



Å, symbol for **angstrom**.

a, symbol for *arterial blood*, as in **PaO₂**.

a-, 1. a prefix meaning ‘before’ from Latin, *ante*. 2. a prefix meaning ‘without,’ ‘lack of,’ ‘not,’ from Greek *a*: *aphasia*.

A, a. See **alpha**.

A68, symbol for a protein found in the brain tissue of patients with Alzheimer’s disease. It is also found in the developing normal brains of fetuses and infants but begins to disappear by the age of 2 years. It is a major subunit of paired helical filaments and derivatized forms of tau protein. See also **tau protein**.

AA, 1. abbreviation for **achievement age**. 2. abbreviation for **Alcoholics Anonymous**. 3. abbreviation for **amplitude of accommodation**. 4. abbreviation for **anesthesiologist assistant**. 5. abbreviation for **amino acid**. 6. abbreviation for *anterior apical*. 7. abbreviation for **aortic arch**. 8. abbreviation for *arm-ankle* (pulse rate).

AAA, 1. abbreviation for *American Association of Anatomists*. 2. abbreviation for *acquired aplastic anemia*. 3. abbreviation for **abdominal aortic aneurysm**.

aa, aa, AA, (in prescriptions) abbreviation for *ana*, indicating an equal amount of each ingredient to be compounded.

AAAI, abbreviation for **American Academy of Allergy and Immunology**.

AACE, 1. abbreviation for *American Association of Clinical Endocrinologists*; 2. abbreviation for *Association for the Advancement of Computing in Education*.

AACN, 1. abbreviation for **American Association of Colleges of Nursing**. 2. abbreviation for **American Association of Critical Care Nurses**.

AAFP, abbreviation for *American Academy of Family Physicians*.

AAI, abbreviation for **ankle-arm index**. See **ankle-brachial index**.

AAIN, abbreviation for **American Association of Industrial Nurses**.

AAL, abbreviation for **anterior axillary line**.

AAMC, abbreviation for **American Association of Medical Colleges**.

AAMI, abbreviation for **Association for the Advancement of Medical Instrumentation**.

AAN, abbreviation for **American Academy of Nursing**.

AAA, abbreviation for **American Association of Nurse Anesthetists**.

AANN, 1. abbreviation for **American Association of Neuroscience Nurses**. 2. abbreviation for **American Association of Neurological Nurses**.

AAO-HNS, abbreviation for *American Academy of Otolaryngology-Head and Neck Surgery*.

AAOMS, abbreviation for *American Association of Oral and Maxillofacial Surgeons*.

APA, abbreviation for **American Academy of Physician Assistants**.

Aaron's sign [Charles D. Aaron, American physician, 1866–1951], a clinical sign in acute appendicitis indicated by referred pain or feeling of distress in the epigastric or precordial region when continuous firm pressure is applied over McBurney’s point. See also **McBurney’s point**.

AARP, a voluntary U.S. organization of older persons, who may or may not be retired, with the goal of improving the welfare of persons over 50 years of age. Among other actions, the group seeks out lower cost car, travel, and health insurance for its members. The AARP advocates for older individuals on legislative, consumer, education, and legal issues. Formerly called American Association of Retired Persons.

Aarskog's syndrome /ärs'kog/ [Dagfinn Charles Aarskog, Norwegian pediatrician, b. 1928], an X-linked syndrome characterized by wide-set eyes, anteverted nostrils, broad upper lip, peculiar scrotal “shawl” above the penis, and small hands. Also called **faciodigitogenital syndrome, faciogenital dysplasia**.

AART, abbreviation for **American Association for Respiratory Therapy**.

Aase's syndrome /äz/ [Jon Morton Aase, American pediatrician, b. 1936], a familial syndrome characterized by mild growth retardation, hypoplastic anemia, variable leukocytopenia, triphalangeal thumbs, narrow shoulders, and late closure of fontanels, and occasionally by cleft lip, cleft palate, retinopathy, and web neck. A recessive mode of inheritance has been suggested.

AAUP, abbreviation for **American Association of University Professors**.

AAV, abbreviation for **adenoassociated virus**.

Ab, abbreviation for **antibody**.

ab-, abs-, prefixes meaning ‘from, off, away from’: *abstract*, *abnormal*.

abacavir, an antiviral that is a nucleoside reverse transcriptase inhibitor.

■ **INDICATION:** It is prescribed in combination with other antiretroviral agents for HIV-1 infection.

■ **CONTRAINDICATION:** Known hypersensitivity to this drug prohibits its use.

■ **ADVERSE EFFECTS:** Hypersensitivity reactions occur in approximately 5% of patients, and can be fatal. Other life-threatening adverse effects include granulocytopenia, anemia, and lactic acidosis. Common side effects include fever, headache, malaise, insomnia, nausea, vomiting, diarrhea, anorexia, and rash.

abacterial /ab'aktir'ē-əl/, any atmosphere or condition free of bacteria; literally, without bacteria.

abaissement /ā'bäsmäN'/ [Fr, a lowering], 1. a falling or depressing. 2. (in ophthalmology) the displacement of a lens.

abalienation /abäl'yōnā'shən/, a state of physical deterioration or mental decay. —*abalienate*, v., *abalienated*, adj.

Ab amyloid, an abnormal peptide, varying from 40 to 43 amino acids in length and found in aggregates in the cerebrovascular walls and the cores of the plaques in Alzheimer’s disease. It is derived from a large transmembrane glycoprotein, amyloid precursor protein. It is postulated to be neurotoxic.

A band, in muscle tissue, the area between two I bands of a sarcomere, marked by partial overlapping of actin and myosin filaments and appearing dark. Compare **I band**.

abandonment of care /əban'dənmənt/, 1. (in law) wrongful cessation of the provision of care to a patient by a health care provider, usually a physician or a nurse. 2. unilateral

termination of care without the patient's consent or knowledge, or without adequate notice, while the patient is still in need.

abapical /əbəp'ækəl/, opposite the apex.

abarelix, a gonadotropin-releasing hormone antagonist.

■ **INDICATION:** This drug is used in palliative treatment of prostate cancer.

■ **CONTRAINDICATIONS:** Pregnancy, latex allergy, lactation, and known hypersensitivity to this drug prohibit its use. It is also contraindicated for use in children.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include breast enlargement, nipple tenderness, pain on injection, local site reactions, and decreased bone density (with long-term treatment). Life-threatening side effects include anaphylaxis and systemic allergic reaction. Common side effects include headache, dizziness, fatigue, sleep disturbance, nausea, constipation, diarrhea, dysuria, urinary frequency, urinary retention, urinary tract infection, pain (including back pain), and hot flashes.

abarognosis /əber'agnō'sis/ [Gk, *a*, not, *baros*, weight, *gnosis*, knowledge], an inability to judge or compare the weight of objects, particularly those held in the hand.

abarthrosis. See **synovial joint.**

abarticular /əb'är'tik'yööłər/ [L, *ab*, away from, *articulus*, joint], 1. pertaining to a condition that does not affect a joint. 2. pertaining to a site or structure remote from a joint.

abarticular gout, extraarticular gout that affects structures other than joints, such as ligaments. See also **tophaceous gout.**

abarticulation /əb'är'tik'yəlā'shən/, 1. dislocation of a joint. 2. a synovial joint.

abasia /əbā'zha/ [Gk, *a*, basis, not step], the inability to walk, caused by lack of motor coordination. —*abasic, abatic, adj.*

abasia-astasia. See **astasia-abasia.**

abatacept, an antirheumatic agent.

■ **INDICATIONS:** This drug is used to treat acute or chronic rheumatoid arthritis that has not responded to other disease-modifying agents. It may be used in combination with other disease-modifying antirheumatic agents. It may not be used with tumor necrosis factor antagonists or anakinra.

■ **CONTRAINDICATIONS:** Tuberculosis and known hypersensitivity to this drug prohibit its use.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include headache, asthenia, dizziness, abdominal pain, dyspepsia, nausea, rash, flushing, urticaria, pruritus, and wheezing. Life-threatening side effects include anaphylaxis, malignancies, and angioedema. Common side effects include hypertension, hypotension, injection site reaction, pharyngitis, cough, rhinitis, and upper respiratory tract infection.

abate /əbāt'/ [ME, *abaten*, to beat down], to decrease or reduce in severity or degree.

abatement /əbāt'mēnt/, a decrease in severity of symptoms.

—*abate, v.*

abatic, pertaining to an inability to walk.

abaxial /əbak'sē'əl/ [L, *ab*, axis, from axle], 1. pertaining to a position outside the axis of a body or structure. 2. pertaining to a position at the opposite extremity of a structure.

Abbe-Estlander flap /əb'ē-est'ländər/ [Robert Abbe, American surgeon, 1851–1928; Jakob A. Estlander, Finnish surgeon, 1831–1881], a surgical procedure that transfers a full-thickness section of one oral lip to the other lip, using an arterial pedicle for ensuring survival of a graft.

Abbe-Zeiss apparatus /əbā'tsis/ [Ernst K. Abbe, German physicist, 1840–1905; Carl Zeiss, German optician, 1816–1885], an apparatus for calculating the number of blood cells in a measured amount of blood. See also **hemacytometer.**

Abbokinase, a trademark for a plasminogen activator (urokinase).

Abbott-Miller tube. See **Miller-Abbott tube.**

Abbott pump, a trademark for a small portable pump that can be adjusted and finely calibrated to deliver precise amounts of medication in solution through an IV infusion set. It is similar to a Harvard pump, but the flow rate may be increased or decreased by smaller increments. See also **Harvard pump.**

ABC, 1. abbreviation for *airway, breathing, circulation.*

2. abbreviation for **aspiration biopsy cytology.**

abciximab /ab-sik'si-mab/, a human-murine monoclonal antibody Fab fragment that inhibits the aggregation of platelets, used in the prevention of thrombosis in percutaneous transluminal coronary angioplasty, administered by intravenous infusion.

■ **INDICATIONS:** It is prescribed as an adjunct to percutaneous transluminal coronary angioplasty or atherectomy.

■ **CONTRAINDICATIONS:** The drug should not be given to patients with active internal bleeding, recent GI or urinary bleeding of significance, history of stroke, thrombocytopenia, or recent major surgery.

■ **ADVERSE EFFECTS:** The side effects most often reported include bleeding, thrombocytopenia, pulmonary edema, atrioventricular block, and atrial fibrillation.

Abdellah, Faye Glenn [b. 1919], a nursing theorist who introduced a typology of 21 nursing problems in 1960 in *Patient-Centered Approaches to Nursing*. The concepts of nursing, nursing problems, and the problem-solving process are central to Abdellah's work. The typology is divided into three areas: (1) the physical, sociological, and emotional needs of the patient; (2) the types of interpersonal relationships between the nurse and the patient; and (3) the common elements of patient care. It was formulated in terms of nursing-centered services that can be used to determine the patient's needs and to teach and evaluate nursing students. It was based on systematic research studies. The typology provided a scientific body of knowledge unique to nursing, making it possible to move away from the medical model of educating nurses. The nursing diagnosis classification system may be considered an outgrowth of Abdellah's typology.

abdomen /əb'dämən, abdō'mən/ [L, *abdominis*, belly], the portion of the body between the thorax and the pelvis. The abdominal cavity is lined by the peritoneum; contains the inferior portion of the esophagus, the stomach, the intestines, the liver, the spleen, the pancreas, and other organs; and is bounded by the diaphragm and the pelvis. See also **abdominal regions.** —*abdominal /abdom'-/ adj.*

abdominal actinomycosis, chronic bacterial disease affecting the abdomen. See **actinomycosis.**

abdominal adhesion /abdom'inəl/, the binding together of tissue surfaces of abdominal organs, usually involving the intestines and causing obstruction. The condition may be a response to surgery or result from trauma or chronic inflammation. The patient experiences abdominal distention, pain, nausea, vomiting, and increased pulse rate. Surgery may be required.

abdominal aorta, the portion of the descending aorta that passes through the diaphragm into the abdomen, descending ventral to the vertebral column and ending at the fourth lumbar vertebra, where it divides into the two common iliac arteries. It supplies blood to abdominal structures such as the testes, ovaries, kidneys, and stomach. Its branches are the celiac, superior mesenteric, inferior mesenteric, middle suprarenal, renal, testicular, ovarian, inferior phrenic, lumbar, middle sacral, and common iliac arteries. See also **descending aorta.** Compare **thoracic aorta.**

abdominal aortic aneurysm (AAA), abnormal dilatation of the abdominal aorta, usually in an area of severe atherosclerosis.



Abdominal aortic aneurysm (Kowalczyk and Mace, 2009)

abdominal aortography, a radiographic study of the abdominal aorta after the introduction of a radiopaque contrast medium through a catheter inserted in the aorta through the femoral artery.

abdominal aponeurosis, the conjoined sheetlike tendons of the oblique and transverse muscles of the abdomen.

abdominal arteries, the arteries that branch from the anterior surface of the abdominal aorta to supply the abdominal part of the gastrointestinal tract, as well as the liver, pancreas, and gallbladder. The celiac artery supplies the foregut, the superior mesenteric artery supplies the midgut, and the inferior mesenteric artery supplies the hindgut.

abdominal bandage, a broad multilayered absorbent gauze or other material commonly used after abdominal surgery. Also called **ABD pad**.

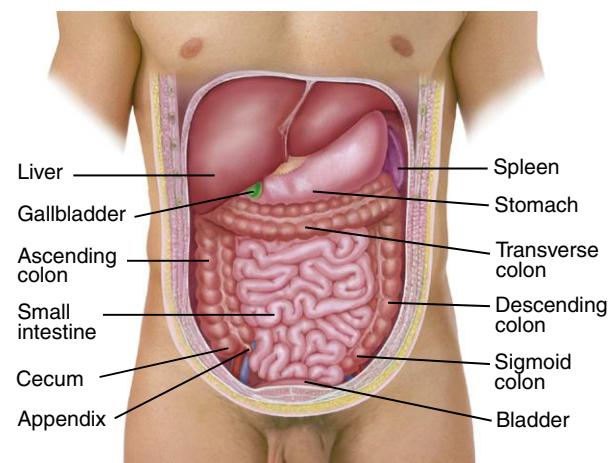
abdominal binder, a bandage or elasticized wrap that is applied around the lower part of the torso to support the abdominal musculature.

abdominal breathing, a pattern of inspiration and expiration in which most of the ventilatory work is done with the abdominal muscles. The contractile force of the abdomen is used to elevate the diaphragm. Compare **diaphragmatic breathing**.

abdominal cavity, the space within the abdominal walls between the diaphragm and the pelvic area, containing the liver, stomach, small intestine, colon, spleen, gallbladder, kidneys, and associated tissues and blood and lymphatic vessels, surrounded by the abdominal fascia.

abdominal decompression, an obstetric technique in which the abdomen is enclosed in a chamber that permits surrounding pressure to be controlled during the first stage of labor. The technique is intended to reduce pain and shorten labor. It is no longer used.

abdominal examination, the physical assessment of a patient's abdomen by visual inspection, auscultation, percussion, and palpation. Visual inspection of the normally oval shape of the abdominal surface while the patient is supine may reveal abnormal surface features indicating the effects of disease, surgery, or injury. Subsurface tumors, fluid accumulation, or hypertrophy of the liver or spleen may be observed as an abnormal surface feature. Auscultation may reveal vascular



Abdominal cavity (Seidel et al, 2011)

sounds that provide information about arterial disorders such as aortic aneurysms and bowel sounds that indicate intestinal function. In pregnancy, auscultation can detect fetal heartbeat and blood circulation in the placenta. Percussion helps detect the condition of internal organs. Palpation is used to detect areas of tenderness or rigidity, muscle tone and skin condition, and shapes and sizes of subsurface organs or masses.

abdominal fascia, an inclusive term for the fascia that forms part of the general layer lining the walls of the abdominal cavity and investing the abdominal organs; it is subdivided into **visceral abdominal fascia**, **parietal abdominal fascia**, and **extraperitoneal fascia**.

abdominal fistula, an abnormal passage or tract leading from an abdominal organ to the external surface of the abdomen.

abdominal gestation, the implantation of a fertilized ovum outside the uterus but within the peritoneal cavity. See also **ectopic pregnancy**.

abdominalgia /abdom'ānăl'jō/ [L, *abdomen*, belly; Gk, *algos*, pain], a pain in the abdomen.

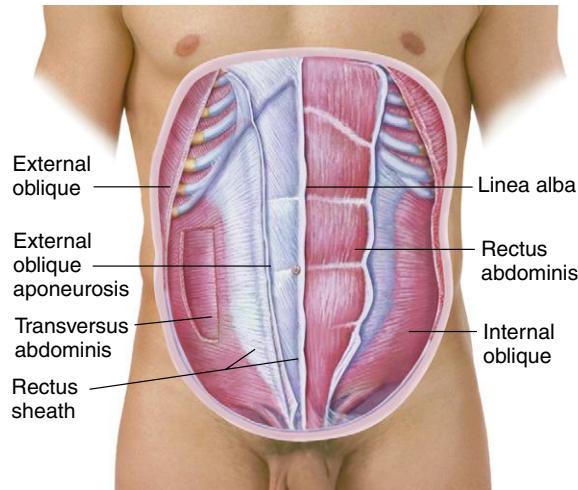
abdominal girth, the circumference of the abdomen, usually measured at the umbilicus.

abdominal hernia, a hernia in which a loop of bowel protrudes through a defect in or weakened portion of the abdominal musculature, often through the site of an old surgical scar that has stretched and thinned. Also called **ventral hernia**. See also **hernia**.

abdominal hysterectomy, the removal of the uterus through an incision in the abdominal wall. Also called **abdominohysterectomy**.

abdominal inguinal ring, an opening of the inguinal canal on the abdominal wall, through which the male spermatic cord or the female round ligament pass. The deep abdominal inguinal ring is marked by an oval depression on the deep aspect of the anterior abdominal wall, just above the inguinal ligament. The superficial abdominal inguinal ring is an oval opening in the aponeurosis of the external abdominal oblique muscle.

abdominal muscles, the muscles between the thorax and the pelvis supporting the abdominal wall. The lateral parts of the wall are formed by the transverse abdominis, the internal oblique, and the external oblique. Anteriorly, on each side, a segmented muscle, the rectus abdominis, spans the distance between the inferior thoracic wall and the pelvis. Other muscles supporting the posterior aspect of the wall are the quadratus lumborum, the psoas major, and the iliacus.



Abdominal muscles (Seidel et al., 2011)

abdominal nephrectomy [L, *abdominis*, belly; Gk, *nephros*, kidney, *ektomē*, cutting out], the surgical removal of a kidney through an abdominal incision.

abdominal nerves, the network of nerve fibers passing through the posterior abdominal region anterolateral to the lumbar vertebral bodies, including the sympathetic trunks and associated splanchnic nerves, the abdominal prevertebral plexus and ganglia, and the lumbar plexus.

abdominal pain, acute or chronic, localized or diffuse pain in the abdominal cavity. Abdominal pain is a significant symptom because its cause may require immediate surgical or medical intervention. The most common causes of severe abdominal pain are inflammation, perforation of an intraabdominal structure, circulatory obstruction, intestinal or ureteral obstruction, intestinal cramping, or rupture of an organ located within the abdomen. Specific conditions include appendicitis, perforated peptic ulcer, strangulated hernia, superior mesenteric arterial thrombosis, diverticulitis, and small and large bowel obstruction. Differential diagnosis of the cause of acute abdominal pain requires its localization and characterization by means of light and deep palpation; auscultation; percussion; and abdominal, rectal, or pelvic examination. Direct physical examination may be supplemented by various laboratory and radiological examinations. Aspiration of peritoneal fluid (paracentesis) for bacteriological and chemical evaluation is sometimes indicated. Conditions producing acute abdominal pain that may require surgery include appendicitis, acute or severe and chronic diverticulitis, acute and chronic cholecystitis, cholelithiasis, acute pancreatitis, perforation of a peptic ulcer, intestinal obstructions, abdominal aortic aneurysms, and trauma affecting any of the abdominal organs. Gynecological causes that may require surgery include pelvic inflammatory disease, ruptured ovarian cyst, and ectopic pregnancy. Abdominal pain associated with pregnancy may be caused by the weight of the enlarged uterus; rotation, stretching, or compression of the round ligament; or squeezing or displacement of the bowel. In addition, uterine contractions associated with preterm labor may produce severe abdominal pain. Chronic abdominal pain may be functional or may result from overeating or aerophagy. When symptoms are recurrent, an organic cause is considered. Organic sources include peptic ulcer, hiatal hernia, gastritis, chronic cholecystitis and cholelithiasis, chronic pancreatitis, pancreatic carcinoma, chronic diverticulitis, intermittent low-grade intestinal obstruction, and functional indigestion. Some

systemic conditions may cause abdominal pain. Examples include systemic lupus erythematosus, lead poisoning, hypercalcemia, sickle cell anemia, diabetic acidosis, porphyria, tabes dorsalis, and black widow spider poisoning.

abdominal paracentesis [L, *abdominis*, belly; Gk, *para*, near, *kentesis*, puncturing], the surgical puncture of the abdominal cavity for the removal of fluid for diagnosis or treatment.

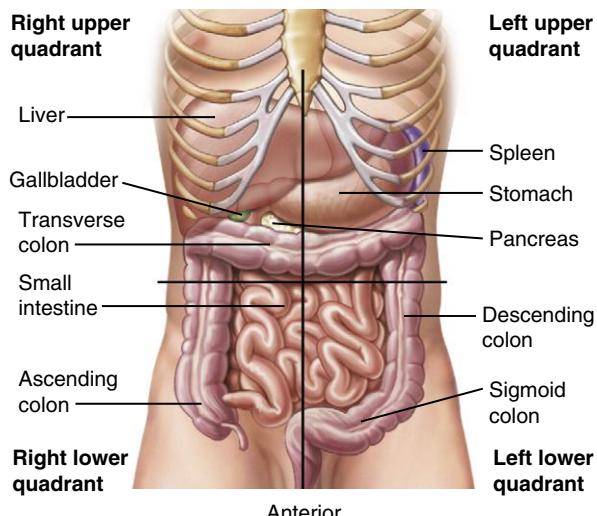
abdominal pregnancy, an extrauterine pregnancy in which the conceptus develops in the abdominal cavity after being extruded from the fimbriated end of the fallopian tube or through a defect in the tube or uterus. The placenta may implant on the abdominal or visceral peritoneum. Abdominal pregnancy may be suspected when the abdomen has enlarged but the uterus has remained small for the length of gestation. The condition results in perinatal death of the fetus in most cases, maternal death in approximately 6%. Because of its rarity, the condition may not be suspected, and diagnosis is often delayed. Ultrasound or x-ray visualization showing gas in the maternal bowel below the fetus is diagnostic of the condition. Surgical removal of the placenta, sac, and embryo or fetus is necessary if attached to the posterior part of the fallopian tube, ovary, broad ligament, or uterus. The procedure is often complicated by massive bleeding, and, because the placenta tends to adhere firmly to the peritoneum and the bowel, complete removal is seldom possible. Allowing it to be absorbed presents fewer problems. Postoperative sequelae may include retained placental tissue, infection, continued bleeding, and sterility. Also called **abdominocytosis**.

abdominal pressure, a sensation or application of pressure surrounding structures within the abdomen.

abdominal prevertebral plexus, the network of nerve fibers surrounding the abdominal aorta. It extends from the aortic hiatus of the diaphragm to the bifurcation of the aorta into the right and left common iliac arteries. Along its route, it is subdivided into the celiac plexus, the abdominal aortic plexus, and the superior hypogastric plexus.

abdominal pulse, the rhythmic transmission of blood turbulence in the abdominal aorta.

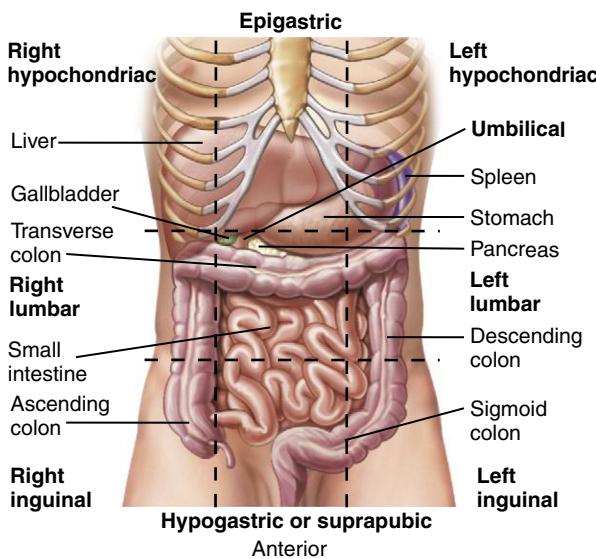
abdominal quadrant, any of four topographic areas of the abdomen divided by two imaginary lines, one vertical and one horizontal, intersecting at the umbilicus. The divisions are the left upper quadrant (LUQ), the left lower quadrant (LLQ), the right upper quadrant (RUQ), and the right lower quadrant (RLQ).



Abdominal quadrants (Harkreader, Hogan, and Thobaben, 2007)

abdominal reflex, a superficial neurological reflex obtained by firmly stroking the skin of the abdomen around the umbilicus. It normally results in a brisk contraction of abdominal muscles in which the umbilicus moves toward the site of the stimulus. This reflex is often lost in diseases of the pyramidal tract and can also be lost with age or abdominal surgery. See also **superficial reflex**.

abdominal regions, the nine topographic subdivisions of the abdomen, determined by four imaginary lines imposed over the anterior surface in a tic-tac-toe pattern. The upper horizontal line passes along the level of the cartilages of the ninth rib, the lower along the iliac crests. The two vertical lines extend on each side of the body from the cartilage of the eighth rib to the center of the inguinal ligament. The lines divide the abdomen into three upper, three middle, and three lower zones: right hypochondriac, epigastric, and left hypochondriac regions (upper zones); right lateral (lumbar), umbilical, and left lateral (lumbar) regions (middle zones); right inguinal (iliac), pubic (hypogastric), and left inguinal (iliac) regions (lower zones).



Abdominal regions (Harkreader, Hogan, and Thobaben, 2007)

abdominal salpingectomy, removal of the fallopian tube or tubes through an incision in the abdomen. Also called *celiosalpingectomy, laparosalpingectomy*.

abdominal splinting, a rigid contraction of the abdominal wall muscles usually occurring as an involuntary reaction to the pain of a visceral disease or disorder or postoperative discomfort. Abdominal splinting, in turn, may result in hypoventilation and respiratory complications. Also called **guarding**.

abdominal sponge, a special type of gauze pad used as an absorbent and sterile covering for the viscera. See also **sponge**.

abdominal surgery, any operation that involves an incision into the abdomen. In preparation for surgery, laboratory, radiographic, and cardiac tests and consultations may be done. Immediately before surgery, body hair is clipped, and skin is cleansed from the nipples to the pubis. Food and fluids by mouth are withheld for up to 6 hours or more before surgery. After surgery, the nurse ensures that the airway is patent and vital signs are stable, checks tubes and catheters, connects drainage tubes to collection containers, checks the dressing for excessive bleeding or drainage, and records

fluid intake and output. The patient is turned and is helped to breathe deeply every hour and, if secretions are present, to cough. Medication is given as needed for pain relief. Some kinds of abdominal surgery are **appendectomy, cholecystectomy, gastrectomy, herniorrhaphy, and laparotomy**. See also **acute abdomen**.

abdominal tenaculum, a clip or clamp to hold abdominal tissue. See **tenaculum**.

abdominal testis, an undescended testis located in the abdominal cavity.

abdominal thrust, quick, hard movements directed inward and upward towards the diaphragm to assist an adult to expel foreign objects in the airway. See **Heimlich maneuver**.

abdominal ultrasound test, a diagnostic study that provides accurate visualization of the abdominal aorta, liver, gallbladder, pancreas, biliary ducts, kidneys, ureters, and bladder. This test is used to diagnose and locate cysts, tumors, calculi, and malformations; to document the progression of various diseases; and to guide the insertion of instruments during surgical procedures.

abdominal viscera, the internal organs enclosed within the abdominal cavity, including the stomach, liver, intestines, spleen, pancreas, and parts of the urinary and reproductive tracts.

abdominal wall, the lining of the abdomen, consisting partly of bone but mostly of muscle. See also **abdominal muscles**.

abdominal wound, a break in the continuity of the abdominal wall. A wound that exposes or penetrates the viscera raises the danger of infection or peritonitis.

abdomino- /abdom'inō-/ , a combining form meaning 'abdomen': *abdominoscopy, abdominovesical*.

abdominocardiac reflex /-kär'dē-äk/, an immediate, involuntary response of the heart to stimulation of the abdominal viscera. The reflex is mediated through the vagus nerve.

abdominocentesis. See **paracentesis**.

abdominocyesis /abdom'inōsī-ë'sis/. See **abdominal pregnancy**.

abdominocystic. See **abdominovesical**.

abdominogenital /-jen'itäl/, pertaining to the abdomen and reproductive system.

abdominohysterectomy. See **abdominal hysterectomy**.

abdominohysterotomy /-his'teröt'ämē/, an incision in the uterus utilizing an abdominal approach. See **hysterotomy**.

abdominopelvic cavity /-pel'vek/, the space between the diaphragm and the groin. There is no structurally distinct separation between the abdomen and pelvic regions.

abdominoperineal /-per'inē'äl/, pertaining to the abdomen and the perineum, including the pelvic area, female vulva and anus, and male scrotum and anus.

abdominoplasty, a surgical procedure for tightening the abdominal muscles. Also called **tummy tuck**.

abdominoscopy /abdom'inos'kōpē/ [L, *abdomen*; Gk, *skopein*, to view], a procedure for examining the contents of the peritoneum in which an electrically illuminated tubular device is passed through a trocar into the abdominal cavity. Also called **peritoneoscopy**. See also **endoscopy, laparoscopy**.

abdominoscrotal /-skrō'täl/, pertaining to the abdomen and scrotum.

abdominothoracic arch /-thôras'ik/, the boundary between the thorax and the abdomen.

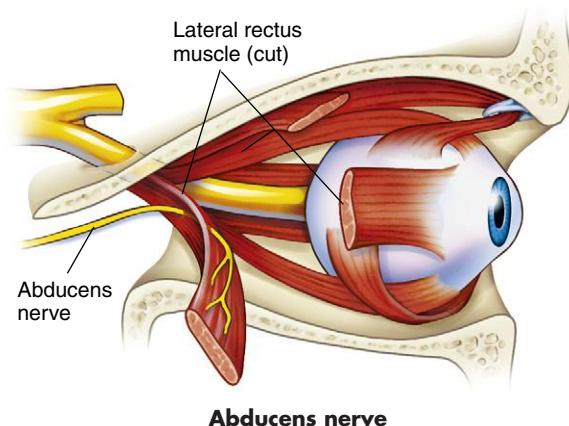
abdominovaginal /-vaj'īnäl/, pertaining to the abdomen and vagina.

abdominovesical /-ves'ikäl/, pertaining to the abdomen and bladder. Also **abdominocystic**.

ABD pad. See **abdominal bandage**.

abducens muscle, the extraocular lateral rectus muscle that moves the eyeball outward. See also **extraocular muscles**.

abducens nerve [L, *abducere*, to take away], either of the paired sixth cranial nerves. It arises in the pons near the fourth ventricle, leaves the brainstem between the medulla oblongata and pons, and passes through the cavernous sinus and the superior orbital fissure. It controls the lateral rectus muscle, turning the eye outward. Also called **abducent**, **nervus abducens**, **sixth cranial nerve**.



Abducens nerve

abducent /ab'doo'sənt/ [L, *drawing away*], pertaining to a movement away from the median line of the body.

abduction [L, *abducere*, to take away], movement of a limb away from the midline or axis of the body. —*abduct*, v. Compare **adduction**.

abduction boots, a pair of orthopedic casts for the lower extremities, available in both short- and long-leg configurations, with a bar incorporated at ankle level to provide hip abduction. Abduction boots are used for postoperative positioning and immobilization after certain surgical procedures. They also promote proper positioning during healing after surgical repair of the lower extremities.

abductor /abduk'tor/ [L, *abducere*], a muscle that draws a body part away from the midline or axis of the body, or one part from another. Compare **adductor**.

abductor digiti minimi of the foot, a muscle on the lateral side of the foot that abducts the little toe at the metatarsophalangeal joint. It is innervated by the lateral plantar branch of the tibial nerve.

abductor digiti minimi of the hand, a muscle that is the principal abductor of the little finger.

abductor hallucis, a muscle that forms the medial margin of the foot and contributes to a soft tissue bulge on the medial side of the sole. It abducts and flexes the great toe at the metatarsophalangeal joint and is innervated by the medial plantar branch of the tibial nerve.

abductor pollicis brevis, one of the three thenar muscles. It abducts the thumb, principally at the metacarpophalangeal joints.

abductor pollicis longus, a muscle that originates from the proximal posterior surfaces of the radius and ulna and from the related interosseous membrane and forms a tendon that passes into the thumb and inserts on the lateral side of the base of the first metacarpal. Its major function is to abduct the thumb at the joint between the first metacarpal and trapezium bones.

abembryonic /ab'embrē'ōn'ik/, opposite the position of the embryo.

Abernethy's sarcoma /ab'ərnē'θēz/ [John Abernethy, British surgeon, 1764–1831], a malignant neoplasm of fat cells, usually occurring on the trunk.

aberrancy. See **aberrant ventricular conduction**.

aberrant. See **aberration**.

aberrant conduction. See **aberrant ventricular conduction**.

aberrant goiter, an enlargement of a supernumerary or ectopic thyroid gland.

aberrant ventricular conduction (AVC), the temporary abnormal intraventricular conduction of a supraventricular impulse. It is usually associated with an increase in the duration of the QRS complex to more than 120 msec. This conduction pattern is fairly common after a very premature atrial beat and during the paroxysmal supraventricular tachycardia that is caused by antidiromic circus movement tachycardia, also known as **Wolff-Parkinson-White syndrome** (using the atrioventricular node retrogradely and an accessory pathway antegradely). Also called **aberrancy**, **aberrant conduction**, **ventricular aberration**.

aberration /ab'ərā'shən/ [L, *aberrare*, to wander], 1. any departure from the usual course or normal condition. 2. abnormal growth or development. 3. (in psychology) an illogical and unreasonable thought or belief, often leading to an unsound mental state. 4. (in genetics) any change in the number or structure of the chromosomes. See also **chromosomal aberration**. 5. (in optics) any imperfect image formation or blurring caused by unequal refraction or focalization of light rays through a lens. 6. (in botany and zoology) pertaining to an abnormal individual, such as certain atypical members of a species. —**aberrant**, adj.

abetalipoproteinemia /əbā'telip'ōprō'tinē'mē-ə/ [Gk, *a + beta*, not beta, *lipos*, fat, *proteios*, first rank, *haima*, blood], a group of rare inherited disorders of fat metabolism, characterized by the absence of apoprotein B-100 and manifested by acanthocytosis, low or absent serum betalipoprotein levels, and hypcholesterolemia. In severe cases, steatorrhea, ataxia, nystagmus, motor incoordination, and retinitis pigmentosa occur. Also called **Bassen-Kornzweig syndrome** /-kōrn'zwīg/.

abeyance /əbā'əns/ [Fr], a temporary state of inaction or temporary interruption of function.

abfraction, pathological loss of tooth structure owing to biomechanical forces or chemical degradation; it is most visible as V-shaped notches in the cervical area of the tooth.

ABG, abbreviation for **arterial blood gas**.

ABI, abbreviation for **ankle-brachial index**.

abient /ab'ē-ənt/ [L, *abire*, to go away], characterized by a tendency to move away from stimuli. Compare **adient**. —*abience*, n.

ability /əbil'iṭē/, the capacity to act in a specified way because of the possession of appropriate skills and mental or physical fitness.

abiogenesis /ab'ē-ōjēn'əsēs/ [Gk, *a + bios*, not life, *genein*, to produce], the idea that life can originate from inorganic, inanimate matter. Mid-twentieth century research by two University of Chicago chemists, Stanley Miller and Harold Urey supported the hypothesis that organic compounds essential to cellular life could be created under specific laboratory conditions. Also called **spontaneous generation**. Compare **biogenesis**. —*abiogenetic*, adj.

abiosis /ab'ē-ō'sis/ [Gk, *a + bios* not life], a nonviable condition or a situation incompatible with life. —*abiotic*, adj.

abiopathy /ab'ē-ōt'rōfē/ [Gk, *a + bios + trophe* nutrition, growth], degeneration or loss of function that is not due to any apparent injury. See also **atrophy**. —*abiopathic* /ab'ē-ōtrō'fik/ adj.

ablastemic /ab'la-stem'ik/, nongerminal or not germinating.

ablation /ablā'shən/ [L, *ab* + *latus*, carried away], 1. an amputation, an excision of any part of the body, or a removal of a growth or harmful substance. 2. reduction by melting. —*ablate*, v.

ablatio placentae. See **abruptio placentae**.

ABL test, abbreviation for **alternate binaural loudness balance test**.

-able, -ible, suffixes meaning ‘ability or capacity’: *durable*, *flexible*.

blepharitis /ab'lēfərētəs/ [Gk, *a* + *blepein*, not to see], a defect or congenital absence of the eyelids (partial or total).

blepharitis /bleplā'sē-təs/ [Gk, *a* + *blepein*, not to see], the condition of being blind. Also called **blepharitis**.

ABLS, abbreviation for **advanced burn life support**.

ablution /ablū'ō-shən/ [L, *abluere*, wash away], 1. the act of washing or bathing. —*ablutent*, adj. 2. the act of cleaning the body.

ABMS, abbreviation for *American Board of Medical Specialties*.

abnerval current /abnur'vel/ [L, *ab*, from; Gk, *neuron*, nerve], an electrical current that passes from a nerve to and through muscle.

abneural /abnōōr'əl/, away from the central nervous system or the neural axis.

abnormal behavior /abnōr'məl/ [L, *ab* + *norma*, away from rule], behavior that deviates from what is commonly accepted by a group or society. See also **behavior disorder**.

abnormality /ab'nōrmal'itē/ [L, *ab* + *norma*, away from rule], a condition that differs from the usual cultural or scientifically accepted standards.

abnormal psychology, the study of any behavior that deviates from culturally accepted norms.

abnormal tooth mobility, excessive movement of a tooth within its alveolus (socket) as a result of injury or disease in the supporting periodontium.

ABO blood group, a system for classifying human blood on the basis of antigenic components of red blood cells and their corresponding antibodies. The ABO blood group is identified by the presence or absence of two different antigens, A and B, on the surface of the red blood cell. The four blood types in this grouping, A, B, AB, and O, are determined by and named for these antigens. Each ABO blood group also contains naturally occurring antibodies to the antigens it lacks. Group A has A antigens on the red cells, with anti-B antibodies in the plasma. Group B has B antigens on the red cells, and anti-A antibodies in the plasma. Group O has neither A nor B antigens, and both anti-A and anti-B in the plasma. AB has both A and B antigens on the red cells, and no anti-A or anti-B in the plasma. In addition to its significant role in transfusion therapy and transplantation, ABO blood grouping contributes to forensic medicine, to genetics, and to anthropology. See also **blood group**, **Rh factor**, **transfusion**.

abolement /ä'bō-äməN'/, an involuntary making of abnormal, animal-like sounds, such as barking. Abolement may be a clinical sign of Gilles de la Tourette’s syndrome.

abort /əbōrt'/ [L, *ab*, away from, *oriri*, to be born], 1. to deliver a nonviable fetus; to miscarry. See also **spontaneous abortion**. 2. to terminate a pregnancy before the fetus has developed enough to live outside the uterus. See also **induced abortion**. 3. to terminate in the early stages or to discontinue before completion, as to arrest the usual course of a disease, to stop growth and development, or to halt a project.

aborted systole, a contraction of the heart that is usually weak and is not associated with a radial pulse.

abortifacient /əbōr'tifā'shənt/, 1. causing abortion. 2. any agent that causes abortion.

abortion /əbor'shən/ [L, *ab* + *oriri*], the spontaneous or induced termination of pregnancy before the fetus has developed to the stage of viability. Kinds of abortion include **habitual abortion**, **infected abortion**, **septic abortion**, **threatened abortion**, **voluntary abortion**. See also **complete abortion**, **elective abortion**, **incomplete abortion**, **induced abortion**, **medical abortion**, **missed abortion**, **spontaneous abortion**, **therapeutic abortion**.

abortionist, a person who performs abortions.

abortion on demand, the absence of restrictive legal statutes giving a woman the right to terminate a pregnancy at her request. That right may be limited by time of gestation, or it may pertain to any period of gestation.

abortion pill. See **mifepristone**.

abortive infection /əbōr'tiv/, an infection in which some or all viral components have been synthesized but no infective virus is produced. The situation may result from an infection with defective viruses or because the host cell is nonpermissive and prohibits replication of the particular virus. Also called **nonproductive infection**.

abortus /əbōr'təs/, any incompletely developed fetus that results from an abortion, particularly one weighing less than 500 g.

abortus fever, a form of brucellosis, caused by *Brucella abortus*, an organism so named because it causes abortion in cows. Also called **Rio Grande fever**. See also **brucellosis**.

abouchement /äbōōshmāN'/ [Fr, a tube connection], the junction of a small blood vessel with a large blood vessel.

aboulia. See **abulia**.

above-elbow (AE) amputation, an amputation of the upper limb between the elbow and the shoulder. A short amputation (near the shoulder) results in the loss of shoulder rotation. After a long amputation (just above the elbow), the patient should retain good shoulder function. Also called **AE amputation**.

above-knee amputation. See **transfemoral amputation**.

ABP, abbreviation for **arterial blood pressure**.

ABR, abbreviation for **auditory brainstem response**.

abracchia /əbrā'kē-ə/ [Gk, *a* + *brachion*, without arm], the absence of arms. —*abracchial*, adj.

abracchiocephalia, congenital absence of the arms and head. See **acephalobracchia**.

abrasion /əbrā'zhən/ [L, *abradere*, to scrape off], a scraping or rubbing away of a surface, such as skin or teeth, by a substance or surface with a hardness greater than that of the tissue being scraped or rubbed away. Abrasion may be the result of trauma, such as a skinned knee; of therapy, as in dermabrasion for the removal of scar tissue; or of normal function, such as the wearing down of a tooth by mastication. Compare **laceration**. See also **bruxism**, **friction burn**.

—*abrade*, v., **abrasive**, adj.



Abrasions of the skin (Kumar, Abbas, and Fausto, 2005)

abrasion arthroplasty, reshaping of a joint by using a small tool or burr to grind down the surface inducing bleeding and fibrocartilaginous repair tissue to form a new articular surface that serves as a better joint covering.

abrasion layer, a protective covering of gelatin enclosing an emulsion on x-ray film. Also called **supercoat** or **overcoat**.

abrasive, a substance used for grinding or polishing a surface. See **abrasion**.

abreact, the expression of repressed feelings by revisiting the situation in a way that relieves anxiety. See **abreaction**.

abreaction /ab're-ak'shən/ [L, *ab*, from, *re*, again, *agere*, to act], an emotional release resulting from mentally reliving or bringing into consciousness, through the process of catharsis, a long-repressed, painful experience. See also **catharsis**. —**abreact**, v.

abrosis /əbrō'zha/ [Gk, fasting], a condition caused by fasting. See also **anorexia**.

abruption [L, *ab*, away from, *rumpere*, rupture], a sudden breaking off or tearing apart.

abruptio placentae [L, *ab*, away from, *rumpere*, to rupture], premature separation of the placenta implanted in normal position in a pregnancy of 20 weeks or more or during labor before delivery of the fetus. It occurs in approximately 1 in 200 deliveries, and, because it often results in severe hemorrhage, it is a significant cause of maternal and fetal mortality. Hypertension and preeclampsia are associated with increased rates of occurrence; in many cases, however, there is no explanation. Complete separation (1 in 500 to 700 deliveries) causes immediate death of the fetus. Bleeding from the site of separation causes abdominal pain, uterine tenderness, and tetanic uterine contraction. Bleeding may be concealed within the uterus or may be evident externally, sometimes as sudden massive hemorrhage. In severe cases, shock and death can result in minutes. Cesarean section must be performed immediately and rapidly. Extensive extravasation of blood within the uterine wall may deplete fibrinogen, prolong clotting time, cause intractable bleeding, lead to disseminated intravascular coagulation, and by damaging the uterine musculature, prevent the uterus from contracting well after delivery. Hysterectomy may be necessary to prevent exsanguination. Partial separation may cause little bleeding and may not interfere with fetal oxygenation. If the pregnancy is near term, labor may be permitted or induced by amniotomy. A premature

pregnancy may be allowed to continue under close observation of the mother on bed rest. The health care provider must be alert to the possibility that bleeding is present but concealed internally and that if all the blood can escape, there may be little pain. Also called **ablatio placentae**, **accidental hemorrhage**, **placenta abruptio**, **placental abruption**. See also **Couvelaire uterus**. Compare **placenta previa**.

abscess /ab'səs/ [L, *abscedere*, to go away], 1. a cavity containing pus and surrounded by inflamed tissue, formed as a result of suppuration in a localized infection, characteristically caused by staphylococci but also caused by parasites and foreign substances. Healing usually occurs when an abscess drains, is incised, or is permanently removed from the body. If an abscess is deep in tissue, drainage is done by means of a sinus tract that connects it to the surface. In a sterile abscess, the contents are not the result of pyogenic bacteria. Abscesses are able to form in almost any location on or within the body. 2. an abscess that develops anywhere along the root length of a tooth. It is usually characterized by pain caused by the pressure of pus against the nerve tissue within the tooth or within the periodontal tissues, redness caused by blood accumulation, and swelling caused by the suppuration. The source of the bacteria that causes the infection is the normal oral flora. See also **periapical abscess**, **periodontal abscess**, and **tooth abscess**.



Abscess (Regezi, Sciubba, and Jordan, 2012)



Partial abruption
with concealed bleeding



Marginal abruption
with external bleeding



Complete abruption
with concealed bleeding

Abruptio placentae (McKinney et al, 2009)

abscissa /əbsɪs'ə/ [L, *ab*, away; *scindere*, to cut], a point on a horizontal Cartesian coordinate plane measured from the *y*-axis (or vertical axis) running perpendicular to the plane, or the *x*-axis.

abscission /əbshɪs'ən/ [L, *abscinere*, to cut away], the process of cutting away, as in corneal abscission, removal of the prominence of the cornea.

absconsio /əbskɒn'shō/ [L, *ab*, away from, *condo*, hidden], a cavity or fossa.

abscopal /əbskō'pəl/, pertaining to the effect of irradiated tissue on remote tissue not exposed to radiation.

absence seizure, an epileptic seizure characterized by a sudden, momentary loss of consciousness. Occasionally it is accompanied by minor myoclonus of the neck or upper extremities, frequent blinking, slight symmetric twitching of the face, or loss of tonus. Seizures usually occur many times a day without a warning aura and are most frequent in children and adolescents, especially at puberty. Children often outgrow them. The patient experiencing a typical seizure has a vacant facial expression and ceases all voluntary motor activity; with the rapid return of consciousness, the patient may resume conversation at the point of interruption without realizing what occurred. During and between seizures, the patient's electroencephalogram shows 3-Hz spike-and-wave discharges. Anticonvulsant drugs used to prevent absence seizures include ethosuximide, trimethadione, and valproic acid. Also called **absentia epileptica**, **petit mal seizure**. See also **epilepsy**.

absenteeism /əb'séntē'izəm/, (for health or related reasons) absence from work. Absenteeism varies according to job assignments, with professional and managerial personnel taking average annual sick leave of 4 days, whereas unskilled workers claim an average of 18 days of sick leave during the year. Surveys also indicate that less than 10% of workers account for nearly 50% of all absenteeism. The most common causes of absenteeism include influenza and occupationally related skin diseases.

absentia epileptica. See **absence seizure**.

absent without leave (AWOL) /ə'wôl/ [L, *absentia*], a term used to describe a patient who departs from a psychiatric facility without authorization or from a medical facility against medical advice.

abs feb, abbreviation for *absente febre*, a Latin phrase meaning 'in the absence of fever.'

Absidia /əbsid'ē-ə/, a genus of fungi belonging to the class Phycomyctes of the order Mucorales, which currently contains 21 species, most of which are soil-borne. *A. corymbifera* is the only recognized pathogen of the *Absidia* species and causes zygomycosis (mucormycosis), but is relatively rare. *A. corymbifera* is found on decaying plants and baked goods.



Absidia species (Mahon, Lehman, and Manuselis, 2011)

absolute /əb'səlōōt/, unconditional, unrestricted, or independent of arbitrary standards.

absolute agraphia [L, *absolutus*, set loose; Gk, *a*, not, *graphein*, to write], a complete inability to write caused by a central nervous system lesion. The person is unable to write even the letters of the alphabet. See also **agraphia**.

absolute alcohol, a clear, colorless, highly hygroscopic liquid with a burning taste, containing at least 99.5% ethyl alcohol by volume. Also called **dehydrated alcohol**.

absolute (A) temperature, temperature that is measured from a base of absolute zero on the Kelvin scale or the Rankine scale.

absolute discharge [L, *absolutus*, set free], a final and complete termination of the patient's relationship with a care-giving agency.

absolute glaucoma /ab'səlōōt/ [L, *absolutus* + Gk, *cata-ract*], complete blindness in which a glaucoma-induced increase in intraocular pressure results in permanent vision loss. The optic disc is white and deeply excavated, and the pupil is usually widely dilated and immobile. Also called *absolutum glaucoma*, **glaucoma consummatum**.

absolute growth, the total increase in size of an organism or a particular organ or part, such as the limbs, head, or trunk.

absolute humidity, the actual mass or content of water in a measured volume of air. It is usually expressed in grams per cubic meter or pounds per cubic foot or cubic yard.

absolute neutrophil count (ANC), the number of neutrophils in a milliliter of blood, having a reference value of approximately 1500–7700 per μL . The ANC is a measure of a person's immune status. Generally, if the count is above 1000, the person may safely mingle with other people or undergo chemotherapy, but a count below 500 indicates that a person is at high risk for infection and should be kept away from those with infectious diseases. Neutropenia by definition is an ANC below $1800/\text{mm}^3$. It is calculated by adding the number of segmented neutrophils and the number of basal neutrophils and multiplying the sum by the total white blood cell (WBC) count. The formula is $\text{ANC} = \text{Total WBC count} \times (\% \text{ neutrophils} + \% \text{ bands})/100$. Also called the absolute granulocyte count (AGC).

absolute refractory period. See **refractory period**.

absolute threshold [L, *absolutus*, set loose; AS, *ther-scold*], 1. the lowest point at which a stimulus can be perceived. 2. pertaining to millivolts of electrical charge determined by ion fluctuations or movement across plasma membranes that result in nerve or muscle stimulation.

absolute zero, the temperature at which all molecular activity except vibration ceases. It is a theoretical value derived by calculations and projections from experiments with the behavior of gases at extremely low temperatures. Absolute zero is estimated to be equal to -273° C or -460° F .

absorb. See **absorption**.

absorbable gauze /əbsōr'bæbəl/, a material produced from oxidized cellulose that can be absorbed. It is applied or sutured directly to tissue to stop bleeding. After a clot forms, the gauze turns into a gel. Also called **absorbable cotton**.

absorbable surgical suture [L, *absorbere*, to suck up; Gk, *cheirourgos*, surgery; L, *sutura*], a suture made from material that can be completely digested (by enzyme activity) or hydrolyzed (by water).

absorbance /əbsōr'bəns/, the degree of absorption of light or other radiant energy by a medium exposed to the energy. It is expressed as the logarithm of the ratio of energy transmitted through a vacuum to the energy transmitted through the medium. For solutions, it is the logarithm of the ratio of energy transmitted through pure solvent to the energy transmitted through the solution. Absorbance varies with factors such as wavelength, solution concentration, and path length.

absorbed dose, the energy imparted by ionizing radiation per unit mass of irradiated material at the place of interest. The SI unit of absorbed dose is the gray, which is 1 J/kg and equals 100 rad.

absorbefacient /əbsôr'bifā'shənt/ [L, *absorbere*, to suck up, + *facere*, to make], 1. any agent that promotes or enhances absorption. 2. causing or enhancing absorption.

absorbent /əbsôr'bənt/ [L, *absorbere*, to suck up], 1. capable of attracting and incorporating substances into itself. 2. a product or substance that can absorb liquids or gases.

absorbent dressing, a clean or sterile covering applied to a wound or incision to suck secretions into itself. Kinds of absorbent dressing are Teflon-coated gauze squares, fluffed gauze, and abdominal bandages.

absorbent gauze, a fabric or pad with various forms, weights, and uses. It may be a rolled, single-layered fine fabric for spiral bandages, or it may be a thick, multilayered pad for a sterile pressure dressing. There may also be an adhesive backing.

absorbent point. See **paper point**.

absorption /əbsôrp'shən/ [L, *absorptio*], 1. the incorporation of matter by other matter through chemical, molecular, or physical action, such as the dissolution of a gas in a liquid or the taking up of a liquid by a porous solid. 2. (in physiology) the passage of substances across and into tissues, such as the passage of digested food molecules into intestinal cells or the passage of liquids into kidney tubules. Types of absorption are **agglutinin absorption**, **cutaneous absorption**, **external absorption**, **intestinal absorption**, **parenteral absorption**, and **pathological absorption**. 3. (in radiology) the process of absorbing electromagnetic radiation in which a photon of energy is taken up by living or non-living matter. —**absorb**, v.

absorption coefficient, the factor by which the intensity of electromagnetic energy decreases as it interacts with a unit thickness of an absorbing material. It is usually expressed per unit thickness.

absorption rate constant, a value describing how much drug is absorbed per unit of time.

absorption spectrum, a plot of percent transmittance, absorbance, logarithm of absorbance, or absorptivity of a compound as a function of wavelength, wave number, or frequency of radiation.

absorptivity /əb'sôrp'tiv'itē/, absorbance at a particular wavelength divided by the product of the concentration of a substance and the sample path length.

abstinence /əb'stinəns/, voluntarily avoiding a substance, such as food or alcohol, or refraining from the performance of an act, such as sexual intercourse.

abstinence syndrome [L, *abstinere*, to hold back; Gk, *syn*, together, *dromos*, course]. See **withdrawal syndrome**.

abstract /əb'strakt, əbstrakt'/ [L, *abstrahere*, to drag away], 1. a condensed summary of a scientific article, literary piece, or address. 2. to collect data such as from a medical record. 3. a preparation containing the soluble principles of a medication concentration mixed with lactose. 4. difficult to understand because of lack of practicality.

abstraction /əbstrak'shən/ [L, *abstrahere*, to drag away], a condition in which teeth or other maxillary and mandibular structures are inferior to their normal position, away from the occlusal plane. Also called infraclusion, or infraocclusion.

abstract thinking, the final, most complex stage in the development of cognitive thinking, in which thought is characterized by adaptability, flexibility, and the use of concepts and generalizations. Problem solving is accomplished by drawing logical conclusions from a set of observations, for example, making hypotheses and testing them. This type of thinking is developed by 12 to 15 years of age, usually after

some degree of education. In psychiatry, many disorders are characterized by the inability to think abstractly. Compare **concrete thinking**, **syncretic thinking**.

abulia /əbūō'lyə/ [Gk, *a* + *boule*, without will], a loss of the ability or a reduced capacity to exhibit initiative or to make decisions. Also spelled **aboulia**.

abuse /əbyōō's/ [L, *abuti*, to waste, *abusus*, using up,], 1. improper use of equipment, a substance, or a service, such as a drug or program, either intentionally or unintentionally. See also **substance abuse**. 2. physical or verbal attack or injury. An example is **child abuse**.

abuse cessation, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as evidence that the victim is no longer hurt or exploited. See also **Nursing Outcomes Classification**.

abused person [Fr, *abuser*, to disuse, L, *persona*, a role played], an individual who has been harmed or maltreated emotionally, verbally, sexually, or physically by another person or by a situation.

abuse of the elderly. See **elder abuse**.

abuse protection, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as protection of self and/or dependent others from abuse. See also **Nursing Outcomes Classification**.

abuse protection support, a nursing intervention from the Nursing Interventions Classification (NIC) defined as identification of high-risk dependent relationships and actions to prevent further infliction of physical or emotional harm. See also **Nursing Interventions Classification**.

abuse protection support: child, a nursing intervention from the Nursing Interventions Classification (NIC) defined as identification of high-risk, dependent child relationships and actions to prevent possible or further infliction of physical, sexual, or emotional harm or neglect of basic necessities of life. See also **Nursing Interventions Classification**.

abuse protection support: domestic partner, a nursing intervention from the Nursing Interventions Classification (NIC) defined as identification of high-risk, dependent domestic relationships and actions to prevent possible or further infliction of physical, sexual, or emotional harm or exploitation of a domestic partner. See also **Nursing Interventions Classification**.

abuse protection support: elder, a nursing intervention from the Nursing Interventions Classification (NIC) defined as identification of high-risk, dependent elder relationships and actions to prevent possible or further infliction of physical, sexual, or emotional harm; neglect of basic necessities of life; or exploitation. See also **Nursing Interventions Classification**.

abuse protection support: religious, a nursing intervention from the Nursing Interventions Classification (NIC) defined as identification of high-risk, controlling religious relationships and actions to prevent infliction of physical, sexual, or emotional harm and/or exploitation. See also **Nursing Interventions Classification**.

abuse recovery, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as extent of healing following physical or psychological abuse that may include sexual or financial exploitation. See also **Nursing Outcomes Classification**.

abuse recovery: emotional, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as extent of healing of psychological injuries due to abuse. See also **Nursing Outcomes Classification**.

abuse recovery: financial, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as extent of control of monetary and legal matters following financial exploitation. See also **Nursing Outcomes Classification**.

abuse recovery: physical, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as extent of healing of physical injuries due to abuse. See also **Nursing Outcomes Classification**.

abuse recovery: sexual, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as extent of healing of physical and psychological injuries due to sexual abuse or exploitation. See also **Nursing Outcomes Classification**.

abusive behavior self-restraint, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as self-restraint of abusive and neglectful behaviors towards others. See also **Nursing Outcomes Classification**.

abutment /ə'bут'mənt/ [Fr, *abouter* to place end to end], a tooth, root, or implant that supports and provides retention for a fixed or removable dental prosthesis.



Frontal view of abutment (Block, 2011)

abutment tooth, a tooth selected to support a prosthesis.

ABVD, an anticancer drug combination of DOXOrubicin, bleomycin, vinBLASTine, and dacarbazine.

Ac, 1. symbol for the element **actinium**. 2. abbreviation for **acetyl** (CH_3CO).

AC, 1. abbreviation for **alternating current**. 2. abbreviation for **accommodative convergence**. See **AC/A ratio**.

ac-. See **ad-**.

a.c., (in prescriptions) abbreviation for *ante cibum*, a Latin phrase meaning 'before meals.'

A-C, abbreviation for *alveolar-capillary*.

acacia gum, a dried, gummy exudate of the acacia tree (*Acacia senegal*) used as a suspending or emulsifying agent in medicines.

academic ladder /ə'kадем'ik/ [Gk, *akademeia*, school], the hierarchy of faculty appointments in an academic setting (university, college, or community college) through which a faculty member advances from the rank of instructor to assistant professor to associate professor to professor.

Academy of Nutrition and Dietetics, an organization that advances the nutritional well-being of the American public. Membership is primarily registered dietitians. Formerly known as the American Dietetic Association (ADA).

acai /ä-sä-ë/, an antioxidant extract from a Brazilian berry used in skin products and juices.

acalculia /ə'kalkoo'lyə/ [Gk, *a*, not; L, *calculare*, to reckon], the inability to perform simple mathematic calculations the patient previously knew. Commonly seen in neurological disorders, it is assessed by having a patient count forward or backwards or do mental addition or subtraction. See also **agraphia**, **constructional apraxia**, **dementia**, **finger agnosia**, **Gerstmann's syndrome**.

acamprostate, an antialcoholic agent.

■ **INDICATIONS:** This drug is used for maintenance of abstinence from alcohol in alcohol dependence.

■ **CONTRAINDICATIONS:** Severe renal disease, creatinine clearance of less than 30 mL per hour, and known hypersensitivity to this drug prohibit its use.

acampsia /ə'kamp'sē-ə/ [Gk, *a* + *kampsein*, not to bend], a condition in which a joint is rigid. See also **ankylosis**.

acanth-, **acantho-**, **acantha** /ə'kan'thə/ [Gk, *akantha*, thorn], combining forms meaning 'thorny or spiny': **acanthasia**, **acanthocytosis**. —**acanthoid**, adj.

acanthamebiasis /ə'kan'thamēbi'sis/, a potentially fatal meningoencephalitis infection caused by *Acanthamoeba castellani*, a free-living amoebal flagellate. It is commonly acquired by swimming in water contaminated by the microorganism. Cleaning contact lenses in contaminated solution can also cause keratitis. Early treatment with a combination of oral fucconazole, sulfadiazine, flucytosine, and intravenous pentamidine may be of benefit.

Acanthamoeba /ə'kan'thamē'bə/, a genus of free-living amoeboid protozoa typically found in moist soil and water. The organisms may enter the body through a break in the skin or even though the nasal mucosa, olfactory nerve, and mucous membranes of the eye. It may cause severe infections, such as keratitis (eye infection that can lead to blindness especially with contact lens wearers), and systemic infections of the lung, genitourinary system, brain, and central nervous system. Disseminated cutaneous lesions caused by this organism are seen particularly in patients with AIDS. Although an infection may be fatal, cases are more commonly chronic and can persist for months.

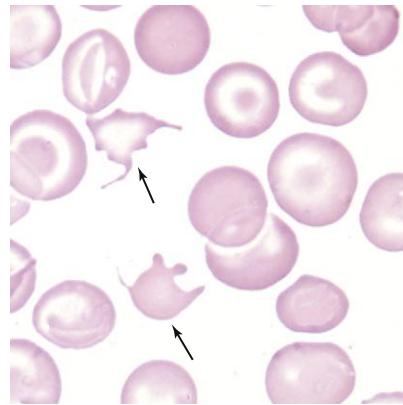
acesthesia /ak'anθēz'zhə/, pinprick paresthesia; an abnormality of cutaneous sensory perception that causes a simple touch to be felt as a painful pinprick.

acanthiomeatal line /ə'kan'thē-ō'mē-ā'təl/, a hypothetical line extending from the external acoustic meatus to the acanthion. In dentistry, a full maxillary denture is constructed so that its occlusal plane is parallel with this line. The line is used for radiographic positioning of the skull.

acanthion, a craniometric point at the center of the base of the anterior nasal spine.

acanthocheilonemiasis. See **mansonellosis**.

acanthocyte /ə'kan'thəsīt'/ [Gk, *akantha* + *kytos*, cell], an abnormal peripheral blood film erythrocyte with irregular spurlike projections. Predominate in abetalipoproteinemia; fewer occur in liver disease. Compare **burr cell**, **elliptocyte**. See also **abetalipoproteinemia**, **acanthocytosis**.



Acanthocyte (Carr and Rodak, 2008)

acanthocytosis /ə'kanθōsītō'sis/ [Gk, *akantha* + *kytos* + *osis*, condition], the presence of acanthocytes on a peripheral blood film, most commonly associated with abetalipoproteinemia, in which as many as 80% of the erythrocytes are acanthocytes. See also **abetalipoproteinemia**. Compare

crenated erythrocytes. See also **abetalipoproteinemia**. Compare **elliptocytosis**.

acanthoid, resembling a spinous process.

acanthoma /ak'anthō'mə/ [Gk, *akantha* + *oma*, tumor], hypertrophy that arises from the stratum spinosum and is localized rather than diffuse. It may be benign or malignant.

acanthoma adenoides cysticum. See **trichoepithelioma**.

acanthoma fissuration, the development of a fissure bordered by increased thickening at sites of friction of the stratum spinosum.

acanthoma fissuratum, a benign, firm, skin-colored or erythematous nodule, grossly resembling basal cell carcinoma, occurring on the bridge of the nose or behind the ear, resulting from constant minor mechanical trauma caused by poorly fitting glasses. Also called **granuloma fissuratum**.

acanthoma verrucosa seborrheica. See **seborrheic keratosis**.

acanthorrhesis /əkan'thō'rek'sis/ , the rupture of intercellular bridges of the stratum spinosum, as in eczema or allergic contact dermatitis.

acanthosis /ak'ənθō'sis/ [Gk, *akantha* + *osis*, condition], an abnormal, diffuse hypertrophy of the stratum spinosum, as in eczema and psoriasis. See also **acanthosis nigricans**. —*acanthotic*, adj.

acanthosis nigricans /nē'grikanz/, a skin disease characterized by hyperpigmented, velvety thickening of the skin, common in the neck, axilla, and groin. There are benign and malignant forms; the latter is most often associated with cancers of the GI tract. See also **acanthosis**.



Acanthosis nigricans (Callen et al, 2000)

acapnia /akap'nē-ə/, deficiency of carbon dioxide from the blood.

AC/A ratio, (in ophthalmology) the proportion between accommodative convergence (AC) and accommodation (A), or the amount of convergence automatically resulting from the dioptric focusing of the eyes at a specified distance. The ratio of accommodative convergence to accommodation is usually expressed as the quotient of accommodative convergence in prism diopters divided by the accommodative response in diopters.

acarbia /akär'bē-ə/ [Gk, *a*, not; L, *carbo*, coal], a decrease in the bicarbonate level in the blood.

acarbose, an insulin-control drug.

■ **INDICATIONS:** It is prescribed in the treatment of type 2 diabetes mellitus; it slows the digestion of complex carbohydrates and reduces the demand for insulin. The drug is

indicated for use with dietary modifications or other medications that treat diabetes in patients whose hyperglycemia is not sufficiently controlled by diet alone.

■ **CONTRAINDICATIONS:** It should not be used by patients with diabetic ketoacidosis or intestinal diseases that may impair digestion or absorption. Caution is advised for use in patients with renal dysfunction.

■ **ADVERSE EFFECTS:** The side effects most often reported include flatulence, diarrhea, and abdominal pain. Increased transaminase levels have been reported in patients taking high doses.

acardia /akär'dē-ə/ [Gk, *a* + *kardia*, without heart], a rare congenital anomaly in which the heart is absent. It is almost exclusively seen in a monozygous twin whose survival depends on the circulatory system of its twin. It is considered the most extreme form of twin-twin transfusion. —*acardiac*, adj.

acardius acephalus, a fetus that lacks a head, heart, and most of the upper part of the body.

acardius acormus, a fetus that lacks a heart and has a grossly defective trunk.

acardius amorphus, an acardiac fetus with a rudimentary body that does not resemble the normal form. Also called **acardius anceps**.

acariasis /ak'ərī'ā-sis/ [Gk, *akari*, mite, *osis*, condition], a disease, usually of the skin, caused by infestation with mites. See also **acarid**.

acarid /ak'ərīd/, one of the many mites and ticks that are members of the order Acarina, which includes a great number of parasitic and free-living organisms. Adults have four pairs of legs and round bodies, living as ectoparasites. Most are yet not described, but several types are of medical interest because they infect humans. Those associated with disease act as intermediate hosts of pathogenic agents, directly cause skin or tissue damage, and cause loss of blood or tissue fluids. Important as vectors of scrub typhus and other rickettsial diseases are the six-legged larvae of mites from the family Trombiculidae, which are parasites of humans, many other mammals, and birds. See also **chigger, scabies**.

acaro-, a combining form meaning ‘mites’: **acariasis**, **acarodermatitis**.

acarodermatitis /ak'ərōdūr'mōtī'tis/ [Gk, *akari*, mite, *derma*, skin, *itis*, inflammation], a skin inflammation caused by mites or ticks.

acarophobia /-fō'bē-ə/, a morbid dread of tiny parasites or the delusion that tiny insects such as mites have invaded the skin.

acaudal /ākō'däl/ [Gk, *a*, without; L, *cauda*, tail], without a tail.

acc, Acc, abbreviation for **accommodation**.

ACC, abbreviation for *American College of Cardiology*.

accelerated hypertension. See **malignant hypertension**.

accelerated idiojunctional rhythm, an automatic junctional rhythm whose rate is greater than 59 beats/min but less than 100 beats/min.

accelerated idioventricular rhythm (AIVR), an automatic ectopic ventricular rhythm whose rate is greater than 49 beats/min but less than 100 beats/min, without retrograde conduction to the atria. In acute myocardial infarction an AIVR can be a sign of spontaneous reperfusion or a result of thrombolytic therapy.

accelerated junctional rhythm, an ectopic junctional heart rhythm whose rate exceeds the normal firing rate of junctional tissue, with or without retrograde atrial conduction.

accelerated respiration, an abnormally rapid rate of breathing, usually more than 25 breaths/min. See also **tachypnea**.

acceleration /aksel'ərā'shōn/ [L, *accelerare*, to quicken], an increase in the speed or velocity of an object or reaction. Compare **deceleration**. —*accelerate*, v.

acceleration-deceleration injury, injury resulting from a collision between a body part and another object or body part while both are in motion.

acceleration phase, the first period of active labor, stage I, characterized by an increased rate of dilation of the cervical canal as charted on a Friedman curve.

accelerator /aksəl'ərātər/ [L, *accelerare*, to quicken], 1. a nerve or muscle that increases the rate of performance of some function. 2. an agent or apparatus used to increase the rate at which a substance acts or a function proceeds.

accelerator urinae. See **bulbospongiosus**.

accentuation /aksən'chōō-ă'shən/ [L, *accentus*, accent], an increase in distinctness or loudness, as in heart sounds.

acceptable daily intake (ADI), the maximum amount of any substance that can be safely ingested by a human. Ingestion that exceeds this amount may cause toxic effects. This term is usually applied to additives, residues, or chemicals not normally found in foods.

acceptance: health status, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as reconciliation to significant change in health circumstances. See also **Nursing Outcomes Classification**.

acceptance of individuality, (in psychiatry) an index of family health in which differentiation or individuation is a valued goal.

acceptance of separation, an indicator of mental well-being in which a loss is mourned in a healthy manner. It indicates a higher level of adaptability.

acceptor /aksep'tər/ [L, *accipere*, to receive]. 1. an organism that receives living tissue, such as transfused blood or a transplanted organ, from another organism. 2. a substance or compound that combines with, or accepts, a part of another substance or compound, such as an atom, an ion, an electron, or an electron pair. Compare **donor**.

access /ak'ses/, a means of approach, such as the space needed for the manipulation of dental or surgical instruments. An example is vascular access in hemodialysis.

access cavity [L, *accedere*, to approach], a coronal opening to the center (pulp chamber) of a tooth, required for effective cleaning, shaping, and obturation of the pulp canals and chamber during endodontic or root canal therapy.

accessory /akses'ərē/ [L, *accessorius*, appendage], 1. a supplementary item, desirable but not necessary, used chiefly for convenience or for safety, such as the electric elevator mechanisms for hospital beds. 2. a structure that serves one of the main anatomical systems, such as the accessory sex organs in men and women or the accessory organs of the skin, including the hair, the nails, and the skin glands. 3. one who aids in perpetrating a crime.

accessory chromosome. See **monosome**.

accessory diaphragm, a rare congenital anomaly in which a second diaphragm or portion of a diaphragm develops in the chest. It is usually found on the right side and is oriented upward and backward to the posterior chest wall. It may be separated from the true diaphragm by a lobe of a lung. It is often associated with cardiac anomalies.

accessory gland, glandular tissue that contributes in a secondary way to the function of a similar gland, which may be nearby or some distance away.

accessory ligament [L, *accessus*, extra, *ligare*, to bind], a ligament that helps strengthen a union between two bones, even though it is not part of a joint capsule.

accessory movement, a joint movement that is necessary for a full range of motion but is not under direct voluntary control. Examples include rotation and gliding.

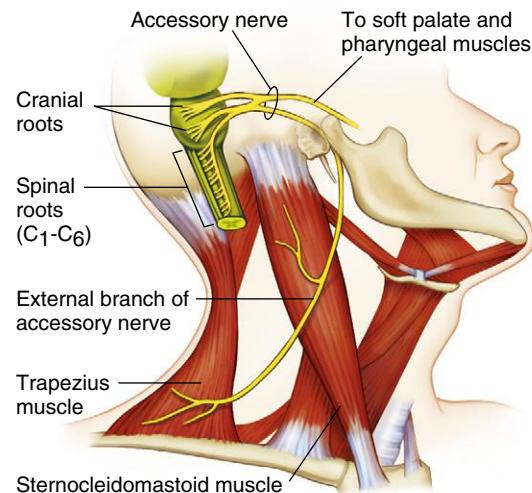
accessory muscle, a relatively rare anatomical duplication of a muscle that may appear anywhere in the muscular

system. The most common sign associated with an accessory muscle is the appearance of a soft tissue mass. Differential diagnosis without an exploratory operation is difficult because of the similar appearance of some tumors or soft tissue masses, such as ganglia. The appearance of the soft tissue mass associated with an accessory muscle may be transient, or it may be constant, depending on the location of the accessory muscle in relation to motion. In many individuals with accessory muscles, specific treatment is not indicated unless the accessory muscle interferes with normal function.

accessory muscle of respiration, any of the muscles of the neck, back, and abdomen that may assist the diaphragm and the internal and external intercostal muscles in respiration, especially in some breathing disorders or during exercise. Often elevated effort of breathing contributes to increased anterior-posterior diameter of the chest (barrel chest) over time.

accessory nasal sinuses [L, *accessus*, extra, *nasus*, nose, *sinus*, hollow], the paranasal sinuses that occur as hollows within the skull but open into the nasal cavity and are lined with a mucous membrane continuous with the nasal mucous membrane. See also **paranasal sinus**.

accessory nerve, either of a pair of cranial nerves essential for speech, swallowing, and certain movements of the head and shoulders. Each nerve has a cranial and a spinal portion, communicates with certain cervical nerves, and connects to the nucleus ambiguus of the brain. Also called **eleventh cranial nerve**, **nervus accessorius**, **spinal accessory nerve**.



Accessory nerve

accessory organ, an organ or other distinct collection of tissues that contributes to the function of another similar organ, such as the ocular muscles and eyelids, which contribute to the function of the eye.

accessory organs of the eye, the accessory organs of the eye: the eyelids, eyelashes, eyebrows, conjunctival sac, lacrimal apparatus, and extrinsic muscles of the eye. Also called **adnexa oculi**.

accessory pancreas [L, *accessus*, extra; Gk, *pan*, all, *kreas*, flesh], small clusters of pancreatic cells detached from the



Evaluating the accessory nerve (Swartz, 2009)

pancreas and sometimes found in the wall of the stomach or intestines.

accessory pancreatic duct, the small duct that branches from the pancreatic duct and opens into the duodenum near the mouth of the common bile duct. Compare **pancreatic duct**.

accessory pathway, an abnormal conduction pathway between an atrium and a ventricle. Ventricular activation via an accessory pathway slows initial ventricular contraction, producing preexcitation and the delta wave of Wolff-Parkinson-White syndrome. The delta wave shortens the P-R interval, and broadens the QRS complex. The most common associated arrhythmias are paroxysmal supraventricular tachycardia and atrial fibrillation. Patients may be cured by transvenous radiofrequency ablation of the accessory pathway or may be treated pharmacologically.

accessory phrenic nerve, the nerve that joins the phrenic nerve at the root of the neck or in the thorax, forming a loop around the subclavian vein. It may arise from the nerve to the subclavius muscle or from the trigeminal nerve. Compare **phrenic nerve**.

accessory placenta [L, *accessionis*, a thing added, *placenta*, flat cake], a small placenta that may develop attached to the main placenta by umbilical blood vessels. Also called **succenturiate placenta**.

accessory root canal, an anatomical lateral branching of the pulp canal in a tooth, usually occurring in the apical third of the root.

accessory sign, a sign that is not typical or characteristic of a particular disease.

accessory sinus of the nose. See **paranasal sinus**.

accessory spleen [L, *accessus*, extra; Gk, *splen*], small nodules of splenic tissue that may occur in the gastrosplenic ligament, greater omentum, or other visceral sites.

accessory thymus [L, *accessus*, extra; Gk, *thymos*, thyme-like], a nodule of thymic tissue that is isolated from the gland.

accessory tooth, a supernumerary tooth that does not resemble a normal tooth in size, shape, or position.

access time, the amount of time required for a computer to retrieve data from its disk drive.

accident /ak'sidənt/ [L, *accidere*, to happen], any unexpected or unplanned event that may result in death, injury, property damage, or a combination of serious effects. The victim may or may not be directly involved in the cause of the accident. Accidents frequently are the result of both physical and mental factors that can result in unsafe operating systems at work, home, or other sites.

accidental hemorrhage. See **abruptio placentae**.

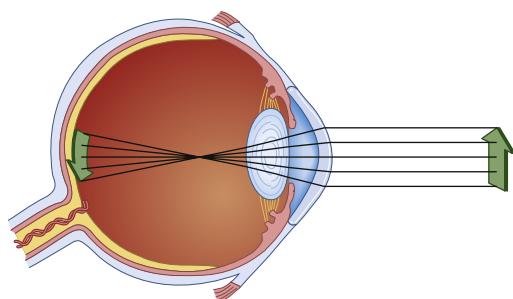
accident-prone, describing a person who experiences accidents and accompanying injuries at a much greater than average rate.

acclimate /æk'lɪmɪt, ak'lɪmāt/ [L, *ad*, toward; Gk, *klima*, region], to adjust physiologically to a different climate or environment or to changes in altitude or temperature. Also **acclimatize** /æk'lɪ'matɪz'. —**acclimation**, **acclimatization**, *n.*

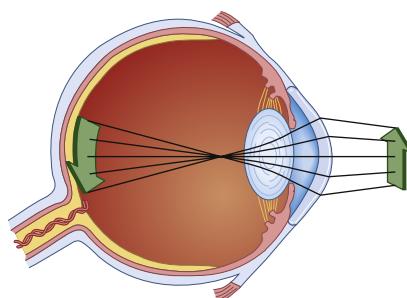
acclimatization to heat [L, *ad*, toward; Gk, *klima*, region], a process whereby the body adapts to warmer environmental temperatures.

accommodation (A, acc, Acc) /ə'kɒmə'dā'shən/ [L, *accommodatio*, adjustment], 1. the state or process of adapting or adjusting one thing or set of things to another. 2. the continuous process or effort of the individual to adapt or adjust to surroundings to maintain a state of homeostasis, both physiologically and psychologically. 3. the adjustment of the eye to variations in distance. See also **accommodation reflex**. 4. (in sociology) the reciprocal reconciliation of conflicts between individuals or groups concerning habits and customs, usually through a process of compromise, arbitration, or negotiation. Also called **adjustment**. Compare **adaptation**.

accommodation reflex, an adjustment of the eyes for near vision, consisting of pupillary constriction, convergence of



Distant image: lens is flattened



Close image: lens is rounded

Accommodation reflex (Patton and Thibodeau, 2010)

the eyes, and increased convexity of the lens. Also called **ciliary reflex**. See also **light reflex**.

accommodative strabismus /ə'kɒmə'dætɪv/ [L, *accommodatio*, adjustment; Gk, *strabismos*, squint], 1. strabismus resulting from abnormal demand on accommodation, such as esotropia resulting from uncorrected hyperopia or exotropia resulting from uncorrected myopia. 2. strabismus resulting from the act of accommodation in association with a high AC/A ratio.

accomplishment quotient /ə'kɒm'plɪshmənt/, a numeric evaluation of a person's achievement age compared with mental age, expressed as a ratio multiplied by 100. See also **achievement quotient, intelligence quotient**.

accountability /ə'kaʊnt'əbɪl'ɪtē/, accountability or responsibility for the moral and legal requirements of proper patient care.

accreditation /ə'kred'ɪtā'shən/, a process whereby a professional association or nongovernmental agency grants recognition to a school or health care institution for demonstrated ability to meet predetermined criteria for established standards, such as the accreditation of hospitals by The Joint Commission on Accreditation of Healthcare Organizations or of schools of nursing by the NLNAC. Compare **certification**.

Accreditation Council for Occupational Therapy Education, The national body that accredits educational programs for occupational therapy and occupational therapy assistant programs.

Accreditation Review Committee on Education in Surgical Technology (ARC-ST), a committee created in 1972 to establish, maintain and promote standards of quality for educational programs in surgical technology and surgical assisting recognized through programmatic accreditation in cooperation with the Commission on Accreditation of Allied Health Education Programs (CAAHEP), the **American College of Surgeons (ACS)**, and the **Association of Surgical Technologists (AST)**.

accrementation /ə'krə'mentish'ən/, a growth or an increase in size by the addition of similar tissue or material, as in cell division, binary fission, budding, or gemmation.

accretio cordis /ə'krē'shē-ō/ [L, *accrescere*, to increase, *cordis*, heart], an abnormal condition in which the pericardium adheres to the plurae, diaphragm, or chest wall.

accretion /ə'krē'shən/ [L, *accrescere*, to increase], 1. growth by the addition of material similar to that already present. 2. the adherence or growing together of parts that are normally separated. 3. an accumulation of foreign material, especially within a cavity. —*accrete*, v., *accretive*, adj.

acculturation /ə'kul'chərā'shən/, 1. the process of adopting the cultural traits or social patterns of a different population group. 2. the modification of the culture of a group resulting from association with another group.

accumulated dose equivalent /ə'kyoo'myəlā'tid/, an estimate of an individual's absorbed dose of radiation over a lifetime, expressed in rem. Occupationally exposed persons are allowed no more than 5 rem/year, or 1 rem multiplied by age at any time during the person's lifetime. Also called **allowable dose**. See also **rem**.

accuracy /ak'yərəsē/, the extent to which a measurement is close to the true value.

accurate empathy /ak'yərit/, a communication technique used to convey an understanding of the patient's feelings and experiences.

Accurbron, a trademark for a bronchodilator (**theophylline**).

Accutane, a trademark for an antiacne agent (**isotretinoin**).

ACDF, abbreviation for **anterior cervical decompression and fusion**.

ACE, abbreviation for **angiotensin-converting enzyme**.

Ace bandage, a trademark for a woven elastic bandage used on the extremities for exsanguination, pressure dressing to prevent swelling, or holding traction set-ups.

acebutolol /ə'səbū'təlol/, an antiadrenergic agent.

■ **INDICATIONS:** It is prescribed in the treatment of hypertension, angina pectoris, ventricular arrhythmias, and other cardiovascular disorders.

■ **CONTRAINdications:** The drug should not be given to patients with asthma, persistent severe bradycardia, second- and third-degree heart block, overt heart failure, cardiogenic shock, and peripheral vascular disease. It is generally not recommended during pregnancy.

■ **ADVERSE EFFECTS:** The most common side effects include fatigue, bradycardia, bronchospasm, flatulence, hypotension, muscle and joint pains, nausea, constipation, diarrhea, headache, rash, dizziness, and insomnia.

acedia /ə'sēdē-ə/ [Gk, *akedia*, apathy], a condition of listlessness and a form of melancholia, marked by indifference and sluggish mental processes.

acellular /ə'sel'yələr/, without cells.

acentric /ə'sen'trik/ [Gk, *a + kentron*, not center], 1. having no center. 2. (in genetics) describing a chromosome fragment that has no centromere.

acentric occlusion. See **eccentric occlusion**.

-aceous /-ā'shəs/, a suffix meaning 'having the appearance of' or 'like' something specified: *foliaceous, testaceous*.

ACEP, abbreviation for **American College of Emergency Physicians**.

acephal-, acephalo-, combining forms meaning 'having no head': *acephalobrachia, acephaly*.

acephalia. See **acephaly**.

acephalism. See **acephaly**.

acephalobrachia /ə'sef'əlōbrā'kē-ə/ [Gk, *a + kephale*, without head, *brachion*, arm], a congenital anomaly in which a fetus lacks both arms and the head. Also called **abraciocephalia**.

acephalocardia /-kär'dē-ə/ [Gk, *a*, not, *kephale*, head, *cardia*, heart], the congenital absence of both the head and the heart.

acephalus /ə'sef'ələs/ [Gk, *a + kephale*, without head], a headless fetus.

acephaly /ə'sef'əlē/ [Gk, *a + kephale*, without head], a congenital defect in which the head is absent or not properly developed. Also called **acephalia** /as'əfā'lē-ə/, **acephalism** /ə'sef'əliz'əm/. —*acephalic*, adj.

acerola /ə'sərō'lə/, a small, cherrylike fruit of the genus *Malpighia* that grows in tropical climates. It is a richer source of vitamin C than any other known fruit. Also called **Barbados cherry**.

acesulfame-K /ə'səsul'fām/, a synthetic noncaloric sweetener marketed under the trademark Sunnette. It is approximately 200 times sweeter than sucrose. Heat does not affect its sweetening ability, an advantage over aspartame. Also called **acesulfame potassium**.

acet-, a combining form meaning 'vinegar': *acetoin, acetyl*.

acetabula. See **acetabulum**.

acetabular /ə'sətab'yələr/ [L, *acetabulum*, little saucer], pertaining to the acetabulum.

acetabular angle, the angle between the acetabular line and Hilgenreiner's line, normally between 27 and 30 degrees in the neonatal hip. It is used in the radiographic assessment of developmental dysplasia of the hip. Also called **acetabular index**.

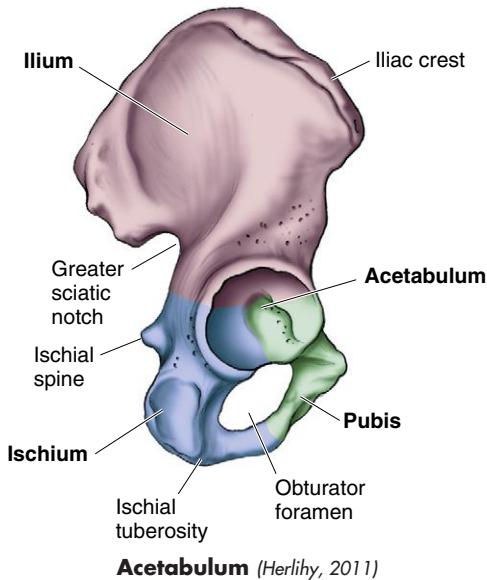
acetabular labrum, a fibrocartilaginous collar on the rim of the acetabulum that crosses the acetabular notch as the transverse acetabular ligament and converts the notch into a foramen.

acetabular line, a line following the slope of the acetabulum that is used in radiographic assessment of the hip joint. With Hilgenreiner's line it forms the acetabular angle.

acetabular notch, an indentation in the margin of the acetabulum.

acetabuloplasty /as'ətab'yəlōplas'tē/, plastic surgery performed to reshape the acetabulum.

acetabulum /as'ətab'yələm/ pl. **acetabula** [L, vinegar cup], the large, cup-shaped cavity at the juncture and lateral surface of the ilium, the ischium, and the pubis, in which the ball-shaped head of the femur articulates.



acetal, 1. also called *diethyl acetal*. A colorless liquid, $C_2H_4(OC_2H_5)_2$, sometimes used as a hypnotic. 2. any compound with the general formula $R_2C(OR)_2$ or $RCH(OR)_2$, in which R indicates an alkyl or aryl group.

acetaldehyde (CH₃CHO) /as'ətlde'hīd/, a colorless, volatile liquid aldehyde with a pungent odor produced by the oxidation of ethyl alcohol. Its systematic (International Union of Pure and Applied Chemistry) name is ethanal. In the human body, acetaldehyde is produced in the liver by the action of alcohol dehydrogenase and other enzymes. It is used commercially in the manufacture of acetic acid and various aromas and flavors. Exposure to high levels of acetaldehyde can result in headache, corneal injury, rhinitis, and respiratory disorders.

acetaminophen /əset'əmin'əfin/, an analgesic and antipyretic drug used in many nonprescription pain relievers. It has no antiinflammatory properties. It may be used with other products that do not contain additional acetaminophen.

■ **INDICATION:** It is often recommended for the treatment of mild to moderate pain and fever.

■ **CONTRAINDICATION:** Known hypersensitivity to acetaminophen prohibits its use. It should not be used in persons with liver disease.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are anaphylaxis, hepatotoxicity, and hemolytic anemia. Overdosing can result in fatal cyanosis and hepatic necrosis. See also **acetaminophen poisoning**.

acetaminophen poisoning, a toxic reaction to the ingestion of excessive doses of acetaminophen. Many over-the-counter and prescription medications contain acetaminophen. Individuals may ingest an overdose accidentally when taking multiple products containing acetaminophen. Dosages exceeding

140 mg/kg can produce liver failure, and larger doses can be fatal. Large amounts of acetaminophen metabolites can overwhelm the glutathione-detoxifying mechanism of the liver, resulting in progressive necrosis of the liver within 5 days. The onset of symptoms may be marked by nausea and vomiting, profuse sweating, pallor, and oliguria. The incidence of nausea and vomiting increases, accompanied by jaundice and pain in the upper abdomen, hypoglycemia, encephalopathy, and kidney failure. Treatment requires inducing vomiting or performing gastric lavage, depending on the length of time since the ingestion. Acetylcysteine may prevent extensive liver damage if given via nasogastric tube soon after ingestion.

acetate (CH₃COO⁻) /as'itāt/, an anion of formula $C_2H_3O_2^-$. It is the conjugate base of acetic acid.

acetate kinase, an enzyme that catalyzes the transfer of a phosphate group from adenosine triphosphate to acetate. Also called **acetokinase**.

acetazolamide /as'ətəzō'ləmīd/, a carbonic anhydrase inhibitor diuretic agent.

■ **INDICATIONS:** It is prescribed for the treatment for glaucoma and edema and as an adjunctive agent for the treatment of refractory epilepsy and altitude sickness.

■ **CONTRAINDICATIONS:** Hyponatremia, hypokalemia, severe liver or kidney disease or dysfunction, Addison's disease, and known hypersensitivity to this drug or other sulfonamides prohibit its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are anorexia and depression, particularly in the elderly; acidosis; hyperuricemia; and crystalluria. Paresthesias, GI disturbances, and lethargy are common.

Acetest, a trademark for a product used to test for the presence of abnormal quantities of ketone in the urine of patients with diabetes mellitus or other metabolic disorders. A large quantity of ketone causes a rapid change in the color of the Acetest tablet. See also **acetone in urine test, acidosis, ketone bodies**.

acetic /əsē'tik, əsēt'ik/ [L, *acetum*, vinegar], pertaining to substances having the sour properties of vinegar or acetic acid or to chemical compounds possessing the radical CH_3CO- .

acetic acid (HC₂H₃O₂), a clear, colorless, pungent liquid that is miscible with water, alcohol, glycerin, and ether and that constitutes 3% to 5% of vinegar. Acetic acid is produced commercially by the reaction of methanol with carbon monoxide in the presence of a catalyst, or it may be obtained from ethyl alcohol by the action of many aerobic bacteria. Various concentrations are used in the manufacture of plastics, dyes, insecticides, cellulose acetate, photographic chemicals, and pharmaceutical preparations, including vaginal jellies and antimicrobial solutions for the treatment of superficial infections of the external acoustic meatus. Also called **ethanoic acid**.

acetic fermentation, the production of acetic acid or vinegar from a weak alcoholic solution.

acetoacetic acid /as'ətō-əsē'tik, əsē'tō-/ , a colorless, oily keto acid produced by the metabolism of lipids and pyruvates. It is excreted in trace amounts in normal urine and in elevated levels in diabetes mellitus, especially in ketoacidosis. Acetoacetic acid levels are also increased during starvation as a result of the incomplete oxidation of fatty acids. Soluble in water, alcohol, and ether, acetoacetic acid decomposes at temperatures below 100° C to acetone and carbon dioxide. Also called **acetone carboxylic acid, acetylacetic acid, beta-ketobutyric acid, diacetic acid**.

acetoHEXAMIDE /-hek'somīd/, a sulfonylurea oral antidiabetic.

■ **INDICATION:** It may be prescribed in the treatment of type 2 diabetes mellitus.

■ **CONTRAINDICATIONS:** Its use is prohibited as sole therapy in type 1 diabetes mellitus, diabetic ketoacidosis, severe liver

or kidney dysfunction, or known hypersensitivity to this drug or to other sulfonylureas.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are blood dyscrasias, hypoglycemia, and allergic reactions. GI disturbances are common.

acetohydroxamic acid /as'ē-to-hi'droks-am'ik/, an inhibitor of bacterial urease used in the prophylaxis and treatment of struvite renal calculi, whose formation is favored by urease-producing bacteria, and as an adjunct in the treatment of urinary tract infections caused by urease-producing bacteria. It is administered orally.

acetokinase. See **acetate kinase.**

acetyl kinase, an enzyme that catalyzes the transfer of a phosphate group from adenosine triphosphate to hydroxy-acetone.

acetonaemia. See **ketonemia.**

acetone /as'ētōn/, a colorless, aromatic, volatile liquid ketone body found in small amounts in normal urine and in larger quantities in the urine of diabetics experiencing ketoacidosis or starvation. It is one of the group of compounds called ketones. Commercially prepared acetone is used to clean the skin before injections, but prolonged exposure to the compound can be irritating. It also has many varied industrial uses. Also called **2-propanone.**

acetone bodies. See **ketone bodies.**

acetone carboxylic acid. See **acetoacetic acid.**

acetone in urine test, a test for the presence of dimethylketone in the urine of patients, used as a laboratory indication of ketosis and the severity of diabetes mellitus. Chemically treated test paper strips or sticks are exposed to urine. If acetone is present in the urine as the result of the incomplete breakdown of fatty and amino acids in the body, the test strips change color. A similar test uses a compound added directly to a urine sample.

acetonide grouping, an acetone-based ketal, or a ketone-alcohol derivative present in some corticosteroid drugs, such as fluocinolone acetonide.

acetonuria /as'ētōnōōr'ē-ə/, the presence of acetone and diacetic bodies in the urine. See also **ketoaciduria.**

acetophenetidin. See **phenacetin.**

acetylacetic acid. See **acetoacetic acid.**

acetyl (CH₃CO, Ac), a monovalent radical associated with derivatives of acetic acid.

acetylcholine (ACh) /as'ētilkō'lēn, əsē'til-/ , a direct-acting cholinergic neurotransmitter agent widely distributed in body tissues, with a primary function of mediating the synaptic activity of the nervous system and skeletal muscles. Its half-life and duration of activity are short because it is rapidly destroyed by acetylcholinesterase. Its activity also can be blocked by atropine at the junctions of nerve fibers with glands and smooth muscle tissue. It is a stimulant of the vagus and autonomic nervous system and functions as a vasodilator and cardiac depressant. Acetylcholine is used therapeutically as an adjunct to eye surgery and has limited benefits in certain circulatory disorders because of its short half-life.

acetylcholine receptor (AChR) antibody test, one of three blood tests for AChR to diagnose myasthenia gravis, the most sensitive of which is the AChR-modulating antibody test and the least sensitive of which is the AChR-blocking antibody test. The test used most often is the AChR-binding antibody test.

acetylcholinesterase (AChE) /-kō'lines'tērās/, an enzyme present at the endings of voluntary nerves and parasympathetic involuntary nerves and autonomic nerve ganglia. It inactivates and prevents the accumulation of the neurotransmitter acetylcholine released during nerve impulse transmission by hydrolyzing the substance to choline and acetate. The action reduces or prevents excessive firing of neurons at neuromuscular junctions.

acetylcoenzyme A /əsē'til-kō'en'zim, as'ētil-/ , a biomolecule that carries an activated form of the 2-carbon acetyl unit found in the course of several important metabolic processes. The formation of acetylcoenzyme A is the critical intermediate step between anaerobic glycolysis and the citric acid cycle. Also called **acetyl-CoA.**

acetylcysteine /-sis'tēn/, a mucolytic and acetaminophen antidote.

■ **INDICATIONS:** It is prescribed in the treatment of chronic pulmonary disease, acute bronchopulmonary disease, atelectasis resulting from mucous obstruction, and acetaminophen poisoning.

■ **CONTRAINDICTION:** Known sensitivity to this drug prohibits its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are stomatitis, nausea, rhinorrhea, and bronchospasm.

acetylene /əset'älēn/, a colorless, highly flammable gas that is the simplest of the alkynes. Also called **ethyne.**

acetylsalicylic acid (ASA). See **aspirin.**

acetylsalicylic acid poisoning /əsē'təlsal'isil'ik, as'itəl-/ , the toxic effects of overdosage of the commonly used anti-pyretic and analgesic drug, aspirin. Early symptoms include dizziness, ringing in the ears, changes in body temperature, GI discomfort, and hyperventilation. Severe poisoning is marked by respiratory alkalosis, which may lead to metabolic acidosis. Children and the elderly are particularly vulnerable to the potential toxic effects of salicylates. See also **Reye's syndrome, salicylate poisoning.**

acetyltransferase /-trans'fərās/, any of several enzymes that transfer acetyl groups from one compound to another.

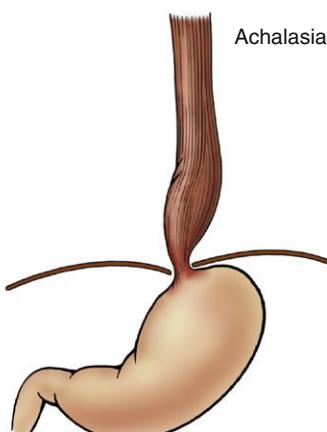
Ace wrap/dressing, a trademark for an elastized wrap. See **bandage, elastic bandage.**

ACG, 1. abbreviation for **apexcardiography.** 2. abbreviation for **apexcardiogram.**

ACh, abbreviation for **acetylcholine.**

ACH, abbreviation for **adrenocortical hormone.**

achalasia /ak'əlā'zhə/ [Gk, *a* + *chalasis*, without relaxation], an abnormal condition characterized by the constriction of the lower portion of the esophagus because of the inability of a muscle to relax (cardiospasm), particularly the lower esophageal sphincter. Compare **corkscrew esophagus.** See also **dysphagia.**



Achalasia (Kumar et al, 2007)

Achard-Thiers syndrome /ashär tērēz'/ [Emile C. Achard, French physician, 1860–1941; Joseph Thiers, French physician, b. 1885], a hormonal disorder seen in postmenopausal women with diabetes mellitus, characterized by the

growth of body hair in a masculine distribution. Treatment includes mechanical removal or bleaching of excess hair and hormonal therapy to correct endocrine imbalances related to systemic disease. See also **hirsutism**.

ache /ak/ [OE, *akan*, to hurt], 1. a pain characterized by persistence, dullness, and, usually, moderate intensity. An ache may be localized, such as a stomachache, headache, bone ache, or a general ache, as in the myalgia that accompanies a viral infection or a persistent fever. 2. to suffer from a dull, persistent pain of moderate intensity.

AChE, abbreviation for **acetylcholinesterase**.

acheiria /əkī'rē-ə/ [Gk, *a*, not, *cheir*, hand], a congenital absence of one or both hands.

acheiropody /ak'ērōp'odē/ [Gk, *a*, not, *cheir*, hand, *pous*, foot], an absence of the hands and feet.

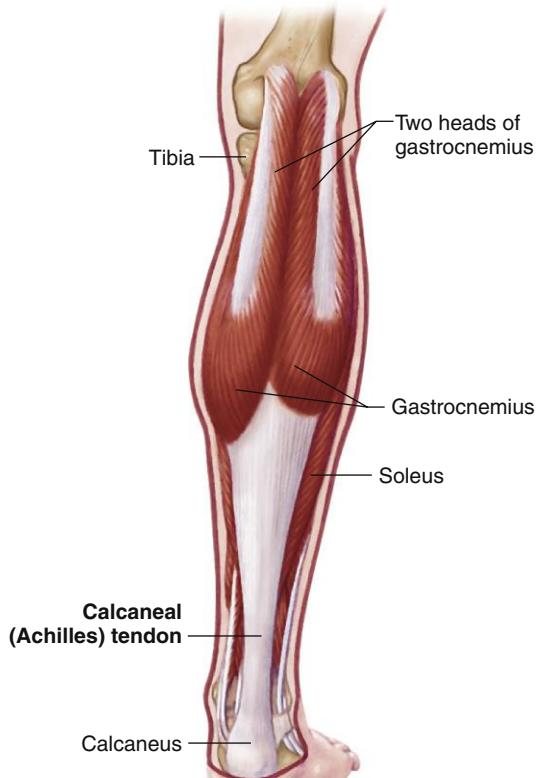
achievement age (AA) /əchēv'mənt/, the level of a person's educational development as measured by an achievement test and compared with the normal score for chronological age. Compare **mental age**. See also **developmental age**.

achievement quotient (AQ), a numeric expression of a person's achievement age, determined by various achievement tests, divided by the chronological age and expressed as a multiple of 100. Compare **intelligence quotient**. See also **accomplishment quotient**.

achievement test, a standardized test for the measurement and comparison of knowledge or proficiency in various fields of vocational or academic study. Compare **aptitude test**, **intelligence test**, **personality test**, **psychological test**.

Achilles jerk. See **Achilles tendon reflex**.

Achilles tendon /əkil'ēz/ [*Achilles*, Greek mythological hero], the common distal tendon of the soleus and gastrocnemius muscles of the leg. It is the thickest and strongest tendon in the body and connects the triceps surae to the heel



Achilles tendon (Patton and Thibodeau, 2010)

bone. In an adult, it is about 15 cm long. The tendon becomes contracted about 4 cm above the heel and flares out again to insert into the calcaneus. Also called **tendo calcaneus**.

Achilles tendon reflex, a deep tendon reflex consisting of plantar flexion of the foot when a sharp tap is given directly to the tendon of the gastrocnemius muscle at the back of the ankle. This reflex is often absent in people with peripheral neuropathies or diabetes. A sluggish return of the flexed foot may occur in patients with hypothyroidism and lower motor neuron diseases. A hyperactive reflex may be caused by hyperthyroidism or by pyramidal tract disease, as well as by any upper motor neuron disease. Also called **Achilles jerk**, **ankle reflex**. See also **deep tendon reflex**.



Elicitation of the Achilles tendon reflex (Seidel et al, 2011)

achiral, pertaining to the absence of chirality in a compound, as in stereochemical isomers.

achlorhydria /ə'klōrhī'drē-ə/ [Gk, *a* + *chloros*, not green, *hydor*, water], an abnormal condition characterized by the absence of hydrochloric acid in gastric secretions. Achlorhydria occurs most commonly in atrophy of the gastric mucosa, gastric carcinoma, and pernicious anemia. It is also found in severe iron deficiency anemia. Malignancy is expected when achlorhydria is seen in combination with peptic ulcers. Protein digestion is severely impaired in patients with achlorhydria, but overall digestion in the digestive tract is relatively normal because trypsin and other enzymes of the pancreas and small intestine are not affected. See also **achylia**, **achlorhydric**, **adj**.

achloropsia /ə'klōrop'sē-ə/ [Gk, *a*, not, *chloros*, green, *opsis*, vision], an inability to see green; green blindness.

acholia /akō'lē-ə/ [Gk, *a* + *chole*, without bile], 1. the absence of or a decrease in bile secretions. 2. any condition that suppresses the flow of bile into the small intestine. **—acholic**, **adj**.

acholuria /ak'əlōōrē-ə/ [Gk, *a* + *chole*, without bile, *ouron*, urine], the absence or lack of bile pigments in the urine. It occurs in some forms of jaundice.

achondrogenesis /ākon'drōjēn'ēsəs/, the most severe form of chondrodyplasia typically lethal before or soon after birth. Type 1 is characterized by deficient ossification in skeletal bone and a large cranium. Type 2 is characterized by deficient ossification of the vertebrae, severe dwarfism, and a prominent abdomen. Several mutations have been identified.

achondroplasia /ākon'drōplā'zha/ [Gk, *a* + *chondros*, without cartilage, *plassein*, to form], a disorder of the growth of cartilage in the epiphyses of the long bones and skull. It results in premature ossification, permanent limitation of skeletal development, and dwarfism typified by a protruding forehead and short, thick arms and legs on a normal trunk. Onset is in fetal life and the diagnosis can be made on prenatal ultrasound. It is inherited as an autosomal-dominant gene with most cases occurring as a sporadic mutation (affecting

a fibroblast growth factor receptor). The majority of affected individuals die during gestation or the first year of life. Those who survive have relatively normal longevity. Also called **chondrodystrophy, fetal rickets**.

achondroplastic dwarf /plas'tik/, the most common type of dwarf, characterized by disproportionately short limbs, a normal-sized trunk, a large head with a depressed nasal bridge and small face, stubby hands, and lordosis. The condition results from an inherited defect in bone-forming tissue and is often associated with other defects or abnormalities, although there is usually no involvement of the central nervous system and intelligence is normal. See also **achondroplasia**.

AChR, abbreviation for **acetylcholine receptor**.

achroma /akrō'mā/ [Gk, *a*, without, *chroma*, color], lack of color.

achromatic, 1. free of color. 2. color blind. 3. a substance not colored by common staining agents.

achromatic lens /ak'rōmat'ik/ [Gk, *a*, without, *chroma*, color; L, *lens*], a lens in which the focal lengths for red and blue colors of the spectrum are the same, refracting light without decomposing it into its component colors.

achromatic vision. See **color blindness**.

achromatocyte. See **achromocyte**.

achromatopsia. See **color blindness**.

achromia /akrō'mēə/ [Gk, *a* + *chroma*, without color], 1. depigmentation. 2. the absence or loss of natural pigmentation of the skin and iris. It may be congenital or acquired.

Achromobacter /akrō'mōbak'tōr/, a genus of gram-negative, rod-shaped, flagellated bacteria that do not form pigment on agar. Most species in the genus are saprophytic, nonpathogenic organisms found in water, soil, or the human digestive tract, but they may cause infection in the compromised host.

achromocyte /ākrō'mōsīt/, a red cell artifact that stains more faintly than intact red cells.

Achromycin V, a trademark for an antibiotic (**tetracycline hydrochloride**).

achylia /ākī'lē-ə/ [Gk, *a*, *chylōs*, not juice], an absence or severe deficiency of hydrochloric acid and pepsinogen (that is, pepsin) in the stomach. This condition may also occur in the pancreas when the exocrine portion of that gland fails to produce digestive enzymes. Also called **achylosis**. See also **achlorhydia**.

achyloous /ākī'lōs/, 1. pertaining to a lack of gastric juice or other digestive secretions. 2. pertaining to a lack of chyle.

acicular /āsik'yōlər/ [L, *aciculus*, little needle], needle-shaped, such as certain leaves and crystals.

acid /ās'id/ [L, *acidus*, sour], 1. a compound that yields hydrogen ions when dissociated in aqueous solution (Arrhenius definition), acts as a hydrogen ion donor (Brønsted definition), or acts as an electron pair acceptor (Lewis definition). Acids turn blue litmus red, have a sour taste, and react with bases to form salts. Acids have chemical properties essentially opposite to those of bases. See also **alkali base**. 2. slang **LSD**. 3. sour or bitter to the taste. —**acidify**, v., *acidic*, adj.

acid-, a prefix meaning ‘sour, bitter, acid’: *acidemia*, *acidophil*.

acidæmia. See **acidemia**.

acidalbumin, a substance formed by the action of mild acid solutions on albumin. Also called **metaprotein**.

acidaminuria. See **aminoaciduria**.

acid-base balance, a condition existing when the net rate at which the body produces acids or bases equals the net rate at which acids or bases are excreted. The result of acid-base

balance is a stable concentration of hydrogen ions in body fluids. See also **acid**, **base**.

acid-base management, a nursing intervention from the Nursing Interventions Classification (NIC) defined as promotion of acid-base balance and prevention of complications resulting from acid-base imbalance. See also **Nursing Interventions Classification**.

acid-base management: metabolic acidosis, a nursing intervention from the Nursing Interventions Classification (NIC) defined as promotion of acid-base balance and prevention of complications resulting from serum HCO₃ levels lower than desired. See also **Nursing Interventions Classification**.

acid-base management: metabolic alkalosis, a nursing intervention from the Nursing Interventions Classification (NIC) defined as promotion of acid-base balance and prevention of complications resulting from serum HCO₃ levels higher than desired. See also **Nursing Interventions Classification**.

acid-base management: respiratory acidosis, a nursing intervention from the Nursing Interventions Classification (NIC) defined as promotion of acid-base balance and prevention of complications resulting from serum pCO₂ levels higher than desired. See also **Nursing Interventions Classification**.

acid-base management: respiratory alkalosis, a nursing intervention from the Nursing Interventions Classification (NIC) defined as promotion of acid-base balance and prevention of complications resulting from serum pCO₂ levels lower than desired. See also **Nursing Interventions Classification**.

acid-base metabolism, the metabolic processes that maintain the balance of acids and bases essential in regulating the composition of body fluids. Acids release hydrogen ions, and bases accept them; the concentration of hydrogen ions present in a solution governs whether it is acid, alkali, or neutral. Hydrogen ions in water are measured on a pH scale of 0.0 to 14.0, with a reading of 7.0 indicating neutral at 25° C. Above 7.0, the solution is alkaline; below, it is acid. Blood is slightly alkaline, ranging from 7.35 to 7.45. Metabolic buffer systems within the body maintain this ratio, and when the ratio is upset, acidosis or alkalosis results. Acidosis may be caused by diarrhea, vomiting, uremia, diabetes mellitus, and the action of certain drugs. Alkalosis may be caused by overingestion of alkaline drugs, loss of chloride in gastric vomitus, and the action of certain diuretic drugs. See also **acid-base balance**, **acidosis**, **alkalosis**, **pH**.

acid-base monitoring, a nursing intervention from the Nursing Interventions Classification (NIC) defined as collection and analysis of patient data to regulate acid-base balance. See also **Nursing Interventions Classification**.

acid burn, damage to tissue caused by exposure to an acid. The severity of the burn is determined by the strength of the acid and the duration and extent of exposure. Initial emergency treatment includes irrigating the affected area with large amounts of cool or cold water. Compare **alkali burn**.

acid dust, an accumulation of highly acidic particles of dust. Such substances accumulate in the atmosphere and account for much of the smog hanging over large metropolitan areas. Many respiratory illnesses, such as lung cancer and asthma, may be aggravated or caused by such dust. See also **acid rain**.

acidemia /ās'idē'mē-ə/, decreased pH status of the blood or abnormal acidity in the blood. Specific types are denoted by prefixes: *lactacidemia*, *lipacidemia*. Also spelled *acidæmia*.

acid etching, microscopic roughening of dental enamel with an acid (usually phosphoric acid) to remove the smear layer and open enamel tubules, increase retention of resin sealant, and promote mechanical retention.

acid-fast bacillus (AFB), a type of bacillus that resists decolorizing by acid after accepting a stain. Examples include *Mycobacterium tuberculosis* and *M. leprae*.

acid-fast stain, a method of staining used in bacteriology in which a smear on a slide is treated with carbol-fuchsin stain or auramine-rhodamine stain, decolorized with acid alcohol, and counterstained with methylene blue or potassium permanganate to identify acid-fast bacteria. Acid-fast organisms resist decolorization and appear red or yellow against a dark background when viewed under a microscope. The stain may be performed on any clinical specimen but is most commonly used in examining sputum for *Mycobacterium tuberculosis*, an acid-fast bacillus. See also **Ziehl-Neelsen test**.

acid flush, a runoff of precipitation with a high acid content, as may occur during thaws in various parts of the world. Acid flushes may pollute rivers and reservoirs, killing fish and endangering the natural balance of the ecosystem. See also **acid rain**.

acidify. See **acid**.

acidity /əsɪd'ɪtē/ [L, *acidus*, sour], 1. the degree of sourness, sharpness of taste, or ability of a chemical to yield hydrogen ions in an aqueous solution. 2. the degree of gastric acid in the stomach. The acidity varies during any 24-hour period, but the pH averages 0.9 to 1.5. The main source of stomach acidity is hydrochloric acid secreted by the gastric glands of the stomach.

acid mist, a mist containing a high concentration of acid or particles of any toxic chemical, such as carbon tetrachloride or silicon tetrachloride. Such chemicals are often used by industry and stored in tanks that may leak their contents into residential areas, becoming especially dangerous if the toxic substance mixes with fog. Inhalation of acid mists may irritate the mucous membranes, the eyes, and the respiratory tract and seriously upset the chemical balances of the body. See also **acid rain**.

acid mucopolysaccharide, a major chemical constituent of ground substance in the dermis.

acidophil /əs'idōfīl/, əsɪd'əfīl/ [L, *acidus* + Gk, *philein*, to love], 1. a cell or cell constituent with an affinity for acid dyes. 2. an organism that thrives in an acid medium. —*acidophilic*, adj.

acidophilic adenoma, a tumor of the pituitary gland characterized by cells that can be stained red with an acid dye. Gigantism and acromegaly can result from the hypersecretion of growth hormone caused by an acidophilic adenoma. Also called **eosinophilic adenoma**.

acidophilus milk /əs'idōf'ləs/, milk inoculated with cultures of *Lactobacillus acidophilus*, used in various enteric disorders to change the bacterial flora of the GI tract.

acidosis /əs'idō'sis/ [L, *acidus* + Gk, *osis*, condition], an abnormal increase in the hydrogen ion concentration in the blood, resulting from an accumulation of an acid or the loss of a base. It is indicated by a blood pH below the normal range (7.35 to 7.45). The various forms of acidosis are named for their cause; for example, renal tubular acidosis results from failure of the kidney to secrete hydrogen ions or reabsorb bicarbonate ions, respiratory acidosis results from respiratory retention of carbon dioxide, and diabetic acidosis results from an accumulation of ketones associated with a lack of insulin. Treatment depends on diagnosis of the underlying abnormality and concurrent correction of the acid-base imbalance. Compare **alkalosis**. —*acidotic*, adj.

acidosis dialysis, a type of metabolic acidosis that may develop when contaminating bacteria alter the pH of the dialysis bath.

acid phosphatase, an enzyme found in the kidneys, serum, semen, and prostate gland. It is elevated in serum in prostate cancer and in trauma. Normal concentrations in serum are 0 to 1.1 Bodansky units/mL. See also **alkaline phosphatase**.

acid phosphatase test, a rarely used blood test used to diagnose end-stage prostatic carcinoma and to monitor the efficacy of treatment. It has mostly been replaced by the prostate-specific antigen test. It is also used to test for the presence of semen in suspected rape cases.

acid poisoning, a toxic condition caused by the ingestion of a toxic acid agent such as hydrochloric, nitric, phosphoric, or sulfuric acid, some of which are ingredients in common household cleaning compounds. Compare **alkali poisoning**.

acid rain, the precipitation of moisture, as rain, with high acidity caused by release into the atmosphere of pollutants from industry, motor vehicle exhaust, and other sources. Acid precipitation with a pH of 5.6 or lower is blamed by various authorities for numerous human health problems, fish kills, and the destruction of timber. Also called *acid precipitation*, *acid snow*. See also **acid dust**, **acid flush**, and **acid mist**.

acid rebound, the hypersecretion of gastric acid that may occur after the initial buffering effect of an antacid. It occurs most noticeably when antacids containing calcium carbonate are used.

acid salt, a salt formed from an acid with two or more bases by only partial replacement of hydrogen ions from the related acid, leaving some degree of acidity. An example is sodium bicarbonate, which is also identified as sodium acid carbonate or sodium hydrogen carbonate.

acid snow. See **acid rain**.

acid therapy, a method for removing verrucae that uses plaster patches impregnated with acid, such as 40% salicylic acid, or with acid drops, such as 5% to 16.7% salicylic and lactic acids in flexible collodion. The patches are applied every 12 to 24 hours for 2 to 4 weeks. Acid therapy is not usually recommended for body areas that perspire heavily or that are likely to become wet or for exposed body parts where the patches would detract from the patient's appearance.

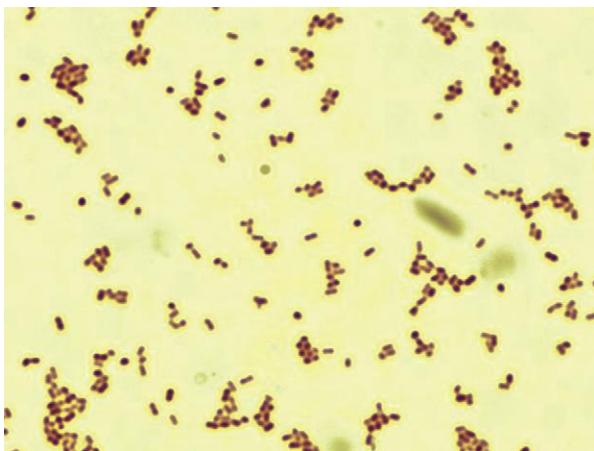
acidulous /əsɪd'yələs/, slightly acidic or sour.

aciduria [L, *acidus* + Gk, *ouron*, urine], the excretion of an acid in the urine. The condition may be caused by a diet rich in meat proteins or certain fruits, a medication used to treat a urinary tract disorder, an inborn error of metabolism, or ketoacidosis.

acinar adenocarcinoma. See **acinic cell adenocarcinoma**.

acinar cell /əs'inər/ [L, *acinus*, grape], a cell of the tiny lobules of a compound gland or similar saclike structure, such as an alveolus.

Acinetobacter /əs'inē'təbək'tər/, a genus of nonmotile, aerobic bacteria of the family Neisseriaceae that often occurs in clinical specimens. The bacterium contains gram-negative or gram-variable cocci and does not produce spores. It grows on regular medium without serum and is oxidase negative and catalase positive. It is mainly found in water, and its disease activity is opportunistic. Most human disease is caused by *A. baumannii*. The bacterium can cause various infections, including pneumonia, wound infections, bacteremia, and meningitis. Most infections occur in immunocompromised individuals and rarely occur outside of intensive care units and other health care settings. The organism can also colonize patients without causing symptoms or infection, particularly in open wounds or tracheostomy sites. *Acinetobacter* is often resistant to those antibiotics used regularly.



Acinetobacter (Murray, Rosenthal, and Pfaller, 2005)

acini. See **acinus.**

acinic cell adenocarcinoma /as'in'ik/ [L, *acinus*, grape], an uncommon low-grade malignant neoplasm that develops in the secreting cells of racemose glands, especially the salivary glands. The tumor consists of cells with clear or slightly granular cytoplasm and small eccentric dark nuclei. Also called **acinar adenocarcinoma**, **acinous adenocarcinoma**.



Acinic cell carcinoma (Fletcher, 2007)

aciform /as'in'ifōrm/ [L, *acinus*, grape; *forma*, shape], shaped like a cluster of grapes. The term refers particularly to glandular tissue.

acinitis /as'inīt'sis/, any inflammation of the tiny, grape-shaped portions of certain glands. Compare **adenitis**.

acinotubular gland /as'inōt(y)ōōb'yələr/ [grape-shaped], a gland in which the acini are tube shaped.

acinous adenocarcinoma. See **acinic cell adenocarcinoma.**

acinus /as'inəs/ pl. **acini** [L, grape], 1. any small saclike structure, particularly one found in a gland. 2. See **alveolus**.

acitretin /as'e-tret'in/, a second-generation retinoid used in the treatment of severe psoriasis. It is administered orally.

A.C. joint, abbreviation for *acromioclavicular joint*. See **acromioclavicular articulation**.

acknowledgement, a therapeutic technique characterized by providing feedback to individuals, assuring them that they have been heard.

ACL, abbreviation for **anterior cruciate ligament**.

Aclovate, a trademark for a topical corticosteroid (**alclo-metasone dipropionate**).

ACLS, abbreviation for **advanced cardiac life support**.

acme /ak'mē/ [Gk, *akme*, point], the peak or highest point, such as the peak of intensity of a uterine contraction during labor or the peak of perfection.

acne /ak'nē/, a chronic disorder of the hair follicles and sebaceous glands characterized by pimple outbreaks, cysts, infected abscesses, and sometimes scarring. Characteristic lesions include open (blackhead) and closed (whitehead) comedones, inflammatory papules, pustules, and nodules. It seems to result from a combination of factors, such as thickening of the follicular opening, increased sebum production, the presence of bacteria, and the host's inflammatory response. Types of acne include **acne conglobata**, **acne fulminans**, and **chloracne**. A common form is **acne vulgaris**. See also **comedo**.

■ **OBSERVATIONS:** Superficial acne presents with comedones, scattered pustules, and oily skin on the face, neck, upper back, and chest. In deep acne, the pustules are more numerous and accompanied by pus-filled cysts, inflamed nodules, abscesses, and scarring.

■ **INTERVENTIONS:** Manual extraction is used for comedones and surgical excision may be used for persistent nodules and sinus tracts. Intralesional steroids may be used to treat inflamed nodules. Topical antimicrobial and antiinfective drugs, comedolytics, and oral antiinfective drugs are used to treat pustules. Isotretinoin may be used if antibiotics are unsuccessful. Oral estrogen-progesterone is often successfully used to treat acne in females. Dermabrasion can be used to treat scarring.

■ **NURSING CONSIDERATIONS:** Patient education includes instruction to avoid picking or squeezing comedones or pustules; and instruction to avoid exposure to coal tar products, cocoa butter, greasy cosmetics, or hair gels. Patients should know that diet has been shown to have little or no influence on acne. Most over-the-counter preparations have no proven efficacy and may aggravate acne outbreaks. Excessive cleansing is counterproductive. Patients started on isotretinoin should have baseline liver and lipid panels and a pregnancy test before use. Females should be counseled on the serious risks of this medication to a fetus should pregnancy occur. Females should be placed on two forms of birth control 1 month before starting therapy, during therapy and at least 1 month after therapy. All patients on this medication should avoid vitamin A supplements and prolonged exposure to the sun. Sunscreen and protective clothing should be used when exposed to sunlight.

acne atrophica /atrof'ikə/, a skin disorder characterized by small scars or pits left by an earlier occurrence of acne vulgaris.

acne cachecticorum, an eruption or irritation of the skin that may occur in patients who are very weak and debilitated. It is characterized by soft, mildly infiltrated pustular lesions.

acne conglobata /kon'glōbā'tə/, a severe form of acne with abscess, cyst, scar, and keloid formation. It may affect the lower back, buttocks, and thighs, as well as the face and chest. It affects more males than females. Also called **cystic acne**.

acneform /ak'nifōrm/, resembling acne. Also **acneiform** /aknē'fōrm/.

acneform drug eruption, any of various skin reactions to a drug characterized by papules and pustules resembling acne.

acne fulminans, severe scarring acne in teenage males, which may be accompanied by fever, polyarthralgia, crusted ulcerative lesions, weight loss, anemia, arthritis, and blood disorders.

acneogenic /ak'nijen'ik/ [Gk, *akme* + *genein*, to produce], causing or producing acne.

acneiform. See **acneform**.

acne keloid [Gk, *akme*, point, *kelis*, spot, *eidos*, form], an acneform disorder in which secondary pyogenic infection in and around pilosebaceous structures results in keloidal scarring. It is manifested as persistent folliculitis of the back of the neck associated with occlusion of the follicular orifices. It is most often encountered in black and Asian men.

acne medicamentosa, any type of acne resulting from a reaction to medication, such as to a steroid or the salt of a halogen. Also called **drug-induced acne**.

acne necrotica miliaris, a rare, chronic type of pruritic, pustular folliculitis of the scalp, forehead, and temples occurring mostly in adults and characterized by tiny pustules, probably a pyoderma or tuberculid. Also called **acne varioliformis**.

acne neonatorum, a skin condition of newborns caused by sebaceous gland hyperplasia and characterized by the localized formation of grouped comedones or papules on the nose, cheeks, and forehead.



Acne neonatorum (Zitelli and Davis, 2007)

acne papulosa, a common skin condition in which comedones develop moderately inflamed papules. It is considered a papular form of acne vulgaris.

acne pustulosa, a form of acne in which the predominant lesions are pustular and may result in scarring.

acne rosacea. See **rosacea**.

acne urticaria /ur'tikərē-ə/, a form of acne marked by papules that are predominantly edematous and wheallike and that have been aggravated by scratching.

acne varioliformis. See **acne necrotica miliaris**.

acne vulgaris. See **acne**.



Acne vulgaris on the forehead (Callen et al, 2000)

ACNM, abbreviation for **American College of Nurse-Midwives**.

ACOEM, abbreviation for **American College of Occupational and Environmental Medicine**.

ACOG, abbreviation for **American College of Obstetricians and Gynecologists**.

acognosia /ak'ōg-nō'zhə/, a knowledge of remedies.

acorea /ā-kōrē'ə/ [Gk, *a*, without, *kore*, pupil], an absence of the pupil of the eye.

acoria /ā-kōrē'ə/ [Gk, *a*, without, *koros*, satiety], a condition characterized by constant hunger and eating, even when the appetite is small.

acorn-tipped catheter, a flexible catheter with an acorn-shaped tip used in various diagnostic procedures, especially in urology.

ACOTE, abbreviation for **Accreditation Council for Occupational Therapy Education**.

acus-, **acus-**, **acust-**, **acusto-**, combining forms meaning 'hearing': *acusma*, *acoustic*.

-acusia, **-acusia**, **-acusis**, **-akusis**, suffixes meaning a '(specified) condition of the hearing.'

acusma pl. **acusmas**, **acusmata** /əkooz'mə/ [Gk, *akousma*, something heard], a hallucinatory impression of strange sounds.

acoustic /əkooō'stik/ [Gk, *akouein*, to hear], pertaining to sound or hearing. Also **acoustical**.

-acoustic, **-acoustical**, 1. suffixes meaning 'the hearing organs': *entacoustic*, *otacoustic*. 2. suffixes meaning 'amplified sound waves': *microacoustic*, *stethacoustic*.

acoustic apparatus, the various components of the sense of hearing. See also **cochlea**, **inner ear**, **organ of Corti**.

acoustic cavitation, a potential biological effect of ultrasound, marked by large-amplitude oscillations of microscopic gas bubbles. As normally used, ultrasound pulses are too short to cause acoustic cavitation in human tissues.

acoustic center, the portion of the brain, in the temporal lobe of the cerebrum, in which the sense of hearing is located. Also called **auditory cortex**.

acoustic hair cell. See **auditory hair**.

acoustic-immittance audiometry, audiological testing used to evaluate the status of the external and middle ears and of the acoustic reflex arc. It includes tympanometry, static-compliance testing, and acoustic reflex measures.

acoustic impedance, interference with the passage of sound waves by objects in the path of those waves. It equals the velocity of sound in a medium multiplied by the density of the medium. The acoustic impedance of bone may be nearly five times as great as that of blood. Testing middle ear acoustic impedance is part of audiological evaluation batteries used to detect middle ear problems.

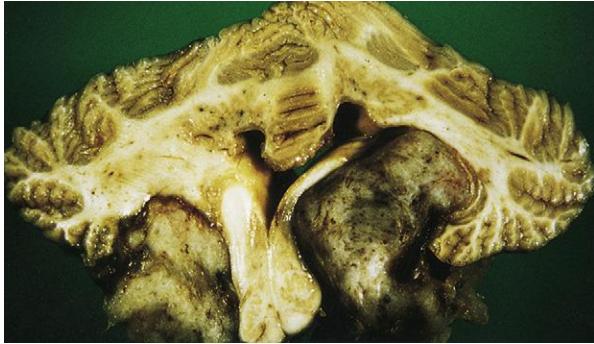
acoustic meatus [Gk, *akoustikos*, hearing; L, *meatus*, a passage], the external or internal canal of the ear.

acoustic microscope, a microscope in which the object being viewed is scanned with sound waves and its image reconstructed with light waves. Acoustic microscopes produce excellent resolution of the objects being studied and allow close examination of cells and tissues without staining or damaging the specimen.

acoustic nerve. See **vestibulocochlear nerve**.

acoustic neuroma, a benign unilateral or bilateral tumor that develops from the vestibulocochlear nerve and grows within the auditory canal. Depending on the location and size of the lesion, tinnitus, progressive hearing loss, headache, facial numbness, papilledema, dizziness, and an unsteady gait may result. Paresis and difficulty in speaking and swallowing may occur in the later stage. Also called **acoustic**

neurilemmoma, acoustic neurinoma, acoustic neurofibroma schwannoma.



Acoustic neuroma

(Kumar, Abbas, and Fausto, 2005/Courtesy Dr. K.M. Earle)

acoustic reflex, a contraction of the stapedius and tensor tympani muscles in the middle ear in response to a loud sound. The muscle contractions pull the stapes out of the oval window and thus protect the internal ear from damage caused by loud noise. The **acoustic reflex threshold** is the lowest level of sound that will elicit an acoustic reflex and is in the range of 85 to 90 dB hearing level in individuals with normal hearing. Acoustic reflexes are usually elevated or absent in cases of conductive or sensorineural hearing loss and present at normal or lower levels in the case of cochlear hearing loss.

acoustics /əkoȯstiks/ [Gk, *akoustikos*, hearing], the science of sound.

acoustic shadow, in an ultrasound image, the absence of echoes produced by the presence of dense material, such as calculi, which impede the transmission of sound waves. It is often used to detect biliary calculi.

acoustic trauma, a sudden loss of hearing, partial or complete, caused by an extremely loud noise, a severe blow to the head, or other trauma. The greatest loss of hearing occurs at 4000 Hz. It may be temporary or permanent. Compare **noise-induced hearing loss**.

acoustooptics /əkoȯstō-ōp'tiks/, a field of physics that studies the generation of light waves by ultra-high-frequency sound waves. Knowledge gained by such study is applied chiefly in the transmission of information by acoustooptic devices.

ACP, 1. abbreviation for **American College of Physicians**.

2. abbreviation for **American College of Prosthodontists**.

acquired /əkwī'ərd/ [L, *acquirere*, to obtain], pertaining to a characteristic, condition, or disease originating after birth, not caused by hereditary or developmental factors but by a reaction to environmental influences outside of the organism. An example is acquired immunity. Compare **congenital, familial, hereditary**.

acquired cystic kidney disease, the development of cysts in a formerly noncystic kidney during end-stage renal disease.

acquired epileptic aphasia. See **Landau-Kleffner syndrome**.

acquired hypogammaglobulinemia [L, *acquirere*, to obtain; Gk, *hypo*, a deficiency, *gamma*, third letter of Greek alphabet; L, *globulus*, small globe; Gk, *haima*, blood], an acquired deficiency of the gamma globulin blood fraction. See also **hypogammaglobulinemia**.

acquired immunity, any form of immunity that is not innate and is obtained during life. It may be naturally or

artificially acquired and actively or passively induced. **Naturally acquired immunity** is obtained by the development of antibodies resulting from an attack of infectious disease or by the transmission of antibodies from the mother through the placenta to the fetus or to the infant through colostrum and breast milk. **Artificially acquired immunity** is obtained by vaccination or by the injection of immune gamma globulin. Acquired immunity can be divided into cell-mediated immunity (T cells) and humoral immunity (B cells). Compare **natural immunity**. See also **active immunity, passive immunity**.

acquired immunodeficiency syndrome (AIDS), a syndrome involving a defect in cell-mediated immunity that has a long incubation period, follows a protracted and debilitating course, is manifested by various opportunistic infections, and without treatment has a poor prognosis. The disorder originally was found in homosexual men and IV drug users but now occurs increasingly among heterosexual men and women and children of those with the disease. More than 1 million cases of AIDS have appeared in the United States, where in 1993 it was the leading cause of death among men between 25 and 44 years of age and the fourth leading cause of death among women of the same age group. Worldwide, an estimated 25 million had died from the epidemic by the end of 2006, 2.9 million of those in 2006 alone. Approximately 40 million people are estimated to be living with HIV/AIDS, 37.2 million adults and 2.3 million children under the age of 15. The disease is particularly prevalent in sub-Saharan Africa.

■ **OBSERVATIONS:** AIDS is caused by either of two varieties of the human immunodeficiency virus, designated HIV-1 and HIV-2. HIV is a retrovirus that attracts and kills CD4+ helper T lymphocytes, weakening the immune system's ability to prevent infection. The virus may also invade macrophages, in which it replicates freely, undetected by the immune system. HIV is not spread by casual contact but rather by sexual intercourse or exposure to contaminated blood, semen, breast milk, or other body fluids of infected persons. A patient may be diagnosed as having AIDS if he or she is infected with HIV, has a CD4+ count below 200 to 500/mL, and exhibits one or more of the following signs and symptoms: extreme fatigue, intermittent fever, night sweats, chills, lymphadenopathy, enlarged spleen, anorexia and consequent weight loss, severe diarrhea, apathy, and depression. As the disease progresses, characteristics are a general failure to thrive, anergy, and any of a variety of recurring infections, most commonly *Pneumocystis pneumonia*, tuberculosis, meningitis, and encephalitis caused by aspergillosis, candidiasis, cryptococcosis, cytomegalovirus infection, toxoplasmosis, or herpes simplex. Some patients with AIDS are susceptible to malignant neoplasms, especially Kaposi's sarcoma, Burkitt's lymphoma, and non-Hodgkin's lymphoma, that both cause and result from immunodeficiency. Psychological complications of AIDS may include chronic anxiety, depression, substance dependence, organic mental disorders, and suicidal ideation.

■ **INTERVENTIONS:** Treatment consists primarily of chronic symptom management and combined chemotherapy to counteract the opportunistic infections. There is no known cure. Drugs used to treat AIDS include reverse transcriptase inhibitors, such as zidovudine and dideoxyinosine, which interfere with the virus' ability to synthesize DNA within host cells, and HIV protease inhibitors, such as ritonavir and indinavir, which cause the production of noninfectious HIV particles. These drugs are given in combinations (often called *cocktails*); one commonly used combination is made up of two reverse transcriptase inhibitors and a potent HIV protease

inhibitor. Vaccines routinely recommended for AIDS include those directed against pneumococcal influenza, hepatitis B, and general childhood infections, as well as infections that may be endemic in countries where the patient may travel, such as typhoid and yellow fever.

■ **NURSING CONSIDERATIONS:** Nursing care of the patient with AIDS varies with the patient's symptoms. These may include dyspnea, nutritional wasting, fatigue, pain, and incontinence. Intervention is directed at providing education to prevent the spread of disease and infection, promoting self-care and optimal nutrition, and providing emotional support for patients and their families. Patients with tumors, hematologic abnormalities, and infections require routine treatment for these disorders along with care for their HIV-related complaints. See also **AIDS-dementia complex, AIDS-wasting syndrome.**

acquired pellicle, an acellular film composed of salivary glycoproteins that closely and firmly adheres to the oral cavity. It is distinct from bacterial plaque, which is cellular and loosely adhered to the teeth until calcified into calculus. Acquired pellicle that has become discolored as a result of poor oral hygiene is called brown pellicle. Compare **bacterial plaque**.

acquired reflex. See **conditioned reflex.**

acquired sterility [L, *acquirere*, to obtain, *sterilis*, barren], the failure to conceive after once bearing a child. Also called **one-child sterility, secondary infertility.**

acquired trait [L, *acquirere*, to obtain + *trahere*, to draw], a physical characteristic that is not inherited but may be an effect of the environment or of a somatic mutation.

ACR, abbreviation for **American College of Radiology.**

acral /ak'ral/ [Gk, *akron*, extremity], pertaining to an extremity or apex.

acral erythema, erythema localized to the palms and soles, as in hand-foot syndrome.

Acremonium /ak're-mo'ne-um/, a genus of Fungi imperfecti of the former class Hyphomycetes. Some species produce cephalosporin antibiotics. Formerly called **Cephalosporium.**

acid /ak'rid/ [L, *acris*, sharp], sharp or pungent, bitter and unpleasant to the smell or taste.

acridine /ak'tridēn/, a dibenzopyridine compound used in the synthesis of dyes and drugs. Its derivatives include fluorescent yellow dyes and the antiseptic agents acriflavine hydrochloride, acriflavine base, and proflavine.

acrimony /ak'rəmō'nē/ [L, *acrimonia*, pungency], a quality of bitterness, harshness, or sharpness.

acrivastine /ak'tri-vas'tēn/, a nonsedating antihistamine used in the treatment of hay fever. It is administered orally.

■ **INDICATION:** When combined with the decongestant pseudoephedrine hydrochloride, it is prescribed in the treatment of allergic rhinitis.

■ **CONTRAINdications:** The drug should not be given to patients with known sensitivity to this drug or other alkylamine antihistamines or any components of the formulation. Since pseudoephedrine is a sympathomimetic, the use of this combination is contraindicated in patients using monoamine oxidase inhibitors or in those with severe coronary artery disease or severe hypertension. It is also contraindicated in those with renal insufficiency.

■ **ADVERSE EFFECTS:** The side effects most often reported include somnolence, headache, dizziness, nervousness, insomnia, tachycardia, palpitations, xerostomia, nausea, and muscle weakness.

acro-, a prefix meaning 'extremities': *acrocentric, acrocyanosis.*

acrocentric /ak'rōsen'trik/ [Gk, *akron*, extremity, *kentron*, center], pertaining to a chromosome in which the centromere is located near one of the ends so that the arms of

the chromosome are extremely uneven in length. Compare **metacentric, submetacentric, telocentric.**

acrocephalopolysyndactyly [acrocephaly + polysyndactyly], any of several inherited disorders characterized by a peaked cranium and webbed fingers and toes, along with extra fingers or toes. Type I (ACPS I) is Pfeiffer's syndrome; Type II (ACPS II) is Carpenter's syndrome; Type III (ACPS III) is Sakati-Nyhan syndrome.

acrocephalosyndactyly /ak'rō-sef'ə-lō-sin-dak'ti-lē/ [acrocephaly + syndactyly], any of a group of autosomal dominant disorders in which premature fusion of the cranium results in a conical deformity of the skull. Webbed fingers or toes are also present. The term is often used alone to denote **Apert's syndrome.**

acrocephaly. See **oxycephaly.**

acrochordon /ak'rōkōr'don/, a benign, pedunculated growth commonly occurring on the eyelids, neck, axillae, or groin. Also called **skin tag.**



Acrochordon (Callen et al, 2000)

acrocyanosis, symmetrical cyanosis of the extremities, with persistent, uneven blue or red discoloration of the skin of the fingers, toes, wrists, or ankles accompanied by sweating or profuse coldness of the digits. Also called **Raynaud's sign.**

acrodermatitis /-dur'mōtī'tis/ [Gk, *akron* + *derma*, skin, *itis*, inflammation], inflammation of the skin of the hands and feet caused by a parasitic mite belonging to the order Acarina.

acrodermatitis enteropathica /en'tärōpäth'ikə/, a rare, chronic disease of infants characterized by vesicles and bullae of the skin and mucous membranes, alopecia, diarrhea, and failure to thrive. An autosomal-recessive disorder of zinc malabsorption, the disease may be lethal if not treated. Zinc sulfate is usually prescribed.



Acrodermatitis enteropathica (Callen et al, 2000)

acrodermatitis papulosa infantum. See Gianotti-Crosti syndrome.

acrodynia /ak'rōdīnē-ə/ [Gk, *akron* + *odyne*, pain], a disease occurring in infants and young children in which mercury poisoning is strongly implicated as the cause. Symptoms include edema, pruritus, generalized rash, pink coloration of the extremities, scarlet coloration of the cheeks and nose, swollen and painful extremities, cold and clammy skin, profuse sweating, digestive disturbances, photophobia, polyneuritis, extreme irritability alternating with periods of listlessness and apathy, and failure to thrive. Also called erythroderma, polyneuropathy, Feer's disease, pink disease, Swift's disease.

acroesthesia /ak'rō-esthē'zhə/ [Gk, *akron*, extremity, *aisthesis*, sensation], a condition of increased sensitivity or pain in the hands or feet.

acrokeratosis verruciformis /ak'rōker'atō'sis/, a skin disorder characterized by the appearance of flat wartlike lesions on the dorsum of the hands and feet and occasionally on the wrists, forearms, and knees. It is an inherited disease, transmitted as a dominant trait.



Acrokeratosis verruciformis (du Vivier, 1993)

acrokinesis /-kīnē'sis/ [Gk, *akron*, extremity, *kinesis*, motion], a state in which the limbs possess an abnormally wide range of motion.

acromegalia. See acromegaly.

acromegalic eunuchoidism /-mēgal'ik/, a rare disorder characterized by genital atrophy and development of female secondary sex characteristics occurring in men with advanced acromegaly caused by a tumor in the anterior pituitary gland. Initially the gonadal function of the anterior lobe may be stimulated, but with the growth of the tumor the patient may become impotent; lose facial, axillary, and pubic hair; and acquire soft skin and a feminine distribution of fat. Also called **retrograde infantilism**.

acromegaly /ak'rōmeg'älē/ [Gk, *akron* + *megas*, great], a chronic metabolic condition in adults caused by oversecretion of growth hormones by the pituitary gland. It is characterized by gradual, marked soft tissue enlargement and widening and thickening of skeletal bones in the face, jaw, hands, and feet. Hypertrophy of the vocal cords leads to deepening of the voice. Complications from increased growth hormone levels include atherosclerosis, peripheral neuropathy, hypertension, hyperglycemia, airway obstruction, cardiomyopathy, and visceromegaly involving the salivary glands, liver, spleen, and kidneys. Treatment normally includes radiation, pharmacological agents, or surgery, often involving partial resection of the pituitary gland. Also called **acromegalia**. Compare **gigantism**. —*acromegalic*, adj.



Acromegaly (Seidel et al, 2011/Courtesy Gary Wand, MD, The Johns Hopkins University and Hospital, Baltimore, Maryland)

acromial. See **acromion**.

acromicria /ak'rōmik'rē-ə/, an anomaly characterized by abnormally small hands and feet. The person may also possess unusually small facial features, such as the nose and ears.

acromioclavicular articulation /-mī'ōklavik'yōlər/, the gliding joint between the acromial end of the clavicle and the medial margin of the acromion of the scapula. It forms the highest part of the shoulder. The joint has six ligaments.

acromiocoracoid /-kōr'əkoid/, pertaining to the acromion and coracoid process.

acromiohumeral /-hyōō'mōrəl/, pertaining to the acromion and the humerus.

acromion /akrō'mē-ən/ [Gk, *akron* + *omos*, shoulder], the lateral extension of the spine of the scapula, forming the highest point of the shoulder and connecting with the clavicle at a small oval surface in the middle of the spine. It gives attachment to the deltoid and trapezius muscles. Also called **acromion process**. Compare **coracoid process**. —*acromial*, adj.

acromioscapular /-skap'yōlər/, pertaining to the acromion and the scapula.

acroosteolysis /ak'rō-ōs'tē-ōlī'sis/, destruction of the digit tips, including the bone, usually caused by vasospasm. It is characterized by Raynaud's phenomenon, loss of bone tissue in the hands, and sensitivity to cold temperatures. Causes include scleroderma, Raynaud's disease, Buerger's disease, frostbite, and exposure to vinyl chloride.

acroparesthesia /ak'rōpar'isthē'zhə/ [Gk, *akron* + *para*, near, *aisthesis*, feeling], 1. an extreme sensitivity at the tips of the extremities of the body, caused by nerve compression in the affected area or by polyneuritis. 2. a disease characterized by tingling, numbness, and stiffness in the extremities, especially in the fingers, hands, and forearms. It sometimes produces pain, pallor, or mild cyanosis. The disease occurs in a simple form, which may produce acrocyanosis, and in an angiospastic form, which may produce gangrene.

acrophobia [Gk, *akron* + *phobos*, fear], a pathological fear or dread of high places that results in extreme anxiety. Psychotherapy attempts to overcome or eliminate the phobic response. See also **obsession, phobia, flooding**.

acrosomal cap, acrosomal head cap. See **acrosome**.

acrosomal reaction /ak'rasō'mal/, the pattern of various chemical changes that occur in the anterior of the head of the spermatozoon in response to contact with the ovum and that lead to the sperm's penetration and fertilization of the ovum.

acrosome /ak'rasōm'/ [Gk, *akron* + *soma*, body], the cap-like structure surrounding the anterior end of the head of a spermatozoon. It is derived from the Golgi apparatus within the cytoplasm and contains degradative enzymes that function in the penetration of the ovum during fertilization. Also called **acrosomal cap**, **acrosomal head cap**. See also **acrosomal reaction**. —*acrosomal*, adj.

acrotic /əkrōt'ik/ [Gk, *a* + *krotos*, not beating], 1. pertaining to the surface of the body or to the skin glands. 2. pertaining to an absent or weak pulse.

acryl-, acryo-, prefixes meaning 'acrylic compound.'

acrylate, an anion, salt, ester, or conjugate base of acrylic acid. Also called *2-propenoate*.

acrylic acid (CH₂COOH) /əkril'ik/, a corrosive liquid used in the production of the plastic materials used in medical and dental procedures. Also called *2-propenoic acid*.

acrylic resin base, a form made of acrylic resin molded to conform to tissues of the alveolar process, used to support teeth of a prosthesis.

acrylic resin dental cement, a cement for restoring or repairing damaged teeth. In powder form it contains polymethyl methacrylate, which acts as a filler, plasticizer, and polymerization initiator. In liquid form it contains methyl methacrylate with an inhibitor and an activator.

ACS, 1. abbreviation for *American Cancer Society*. 2. abbreviation for *American Chemical Society*. 3. abbreviation for *American College of Surgeons*. 4. abbreviation for *anodal closing sound*. 5. abbreviation for **acute confusional state**. 6. abbreviation for *Association of Clinical Scientists*. 7. abbreviation for *abdominal compartment syndrome*.

ACSM, abbreviation for *American College of Sports Medicine*.

act-, a prefix meaning 'to do, drive, act': *action*, *activate*.

ACTH, abbreviation for **adrenocorticotrophic hormone**.

Acthar, a trademark for adrenocorticotrophic hormone injection (ACTH corticotropin).

-atide, a combining form designating a synthetic corticotropin.

Actifed, a trademark for a fixed-combination drug containing an adrenergic vasoconstrictor (**pseudoephedrine hydrochloride**) and an antihistamine (triprolidine hydrochloride).

actigraph /ak'tigraf/, any instrument that records changes in the activity of a substance or an organism and produces a graphic record of the process, such as an electrocardiograph.

actin, a protein forming the thin filaments in muscle fibers that are pulled on by myosin cross-bridges to cause a muscle contraction. Some bacteria forms actin tails to use for motility. See also **myosin**.

actin-. See **actino-**.

acting out, the expression of intrapsychic conflict or painful emotion through overt behavior that is usually pathological, defensive, and unconscious and that may be destructive or dangerous. In controlled situations such as psychodrama, Gestalt therapy, or play therapy, this behavior may be therapeutic in that it may serve to reveal to the patient the underlying conflict governing the behavior. See also **transference**.

actinic /ak'tin'ik/ [Gk, *aktis*, ray], pertaining to radiation, such as sunlight or x-rays.

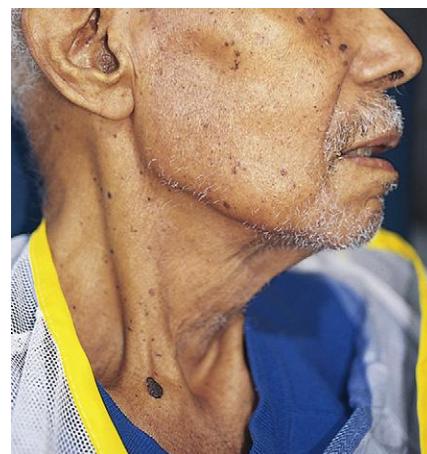
actinic burn, a burn caused by exposure to sunlight or another source of ultraviolet radiation.

actinic conjunctivitis [Gk, *aktis*, ray, + L, *conjunctivus*, connecting; Gk, *itis*, inflammation], an inflammation of the conjunctiva caused by exposure to the ultraviolet radiation

of sunlight or other sources, such as acetylene torches, therapeutic lamps (sun lamps), and klieg lights. Also called **actinic ophthalmia**.

actinic dermatitis, a skin inflammation or rash resulting from exposure to sunlight, x-ray, or atomic particle radiation. Chronic or recurrent actinic dermatitis can predispose to skin cancer. See also **actinic keratosis**.

actinic keratosis, a slowly developing, localized thickening and scaling of the outer layers of the skin as a result of chronic, prolonged exposure to the sun. It is more common in the fair skinned and elderly. It usually is a discrete, slightly raised, red-on-pink lesion located on a sun-exposed surface. Treatment of this premalignant lesion includes surgical excision, cryotherapy, and topical chemotherapy. Also called **senile keratosis**, **senile wart**, **solar keratosis**.



Actinic keratosis (Swartz, 2009)

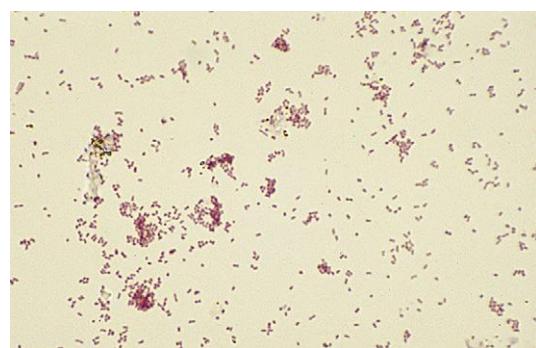
actinic ophthalmia. See **actinic conjunctivitis**.

actinism, the ability of sunlight or similar forms of radiation to produce chemical changes.

actinium (Ac), a rare, radioactive metallic element. Its atomic number is 89; its atomic mass is 227. It occurs in some ores of uranium.

actino-, actin-, prefixes meaning 'ray or radiation': *actiniform*, *actinotherapy*.

Actinobacillus /ak'tinōbāsill'əs/, a genus of small, gram-negative bacillus, with members that are pathogenic for humans and other animals. The species *Actinobacillus actinomycetemcomitans* is the cause of actinomycosis in humans.



Actinobacillus actinomycetemcomitans

(Mahon, Lehman, and Manoslis, 2007)

Actinomyces /ak'tinōmī'sēz/, pl. *actinomycetes* [Gk, *aktis*, ray, *mykes*, fungus], a genus of anaerobic or facultative

anaerobic, gram-positive bacteria. Species that may cause disease in humans, such as *Actinomyces israelii* (which causes actinomycosis), are normally present in the mouth and throat. Disease activity is normally limited to periodontal disease.

actinomycin A, the first of a group of chromopeptide antibiotic agents derived from soil bacteria. Most are derivatives of phenoxyazine and contain actinocin. They are generally active against gram-positive and gram-negative bacteria and some fungi. Because of their cytotoxic properties, they are effective for certain types of neoplasms. See also **dactinomycin**.

actinomycin B, an antibiotic antineoplastic agent derived from *Actinomyces antibioticus*.

actinomycin D. See **dactinomycin**.

actinomycosis /ak'tinōmīkō'sis/, a chronic bacterial disease most frequently located in the jaw, thorax, or abdomen. It is characterized by deep, lumpy abscesses that extrude a thin, granular pus through multiple sinuses. The disease occurs worldwide but is seen most frequently in those who live in rural areas. It is not spread from person to person or from animals to humans. The most common causative organism in humans is *Actinomyces israelii*, a normal inhabitant of the bowel and mouth. Disease occurs after tissue damage, usually in the presence of another infectious organism. It can be diagnosed by microscopic identification of sulfur granules, pathognomonic of *Actinomyces*, in the exudate. There are several forms of actinomycosis. Orocervicofacial actinomycosis occurs with the spread of the bacterium into the subcutaneous tissues of the mouth, throat, and neck as a result of dental or tonsillar infection. Thoracic actinomycosis may represent proliferation of the organism from cervicofacial abscesses into the esophagus, or it may result from inhalation of the bacterium into the bronchi. Abdominal actinomycosis usually follows an acute inflammatory process in the stomach or intestines, such as appendicitis, diverticulum of the large bowel, or a perforation found in the groin or another area that drains exudate into the stomach. A large mass may be palpated, and sinus tracts from abscesses deep in the abdomen may form. Pelvic actinomycosis is most commonly associated with intrauterine devices. Central nervous system actinomycosis is a rare cause of brain abscess. Bacterial endocarditis is very rarely caused by actinobacillus infection. Musculoskeletal actinomycosis involves subcutaneous tissue, muscle, and bone. Disseminated *Actinomycosis* follows hematogenous spread of the infection and may involve the skin, brain, liver, and urogenital system. All forms of actinomycosis are treated with at least 6 weeks of daily injections of penicillin in large doses. Abdominal actinomycosis can be cured in 40% of cases, thoracic actinomycosis in 80%, and orocervicofacial actinomycosis in 90%.



Actinomycosis

(Cohen, Powderly, and Opal, 2010/Courtesy Professor I. Brook)

actinomyosin, the complex consisting of parallel threads of actin and myosin proteins that constitutes muscle fibers. It is responsible for the contraction and relaxation of muscle. When a muscle fiber contracts, the two proteins slide past each other, shortening the fiber while increasing its apparent thickness. Also called **actomyosin**. See also **sliding filaments**.

actinotherapy, the use of ultraviolet, other parts of the spectrum of the sun's rays, or x-rays to treat various disorders, particularly skin diseases.

action, an activity used to carry out a function or produce an effect.

action current. See **action potential**.

action level, the level of concentration at which an undesirable or toxic component of a food is considered dangerous enough to public health to warrant government prohibition of the sale of that food. The U.S. Food and Drug Administration tests foods for action levels.

action potential, an electric impulse consisting of a self-propagating series of polarizations and depolarizations, transmitted across the plasma membranes of a nerve fiber during the transmission of a nerve impulse and across the plasma membranes of a muscle cell during contraction or another activity. In the absence of an impulse, the inside is electrically negative and the outside is positive (the resting potential). During the passage of an impulse at any point on the nerve fiber, the inside becomes positive and the outside, negative. Also called **action current**.

action tremor [L, *agere*, to do, *tremor*, shaking], a slight shaking that occurs or is evident during voluntary movements of the upper extremities. Also called **intention tremor**. See also **resting tremor**.

Activase, a trademark for a commercial form of tissue plasminogen activator (alteplase recombinant).

activate. See **activation**.

activated charcoal, a general-purpose emergency antidote and a powerful pharmaceutical adsorbent.

■ **INDICATIONS:** It is prescribed in the treatment of acute poisoning and the control of flatulence.

■ **CONTRAINdications:** There are no known contraindications, but activated charcoal is ineffective in poisoning caused by a strong acid or an alkali, cyanide, organic solvents, ethanol, methanol, iron, and lithium. It should not be administered to unconscious persons.

■ **ADVERSE EFFECTS:** There are no known adverse effects.

activated clotting time (ACT) test, a blood test primarily used to measure the effect of heparin as an anticoagulant during cardiac angioplasty, hemodialysis, and cardiopulmonary bypass. It can also be used to monitor the dose of protamine sulfate required to reverse the effect of heparin. The test measures the time required for whole blood to clot after the addition of particulate activators.

activated 7-dehydrocholesterol. See **vitamin D₃**.

activated partial thromboplastin time (APTT). See **partial thromboplastin time**.

activated prothrombin complex concentrate (APCC), a therapeutic concentrate of activated coagulation factors II, VII, IX, and X, used to treat hemophilic patients who have developed coagulation factor inhibitors, usually anti-coagulation factor VIII or IX.

activated resin. See **self-curing resin**.

activating enzyme, an enzyme that promotes or sustains an activity, such as catalyzing the combination of amino acids to form peptides or proteins.

activation /ak'tivā'shən/, 1. the promotion or production of an activity, such as the generation of a catalyst, protein synthesis, or enzymatic function. 2. the treatment of sewage using a combination of bacteria and air.

activation energy [L, *actus*, active], the energy required to convert reactants to transition-state species or an activated complex that will spontaneously proceed to products.

activation factor. See **factor XII**.

activator /ak'tivā'tör/, 1. a substance, force, or device that stimulates activity in another substance or structure, especially a substance that activates an enzyme. 2. a substance that stimulates the development of an anatomical structure in the embryo. 3. an internal secretion of the pancreas. 4. an apparatus for making substances radioactive, such as a cyclotron or neutron generator. 5. (in dentistry) a removable orthodontic appliance that functions as a passive transmitter and stimulator of the perioral muscles.

active algodnia. See **sadism**.

active anaphylaxis [Gk, *ana*, up, *phylaxis*, protection], hypersensitivity caused by the reaction of the immune system to the injection of a foreign protein. Compare **antiserum anaphylaxis**.

active assisted exercise [L, *actus*], the movement of the body or any of its parts primarily through the individual's own efforts but accompanied by the aid of a member of the health care team or some device, such as an exercise machine. See also **active exercise, exercise, passive exercise**.

active carrier [OFr, *carrier*], a person without signs or symptoms of an infectious disease who carries the causal microorganisms and can transmit the disease to others.

active electrode [Gk, *elektron*, amber, *hodos*, way], an electrode that is applied at a specific point to produce stimulation in a concentrated area in electrotherapy or electrocautery.

active euthanasia, the ending of life by the deliberate administration of drugs.

active exercise, a repetitive movement of a part of the body as a result of voluntary contraction and relaxation of the controlling muscles. Compare **passive exercise**. See also **aerobic exercise, anaerobic exercise**.

active expiration [L, *expirare*, to breathe out], a forced exhalation using the abdominal wall, internal intercostal muscles, and diaphragm.

active hyperemia [L, *actus* + Gk, *hyper*, excessive, *haima*, blood], the increased flow of blood into a particular body part, caused by an increase in vasoactive metabolites. It is associated with increased metabolism.

active immunity, a form of long-term, acquired immunity. It protects the body against a new infection as the result of antibodies that develop naturally after an initial infection or artificially after a vaccination. Compare **passive immunity**. See also **acquired immunity, immune response, natural immunity**.

active labor [L, *actus*, active, *labor*, work], the normal progress of the birth process, including uterine contractions, full dilation of the cervix, and descent of the fetus into the birth canal (midpelvis).

active listening¹, the act of alert and intentional hearing, interpretation, and demonstration of an interest in what a person has to say through verbal signal, nonverbal gestures, and body language.

active listening², a nursing intervention from the Nursing Interventions Classification (NIC) defined as attending closely to and attaching significance to a patient's verbal and nonverbal messages. See also **Nursing Interventions Classification**.

active matrix array (AMA), a large-area integrated circuit that consists of millions of identical semiconductor elements and acts as the flat-panel image receptor in digital radiographic and fluoroscopic systems.

active movement, the movement of parts of the body as a result of voluntary effort. Compare **passive movement**.

active-passive, (in psychiatry) a concept that characterizes persons as either actively involved in shaping events, such as being proactive, or passively reacting to them, such as being reactive.

active play, any activity from which one derives amusement, entertainment, enjoyment, or satisfaction by taking a participatory rather than a passive role. Children of all age groups engage in various forms of active play, from the exploration of objects and toys by the infant and toddler to the formal games, sports, and hobbies of the older child. Compare **passive play**.

active range of motion (AROM), the range of movement through which a patient can actively (without assistance) move a joint using the adjacent muscles. Movement occurs because of the contraction of skeletal muscle.

active resistance exercise, the movement or exertion of the body or any of its parts performed totally through the individual's own efforts against a resisting force. See also **progressive resistance exercise**.

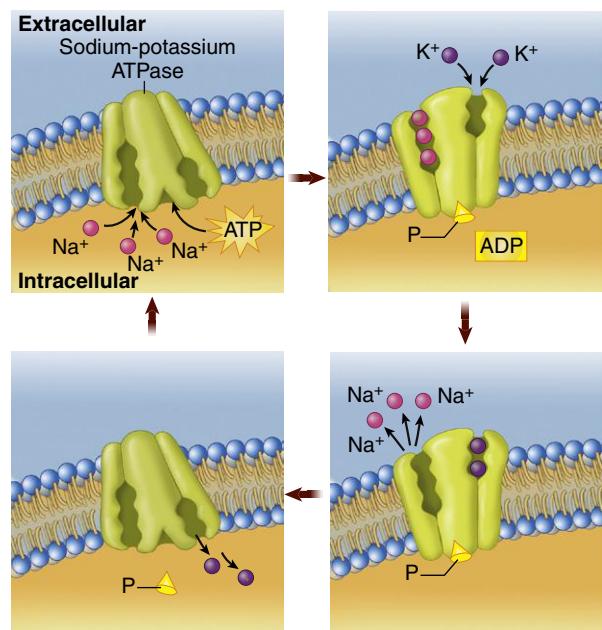
active resistance training (ART), a conditioning or rehabilitation program designed to enhance a patient's muscular strength, power, and endurance through progressive active resistance exercises and muscle overloading.

active sensitization [L, *agere*, to do, *sentire*, to feel], the condition that results when a specific antigen is injected into a person known to be susceptible to it. See also **sensitization**.

active site, the place on the surface of an enzyme where its catalytic action occurs.

active specific immunotherapy, a therapy that attempts to stimulate specific antitumor responses with tumor-associated antigens as the immunizing materials.

active transport, the movement of materials across the membranes and epithelial layers of a cell by means of chemical activity that allows the cell to admit otherwise impermeable molecules against a concentration gradient. Expediting active transport are carrier molecules within the cell that bind and enclose themselves to incoming molecules. Active transport is the means by which the cell absorbs glucose and other substances needed to sustain life and health. Certain enzymes play a role in active transport, providing a chemical "pump" that typically uses adenosine triphosphate (ATP) to help move substances through the plasma membrane. Compare **osmosis, passive transport**.



Active transport: the sodium-potassium pump
(Patton and Thibodeau, 2010)

activities of daily living (ADL) /aktiv'itēz/, the activities usually performed in the course of a normal day in a person's life, such as eating, toileting, dressing, bathing, or brushing the teeth. The ability to perform ADL may be compromised by a variety of causes, including chronic illnesses and accidents. The limitation may be temporary or permanent; rehabilitation may involve relearning the skills or learning new ways to accomplish ADL. The goal of health care professionals is to promote the greatest degree of independence for the patient. An ADL checklist is often used before discharge from a hospital. If any activities cannot be adequately performed, arrangements are made with an outside agency, health care professionals, or family members to provide the necessary assistance. See also **Barthel Index**.

activity, 1. any action or task completed. 2. the action of an enzyme on an amount of substrate that is converted to product per unit of time under defined conditions.

activity analysis, A tool that helps occupational therapy practitioners prioritize, plan, and implement effective intervention; involves identifying every characteristic of a task and examining each client factor, performance component, performance area, and performance context.

activity coefficient, a proportionality constant, γ , relating activity, a , to concentration, c , expressed in the equation, $a = \gamma c$.

activity demands, the features of a task that influence the type and nature of effort required to carry out the task (activity).

activity theory, a concept proposed by Robert J. Havighurst [1900–1990] that continuing activities from middle age promotes well-being and satisfaction in aging. Thus older adults who are actively involved in a variety of situations and who establish new roles and relationships are more likely to age with a sense of satisfaction.

activity therapy, a nursing intervention from the Nursing Interventions Classification (NIC) defined as prescription of and assistance with specific physical, cognitive, social, and spiritual activities to increase the range, frequency, or duration of an individual's (or group's) activity. See also **Nursing Interventions Classification**.

activity tolerance¹, the type and amount of exercise a patient may be able to perform without undue exertion or possible injury.

activity tolerance², a nursing outcome from the Nursing Outcomes Classification (NOC) defined as physiological response to energy-consuming movements with daily activities. See also **Nursing Outcomes Classification**.

actomyosin /ak'tōmī'əsin/. See **actinomyosin**.

actual cautery /ak'chōōr'ēl/ [L, *actus*, act], the application of heat, rather than a chemical substance, in the destruction of tissue.

actual charge, the amount actually charged or billed by a practitioner for a service. The actual charge usually is not the same as that paid for the service by an insurance plan.

actual damages. See **damages**.

actual focal spot. See **focal spot**.

actualization, 1. the fulfillment of a potential, as by a person who may develop capabilities through experience and education. 2. the fulfillment of the highest level of human needs based on Maslow's hierarchy of needs. —*actualize*, v, /ak'chōōr'ēlīz/.

acu-, a combining form meaning 'sharp, clear, needle': *acuity*, *acupuncture*.

acuity /ək'yoo'itē/ [L, *acuere*, to sharpen], the clearness or sharpness of perception, such as visual acuity.

acuminate /ə-k'yoo'mi-nāt/ [L, *acuminatus*], 1. sharp-pointed. 2. to sharpen something or to make it tapered.

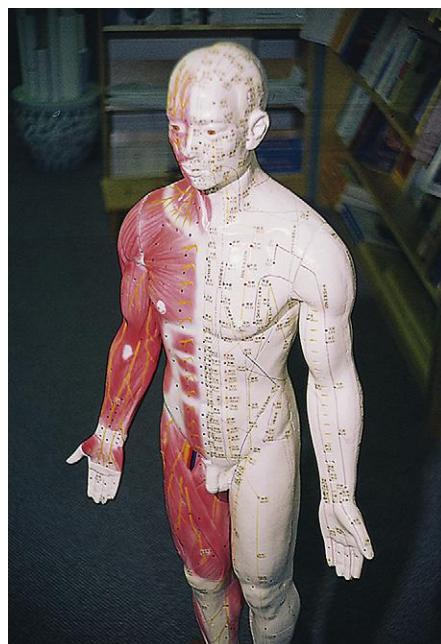
acuminate wart. See **genital wart**.

acupressure¹ /ak'yōprēsh'ər/ [L, *acus*, needle, *pressura*, pressure], a therapeutic technique of applying digital pressure in a specified way on designated points on the body to relieve pain, produce anesthesia, or regulate a body function.

acupressure², a nursing intervention from the Nursing Interventions Classification (NIC) defined as application of firm, sustained pressure to special points on the body to decrease pain, produce relaxation, and prevent or reduce nausea. See also **Nursing Interventions Classification**.

acupressure needle, 1. a slender pointed device used for insertion and manipulation at acupressure points to improve health and well-being. 2. any of several needles inserted near a source of bleeding to help control blood loss. The needles exert pressure on tissues adjacent to the damaged vessel.

acupuncture /ak'yōpung'chər/ [L, *acus* + *punctura*, puncture], a traditional Chinese method of producing analgesia or altering the function of a body system by inserting fine, wire-thin needles into the skin at specific body sites along a series of lines, or channels, called meridians. Acupuncture is highly effective in treating both acute and chronic pain associated with multiple causes. In addition, common conditions are effectively treated, including sinusitis, allergies, tinnitus, sore throats, hypertension, gastroesophageal reflux, hyperacidity and peptic ulcer disease, constipation, diarrhea, spastic colon, urinary incontinence, urinary tract infection, premenstrual syndrome, infertility, dysmenorrhea, memory problems, sensory disturbances, depression, anxiety, and other psychological disorders. It is sometimes used with **moxibustion**. —*acupuncturist*, n.



Acupuncture sites on a male model (Swartz, 2009)

acupuncture point, one of many discrete points on the skin along the several meridians, or chains of points of the body. Stimulation of any of the various points may induce an increase or a decrease in function or sensation in an area or a system of the body.

acus /ə'kəs/, any needlelike structure.

-acusis. See **-acousia**.

acute /ək'yoȯt/ [L, *acus*, sharp], 1. (of a disease or disease symptoms) beginning abruptly with marked intensity or sharpness, then subsiding after a relatively short period. 2. sharp or severe. Compare **chronic**.

acute abdomen, an abnormal condition characterized by the acute onset of severe pain within the abdominal cavity. An acute abdomen requires immediate evaluation and diagnosis because it may indicate a condition that calls for surgical intervention. Information about the onset, duration, character, location, and symptoms associated with the pain is critical in making an accurate diagnosis. The patient is asked what decreases or increases the pain; constant, increasing pain is generally associated with appendicitis and diverticulitis, whereas intermittent pain more likely indicates an intestinal obstruction, ureteral calculi, or biliary calculi. Appendicitis may often be differentiated from a perforating ulcer by the slower onset or development of pain. Although the patient's report of the location of the pain is sometimes misleading because of referral, radiation, or reflection of pain, it may serve to identify a specific organ or system. Factors in the patient's history that are useful in the diagnosis and management of an acute abdomen include changes in bowel habits, weight loss, bloody stool, diarrhea, menses, vomiting, clay-colored stool, and previous abdominal surgery. Also called **surgical abdomen**. See also **abdominal pain**.

acute abscess, a recently formed collection of pus with little or no fibrosis in the wall of the cavity. It is accompanied by localized inflammation, pain, pyrexia, and swelling. See also **abscess**.

acute air trapping, a condition of bronchiolar obstruction that results in early airway closure and trapping of air distal to the affected bronchiole. Air trapping can occur in persons with chronic obstructive pulmonary disease or asthma. Persons prone to episodes of acute air trapping learn to control exhalations through pursed-lip breathing.

acute alcoholism, intoxication resulting from excessive consumption of alcoholic beverages. The syndrome is temporary and is characterized by depression of the higher nerve centers, causing impaired motor control, stupor, lack of coordination, and often nausea, dehydration, headache, and other physical symptoms. Compare **chronic alcoholism**. See also **alcoholism**.

acute angle [L, *acus* + *angulus*], any angle of less than 90 degrees.

acute anicteric hepatitis [Gk, *a*, without, *ikteros*, jaundice, *hépar*, liver, *itis*, inflammation], an acute hepatitis not accompanied by jaundice.

acute anterior poliomyelitis. See **acute infectious paralysis**.

acute articular rheumatism. See **rheumatic fever**.

acute ascending myelitis [L, *ascendere*, to go up; Gk, *myelos*, marrow, *itis*, inflammation], a severe inflammation of the spinal cord that extends progressively upward with corresponding interference in nerve functions. See also **myelitis**.

acute ascending spinal paralysis, a severe progressive spinal paralysis that spreads upward toward the brain.

acute atrophic paralysis [Gk, *a*, *trophe*, without nourishment, *paralyein*, to be palsied], a severe poliomyelitis involving the anterior horns of the spinal cord. It results first in flaccid paralysis of involved muscle groups and later in atrophy of those muscles.

acute bacterial arthritis. See **septic arthritis**.

acute bronchitis. See **bronchitis**.

acute care, a pattern of health care in which a patient is treated for a brief but severe episode of illness, for the sequelae of an accident or other trauma, or during recovery

from surgery. Acute care is usually given in a hospital by specialized personnel using complex and sophisticated technical equipment and materials, and it may involve intensive or emergency care. This pattern of care is often necessary for only a short time, unlike chronic care.

acute catarrhal sinusitis [Gk, *kata* + *rhoia*, flow; L, *sinus*, hollow], an inflammation that involves the nose and sinuses. **acute cervicitis**. See **cervicitis**.

acute childhood leukemia, a progressive, malignant disease of the blood-forming tissues. It is characterized by the uncontrolled proliferation of immature leukocytes and their precursors, particularly in the bone marrow, spleen, and lymph nodes. It is the most frequent cancer in children, with a peak onset occurring between 2 and 5 years of age. Cure rates are high. See also **acute lymphocytic leukemia**, **acute myelocytic leukemia**, **leukemia**.

■ **OBSERVATIONS:** Acute leukemia is classified according to cell type: **acute lymphoid leukemia (ALL)** includes lymphatic, lymphocytic, lymphoblastic, and lymphoblastoid types; **acute nonlymphoid leukemia (ANLL)** includes granulocytic, myelocytic, monocytic, myelogenous, monoblastic, and monomyeloblastic types. ALL is predominantly a disease of childhood, whereas acute myeloid leukemia (AML) and ANLL occur in all age groups. The traditional classification of leukemia into chronic and acute types is based on the duration or expected course of the illness and the relative maturity of the leukemic cells. The exact cause of the disease is unknown, although various factors are implicated, including genetic defects, immune deficiency, viruses, and carcinogenic environmental factors, primarily ionizing radiation. Individuals with Down syndrome and other genetic disorders are at increased risk for ALL. In acute leukemia, large immature leukocytes accumulate rapidly and infiltrate other body tissues, especially the reticuloendothelial system, causing decreased production of erythrocytes and platelets. Neutropenia, anemia, increased susceptibility to infection and hemorrhage, and weakening of the bones with a tendency to fracture also occur. Initial symptoms include fever; pallor; fatigue; anorexia; secondary infections (usually of the mouth, throat, or lungs); bone, joint, and abdominal pain; subdermal or submucosal hemorrhage; and enlargement of the spleen, liver, and lymph nodes. The onset may be abrupt or may follow a gradual, progressive course. Involvement of the central nervous system may lead to leukemic meningitis. Characteristically, a peripheral blood smear reveals many immature leukocytes. The diagnosis is confirmed by bone marrow aspiration or biopsy and examination, which in ALL reveal a highly elevated number of lymphoblasts with almost complete absence of erythrocytes, granulocytes, and megakaryocytes. The prognosis is poor in untreated cases, and death occurs usually within 6 months after the onset of symptoms. Survival rates have dramatically increased in recent years with the use of antileukemic agents in combination regimens. Remission of 5 years or longer occurs in 50% to 70% of children with ALL, with 20% to 30% achieving complete remission. Children with AML have a poorer prognosis, and the remission rate is far less than for ALL.

■ **INTERVENTIONS:** The treatment of acute leukemia consists of a three-stage process involving the use of chemotherapeutic agents and irradiation. In the first phase (remission induction), complete destruction of all leukemic cells is achieved within 4 to 6 weeks with the use of a combination chemotherapy regimen. The drugs used in ALL are the corticosteroids; vinCRIStine sulfate; and L-asparaginase. Allopurinol, a xanthine oxidase inhibitor, or rasburicase is usually administered to inhibit uric acid production and prevent tumor lysis syndrome. Other drugs used in various combination regimens

in sequential cycles include methotrexate, mercaptopurine, cyclophosphamide, cytarabine, hydroxyurea, DAUNOrubicin citrate liposomal, and DOXOrubicin hydrochloride. In children with AML the primary drugs for induction remission are 6-thioguanine, daunomycin, cytarabine, 5-azacytidine, vinCRISTine sulfate, and predniSONE. The child is usually hospitalized for part or all of the treatment because of the many side effects of the drugs and the high risk of complications, especially infection and hemorrhage. If severe hemorrhage occurs and does not respond to local treatment, platelet transfusions may be necessary, and in cases of severe anemia, especially during induction therapy, whole blood or packed red blood cells may be needed to raise hemoglobin levels. The second stage of treatment involves prophylactic maintenance to prevent leukemic infiltration of the central nervous system. Because chemotherapy drugs do not cross the blood-brain barrier, therapy usually consists of daily high-dose cranial irradiation for about 2 weeks after induction remission and weekly or twice-weekly doses of intrathecal methotrexate; in some cases, only the drug is given. In small children, irradiation is limited to the cranium to prevent retardation of linear growth, but older children may receive craniospinal radiation. Therapy to maintain remission usually begins after the child is discharged from the hospital and consists of various regimens of drugs in combination. A common schedule includes daily oral doses of mercaptopurine and weekly doses of oral methotrexate, intermittent short-term therapy with predniSONE and vinCRISTine sulfate, and periodic doses of intrathecal methotrexate for prophylaxis against spread to the central nervous system. Complete blood counts are performed weekly or monthly, and bone marrow examinations are performed every 3 to 4 months to detect bone marrow suppression and drug toxicity. Maintenance therapy is discontinued after 2 to 3 years if initial remission is maintained. Continuous treatment beyond 3 years is not advised, as the adverse effects of the medications increase with prolonged use. Relapse occurs in as many as 20% of treated children. If relapse occurs, the child begins the treatment cycle again, usually with predniSONE, vinCRISTine sulfate, and a combination of other drugs not previously tried. With each relapse the prognosis becomes poorer. Other treatments for prolonging remission include immunotherapy using periodic inoculation with bacille Calmette-Guerin vaccine or bone marrow transplantation, which has been successful in inducing long-term remissions in about 10% to 20% of cases, especially those with AML or severe, terminal ALL. Care of the child with acute leukemia involves intensive physical and emotional support during all phases of the disease, its diagnosis, and its treatment. Foremost is the preparation of the child and parents or caregivers for the various diagnostic and therapeutic procedures, including venipuncture, bone marrow aspiration or biopsy, and lumbar puncture. Specific medical and nursing management depends on the particular regimen of drug therapy, although most of the chemotherapeutic agents used in treatment cause bone marrow suppression that may lead to secondary complications of infection, hemorrhage, and anemia. Overwhelming infection is a major problem and one of the most frequent causes of death. Severe neutropenia indicates increased risk of infection. It may occur during immunosuppressive therapy or after prolonged antibiotic therapy. The most common infectious organisms are viruses, especially varicella, herpes zoster, herpes simplex, measles, mumps, rubella, and poliomyelitis; both gram-positive and gram-negative bacteria, including *Staphylococcus aureus*, *S. epidermidis*, group A beta-hemolytic streptococci, *Pseudomonas aeruginosa*, *Escherichia coli*, *Proteus*, and *Klebsiella*; and various parasites and fungi,

especially *Pneumocystis jiroveci* and *Candida albicans*. To prevent infection, the nurse isolates the child as much as possible, screens visitors for active infection, institutes strict aseptic technique, monitors temperature closely, evaluates possible infection sites (such as needle punctures), encourages adequate nutrition, helps the child to avoid exertion or fatigue, and, at discharge, teaches the child and parents the necessity for avoiding all known sources of infection, primarily the common childhood communicable diseases. Preventive measures for controlling infection also help decrease the tendency toward hemorrhage. Special attention is given to skin care, oral hygiene, cleanliness of the perineal area, and restriction of activities that could result in unintentional injury. A major nursing consideration is the management of the many side effects resulting from drug toxicity, including nausea and vomiting, anorexia, oral and rectal ulceration, alopecia, hemorrhagic cystitis, and peripheral neuropathy, including weakness and numbing of the extremities and severe jaw pain. Although corticosteroid treatment usually increases the appetite and produces a euphoric sense of well-being in the child, it also causes moon face, which is reversed with cessation of steroid therapy. During maintenance therapy, the nurse continues to provide emotional support and guidance, specifically teaching parents which side effects are normal reactions to drugs and which indicate toxicity and require medical attention. In terminal stages of the disease, relief of discomfort and pain becomes the primary focus. Effective measures include careful physical handling of the child, frequent position changes, prevention of pressure on painful areas, and control of annoying environmental factors, such as excessive light and noise. Nonsalicylate analgesics are used as needed, depending on the severity of pain. Opioids are used to handle end-of-life pain. Referrals can be made to palliative care teams for symptom management and ongoing family support.

acute cholecystitis. See **cholecystitis**.

acute circulatory failure /sur'kyələtōr'ē/, a drop in cardiac output resulting from cardiac or noncardiac causes and leading to tissue hypoxia. Acute circulatory failure usually happens so rapidly that the body does not have time to adjust to the changes. If not controlled immediately, the condition usually progresses to shock.

acute circumscribed edema [L, *circum*, around, *scribere*, to draw; Gk, *oedema*, swelling], a localized edema, often associated with an inflammatory lesion or process.

acute compression syndrome. See **Beck's triad**.

acute confusional state (ACS), a form of delirium caused by interference with the metabolic or other biochemical processes essential for normal brain functioning. Symptoms may include disturbances in cognition and levels of awareness, short-term memory deficit, retrograde and anterograde amnesia, and disturbances in orientation, accompanied by restlessness, apprehension, irritability, and apathy. The condition may be associated with an acute physiological state, delirium, toxic psychosis, or acute brain syndrome which constitutes a medical emergency.

acute confusion level, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as severity of disturbance in consciousness and cognition that develops over a short period of time. See also **Nursing Outcomes Classification**.

acute coronary syndrome, a classification encompassing clinical presentations ranging from unstable angina through myocardial infarctions not characterized by alterations in Q waves. The classification sometimes also includes myocardial infarctions characterized by altered Q waves.

acute delirium, an episode of acute organic reaction that is sudden, severe, and transient. Constitutes a medical emergency. See also **delirium**.

acute diarrhea [Gk, *dia + rhein*, to flow], a sudden severe attack of diarrhea.

acute diffuse peritonitis [L, *diffundere*, to pour out; Gk, *peri*, near, *tenein*, to stretch, *itis*, inflammation], an acute widespread attack of peritonitis affecting most of the peritoneum and usually caused by infection or by a perforation of an abdominal organ (e.g., stomach or appendix). It is also a complication of peritoneal dialysis. Also called **generalized peritonitis**.

acute disease, a disease characterized by a relatively sudden onset of symptoms that are usually severe. An episode of acute disease results in recovery to a state comparable to the patient's condition of health and activity before the disease, in passage into a chronic phase, or in death. Examples are pneumonia and appendicitis. See also **chronic disease**.

acute disseminated encephalomyelitis. See **acute disseminated encephalomyelitis**.

acute disseminated encephalomyelitis (ADEM), an acute disease of the brain and spinal cord with variable symptoms. It is thought to be an allergic reaction or immune attack on the myelin tissue after a viral infection, such as measles, or, less often, after vaccination for measles, mumps, or rubella. Early symptoms may include fever, headache, vomiting, and drowsiness and progress to seizures, coma, and paralysis. It is often misdiagnosed as a severe attack of multiple sclerosis. Frequently patients who recover experience neurological disorders. Also called **acute disseminated encephalitis**.

acute diverticulitis, a sudden severe, painful disorder of the intestinal tract, resulting from inflammation of one or more diverticula, or small pouches, in the wall of the bowel. The condition is typically diagnosed through x-rays and treated with antibiotics and/or surgically. If left untreated, the inflamed pouches may rupture, spilling fecal matter into the abdominal cavity and causing peritonitis.

acute endarteritis. See **endarteritis**.

acute epiglottitis, a severe, rapidly progressing bacterial infection of the upper respiratory tract that occurs in young children, primarily between 2 and 7 years of age. It is characterized by sore throat, croupy stridor, and inflamed epiglottis, which may cause sudden respiratory obstruction and possibly death. The infection is generally caused by *Haemophilus influenzae*, type B, although streptococci may occasionally be the causative agents. Transmission occurs via infection with airborne particles or contact with infected secretions. The diagnosis is made by bacteriological identification of *H. influenzae*, type B, in a specimen taken from the upper respiratory tract or in the blood. A lateral x-ray film of the neck shows an enlarged epiglottis and distension of the hypopharynx, which distinguishes the condition from croup. Direct visualization of the inflamed, cherry-red epiglottis by depression of the tongue or indirect laryngoscopy is also diagnostic but may produce total acute obstruction and should be attempted only by trained personnel with equipment to establish an airway or to provide respiratory resuscitation, if necessary. Epiglottitis caused by *H. influenzae* can be prevented by administration of *H. influenzae* type B conjugate vaccines to infants at or before the age of 2 months. Compare **croup**.

■ **OBSERVATIONS:** The infection is abrupt in onset, and it progresses rapidly. The first signs—sore throat, hoarseness, fever, and dysphagia—may be followed by an inability to swallow, drooling, varying degrees of dyspnea, inspiratory stridor, marked irritability and apprehension, and a tendency to sit upright and hyperextend the neck to breathe. Difficulty in breathing may progress to severe respiratory distress in

minutes or hours. Suprasternal, supraclavicular, intercostal, and subcostal inspiratory retractions may be visible. The hypoxic child appears frightened and anxious; the skin color ranges from pallor to cyanosis.

■ **INTERVENTIONS:** Establishment of an airway is urgent, either by endotracheal intubation or by tracheostomy. Humidity and oxygen are provided, and airway secretions are drained or suctioned. IV fluids are usually required, and antibiotic therapy is initiated immediately, usually with ceftriaxone, cefuroxime sodium, or ampicillin/sulbactam. Sedatives are contraindicated because of their depressant effect on the respiratory system, and antihistamines and adrenergic drugs usually have no therapeutic value. Steroids are useful.

■ **NURSING CONSIDERATIONS:** The nurse may assist with intubation or tracheostomy once the diagnosis is confirmed. Intensive nursing care is required for a child with acute epiglottitis. The most acute phase of the condition passes within 24 to 48 hours, and intubation is rarely needed beyond 3 to 4 days. As the child responds to therapy, breathing becomes easier; rapid recovery usually occurs, so bed rest and quiet activity to relieve boredom become primary nursing concerns. The infection may spread, causing complications such as otitis media, pneumonia, and bronchiolitis. Complications of the tracheostomy may also develop and include infection, atelectasis, cannula occlusion, tracheal bleeding, granulation, stenosis, and delayed healing of the stoma. Also called **acute epiglottiditis**.

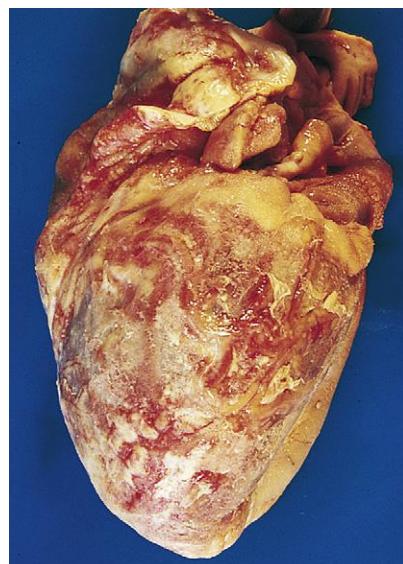
acute erosive gastritis. See **erosive gastritis**.

acute fatigue, a sudden onset of physical and mental exhaustion or weariness, particularly after a period of mental or physical stress. Physical factors usually include an accumulation of the waste products of muscle contractions. Boredom is a common mental factor. Recovery follows a period of rest and restoration of energy sources.

acute febrile neutrophilic dermatosis. See **Sweet's syndrome**.

acute febrile polyneuritis. See **Guillain-Barré syndrome**.

acute fibrinous pericarditis [L, *fibra*, fibrous; Gk, *peri*, near, *kardia*, heart, *itis*, inflammation], an acute inflammation of the endothelial cells of the pericardium with fibers extending into the pericardial sac.



Acute fibrinous pericarditis (Damjanov, 2012)

acute focal bacterial nephritis. See **pyelonephritis**.

acute gastritis. See **gastritis**.

acute glaucoma. See **glaucoma**.

acute glomerulonephritis. See **postinfectious glomerulonephritis**.

acute goiter [L, *guttur*, throat], a sudden enlargement of the thyroid gland. Clinical manifestations are the same as those of hyperthyroidism.

acute granulocytic leukemia (AGL). See **myeloblastic leukemia**.

acute hallucinatory paranoia, a form of psychosis in which hallucinations are combined with the delusions of paranoia.

acute hallucinosis. See **alcoholic hallucinosis**.

acute hemorrhagic conjunctivitis, a highly contagious eye disease usually caused by enterovirus type 70 but also by coxsackie virus AZA. The disease is found primarily in densely populated humid areas, particularly developing countries or places with large immigrant populations. Clinical features include a sudden onset of severe ocular pain, blurred vision, photophobia, subconjunctival hemorrhage, chemosis, and a profuse watery discharge from the eye. Symptoms are caused by neutralizing antibodies to infection. A polymerase chain reaction analysis of conjunctival swab specimens from patients is a rapid method of identification of the infectious agent. Spontaneous improvement occurs within 2 to 4 days and is complete by 7 to 10 days. Management consists of hygienic measures and ophthalmic preparations.

acute hemorrhagic leukoencephalitis. See **acute necrotizing hemorrhagic encephalopathy**.

acute hemorrhagic pancreatitis [Gk, *haima*, blood, *rhegnynei*, to gush, *pan*, all, *kreas*, flesh], a potentially fatal inflammation of the pancreas characterized by bleeding, necrosis, and paralysis of the digestive tract.

acute hypoxia, a sudden or rapid depletion in available oxygen at the tissue level. The condition may result from asphyxia, airway obstruction, acute hemorrhage, blockage of alveoli by edema or infectious exudate, or abrupt cardiopulmonary failure. Clinical signs may include hypoventilation or hyperventilation to the point of air hunger and neurological deficits ranging from headache and confusion to loss of consciousness. Compare **chronic hypoxia**.

acute idiopathic polyneuritis. See **Guillain-Barré syndrome**.

acute idiopathic thrombocytopenic purpura. See **immune thrombocytopenic purpura**.

acute illness, any illness characterized by signs and symptoms of rapid onset and short duration. It may be severe and impair normal functioning.

acute immune disease. See **autoimmunity**.

acute infectious nonbacterial gastroenteritis, former name for *Norwalk virus gastroenteritis*.

acute infectious paralysis [L, *inficere*, to stain; Gk, *paralyein*, to be palsied], acute disease caused by a poliovirus. Symptoms of minor disease include fever, headache, vomiting, sore throat, and frequently stiff back and neck. Major disease includes central nervous system involvement, pleocytosis in spinal fluid, and paralysis. Also called **acute anterior poliomyelitis**.

acute infective hepatitis. See **hepatitis A**.

acute intermittent porphyria (AIP), an autosomal-dominant, genetically transmitted metabolic hepatic disorder characterized by acute attacks of neurological dysfunction that can be started by environmental or endogenous factors. Women are affected more frequently than men, and attacks often are precipitated by starvation or severe dieting, alcohol ingestion, bacterial or viral infections, and a wide range of pharmaceutical products. Any part of the nervous system can be affected, and an initial common effect is mild to

severe abdominal pain. Other effects can include tachycardia, hypertension, hyponatremia, peripheral neuropathy, and organic brain dysfunction marked by seizures, coma, hallucinations, and respiratory paralysis. A frequent diagnostic factor is a high level of porphyrin precursors in the urine, which usually increases during periods of acute attacks. Treatment is generally symptomatic, with emphasis on respiratory support, beta-blockers, and pain control. Education of the patient focuses on environmental factors, particularly medications such as barbiturates, that are known to cause an onset of symptoms, as well as avoidance of alcohol, sunlight, and skin trauma. A high-carbohydrate diet is reported to reduce the risk of acute attacks because glucose tends to block the induction of hepatic gamma-aminolevulinic acid synthetase, an enzyme involved in the porphyrias. See also **porphyria**.

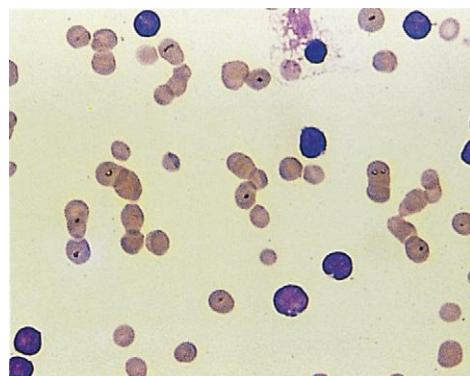
acute interstitial nephritis. See **interstitial nephritis**.

acute laryngotracheobronchitis. See **croup**.

acute lichenoid pityriasis. See **Mucha-Habermann disease**.

acute lobar pneumonia, a form of pneumonia characterized by lobar distribution of the consolidation of the serofibrinous fluid exuded by the alveoli. The condition results from infection by a virulent type of *Streptococcus pneumoniae*. The onset is sudden. Symptoms include pleuritic chest pain, dry cough, and rust-colored sputum.

acute lymphocytic leukemia (ALL), a hematologic, malignant disease characterized by large numbers of lymphoblasts in the bone marrow, circulating blood, lymph nodes, spleen, liver, and other organs. The number of normal blood cells is usually reduced. More than three-fourths of cases in the United States occur in children, with the greatest number diagnosed between 2 and 5 years of age. The risk of the disease is increased for people with Down syndrome and for siblings of leukemia patients. The disease has a sudden onset and rapid progression marked by fever, pallor, anorexia, fatigue, anemia, hemorrhage, bone pain, splenomegaly, and recurrent infection. Blood and bone marrow studies are used for diagnosis and for determination of the type of proliferating lymphocyte, which may be B cells, T cells (which usually respond poorly to therapy), or null cells that lack T or B cell characteristics. Treatment includes intensive combination chemotherapy, therapy for secondary infections and hyperuricemia, and intrathecal methotrexate. Also called **acute lymphoblastic leukemia**. See also **chronic lymphocytic leukemia**.



Acute lymphocytic leukemia (Zitelli and Davis, 2007)

acute lymphoid leukemia (ALL). See **acute childhood leukemia**.

acute mastitis. See **mastitis**.

acute mountain sickness. See **altitude sickness**.

acute myelitis, a sudden, severe inflammation of the spinal cord. See also **myelitis**.

acute myeloid leukemia (AML), a malignant neoplasm of blood-forming tissues characterized by the uncontrolled proliferation of immature granular leukocytes that usually have azurophilic Auer rods. Typical symptoms are spongy and bleeding gums, anemia, fatigue, fever, dyspnea, moderate splenomegaly, joint and bone pain, and repeated infections. AML occurs most frequently in adolescents and young adults. The risk of the disease is increased among people who have been exposed to massive doses of radiation and who have certain blood dyscrasias, such as polycythemia, primary thrombocytopenia, and refractory anemia. Hispanics are also at greater risk. Variants of AML, in which only one cell line proliferates, are erythroid, eosinophilic, basophilic, monocytic, and megakaryocytic leukemias. The diagnosis is based on blood counts and bone marrow biopsies. Cytogenetic analysis and immunophenotyping are also done for diagnosis. Chemotherapy, biotherapy, and bone marrow transplantation are used, but long remissions resulting from any form of treatment are rare. Also called **acute granulocytic leukemia**, **acute myelogenous leukemia**, **acute nonlymphocytic leukemia**, **myeloid leukemia**, **splenomedullary leukemia**, **splenomyelogenous leukemia**. See also **acute childhood leukemia**, **chronic myelocytic leukemia**.

acute myocardial infarction (AMI) [L, *acutus*, + Gk, *mys*, muscle, *kardia*, heart; L, *infarcire*, to stuff], the early critical stage of necrosis of heart muscle tissue caused by blockage of a coronary artery. It is characterized by elevated S-T segments in the reflecting leads and elevated levels of cardiac enzymes. See also **myocardial infarction**.

acute necrotizing hemorrhagic encephalopathy, a degenerative brain disease, characterized by marked edema, numerous minute hemorrhages, necrosis of blood vessel walls, demyelination of nerve fibers, and infiltration of the meninges with neutrophils, lymphocytes, and histiocytes. Typical signs are severe headache, fever, and vomiting; seizures may occur, and the patient may rapidly lose consciousness. Treatment consists of decompression via withdrawal of cerebrospinal fluid. Also called **acute hemorrhagic leukoencephalitis**.

acute necrotizing ulcerative gingivitis (ANUG), a recurrent periodontal disease of sudden onset that primarily affects the interdental papillae. It is characterized by painful inflammation and ulceration of the gums, leading to the formation of craterlike defects and ulcers. The necrotic tissue appears as a gray membrane that is easily sloughed off. There also may be fever, bone destruction, a fetid odor, and enlarged lymph nodes in the throat and neck. It is usually associated with poor oral hygiene and stress and is most common in conditions in which there is crowding of the teeth and malnutrition. Treatment includes



Acute necrotizing gingivitis (Zitelli and Davis, 2007)

chlorhexidine mouthwashes, antibiotics, analgesics, and dental care to remove and disrupt bacterial flora. Also called **trench mouth**, **Vincent's angina**, **Vincent's infection**. See **gingivitis**.

acute nephritis, a sudden inflammation of the kidney, characterized by albuminuria and hematuria but without edema or urine retention. It affects children most commonly and usually involves only a few glomeruli. See also **nephritis**.

acute nicotine poisoning [L, *Nicotiana, potio*, drink], a toxic effect produced by nicotine. Characteristics include a burning sensation in the mouth, nausea and vomiting, diarrhea, palpitations, salivation, agitation, respiratory depression, and seizures that may lead to death. See also **nicotine poisoning**.

acute nongonorrheal vulvitis [L, *non*, not; Gk, *rhoia*, flow; L, *vulva*, wrapper; Gk, *itis*, inflammation], an inflammation of the vulva resulting from chafing of the vulvar lips, accumulation of sebaceous material, atopic reactions, local infections, or other causes that are nonvenereal.

acute nonlymphocytic leukemia (ANLL). See **acute myelocytic leukemia**.

acute nonspecific pericarditis [Gk, *peri*, around, *kardia*, heart, *itis*, inflammation], an inflammation of the pericardium, with or without effusion. It often is associated with myocarditis but usually resolves without complications. See also **pericarditis**.

acute pain, severe pain, as may follow surgery or trauma or accompany myocardial infarction or other conditions and diseases. Acute pain occurring in the first 24 to 48 hours after surgery is often difficult to relieve, even with medications. Acute pain in individuals with orthopedic problems originates from the periosteum, the joint surfaces, and the arterial walls. Muscle pain associated with bone surgery results from muscle ischemia rather than muscle tension. Acute abdominal pain often causes the individual to lie on one side and draw up the legs in the fetal position. Compare **chronic pain**. See also **pain**, **pain intervention**, **pain mechanism**.

acute pancreatitis [Gk, *pan*, all, *kreas*, flesh, *itis*, inflammation], a sudden inflammation of the pancreas caused by autodigestion and marked by symptoms of acute abdomen and escape of pancreatic enzymes into the pancreatic tissues. The condition is associated with trauma, biliary disease or alcoholism. The autodigestion is caused by premature activation of the digestive enzymes. Acute pancreatitis can also be of unknown cause. See also **pancreatitis**.

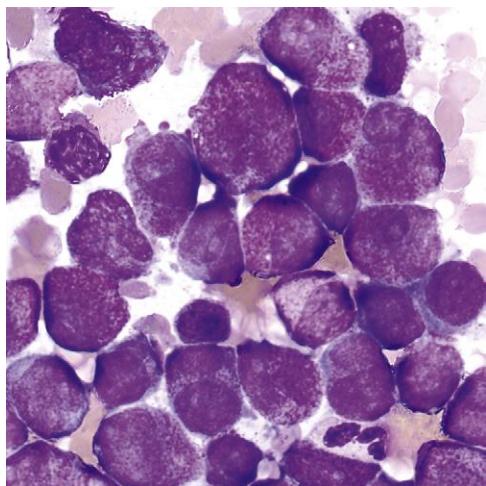
acute parapsoriasis. See **Mucha-Habermann disease**.

acute pharyngitis. See **pharyngitis**.

acute pleurisy, an inflammation of the pleura, often as a result of lung disease. It is characterized by irritation without recognizable pleural effusion and is localized. See also **pleurisy**.

acute primary myocarditis, 1. an inflammation of the heart muscle, most commonly caused by a bacterial infection initiated locally or carried through the bloodstream. 2. a severe inflammation of the heart muscle associated with degeneration of the muscle fibers and release of leukocytes into the interstitial tissues. See also **myocarditis**.

acute promyelocytic leukemia (APoL), a malignancy of the blood-forming tissues, characterized by the proliferation of promyelocytes and blast cells with distinctive Auer rods. Symptoms include severe bleeding and bruises. The patient may also have a low fibrinogen level and platelet count. Management of the disease typically requires replacement of coagulation factors and administration of cytotoxic drugs. See also **leukemia**.



Acute promyelocytic leukemia (Carr and Rodak, 2008)

acute prostatitis. See **prostatitis**.

acute psychosis, one of a group of disorders in which ego functioning is either impaired or inhibited. The ability to process reality-based information is diminished and disordered. The cause may be a known psychological abnormality. In situations in which a physiological abnormality is not recognized, the functional impairment is still clearly present.

acute pyelonephritis. See **pyelonephritis**.

acute pyogenic arthritis, an acute bacterial infection of one or more joints, caused by trauma or a penetrating wound and occurring most frequently in children. Typical signs are pain, redness, and swelling in the affected joint; muscular spasms in the area; chills; fever; sweating; and leukocytosis. Treatment consists of immobilization of the joint, analgesia, sedation, and IV administration of an antibiotic. If required, the joint may be irrigated with normal saline solution and an antibiotic. Hospitalization is usually required. Also called **acute septic arthritis**.

acute radial nerve palsy. See **radial nerve palsy**.

acute radiation exposure, exposure of short duration to intense ionizing radiation, usually occurring as the result of an accidental spill of radioactive material. See **radiation exposure**.

acute rejection [L, *rejicere*, to throw back], after organ transplantation, the rapid reaction against allograft or xenograft tissue that is incompatible. It often occurs a week after treatment, during which the immune response increases in intensity.

acute renal failure (ARF), renal failure of sudden onset, such as from physical trauma, infection, inflammation, or toxicity. Symptoms include uremia and usually oliguria or anuria, with hyperkalemia and pulmonary edema. Three types are distinguished: prerenal, associated with poor systemic perfusion and decreased renal blood flow, such as with hypovolemic shock or congestive heart failure; intrarenal, associated with disease of the renal parenchyma, such as tubulointerstitial nephritis, acute interstitial nephritis, or nephrotoxicity; and postrenal, resulting from obstruction of urine flow out of the kidneys. See also **renal failure**.

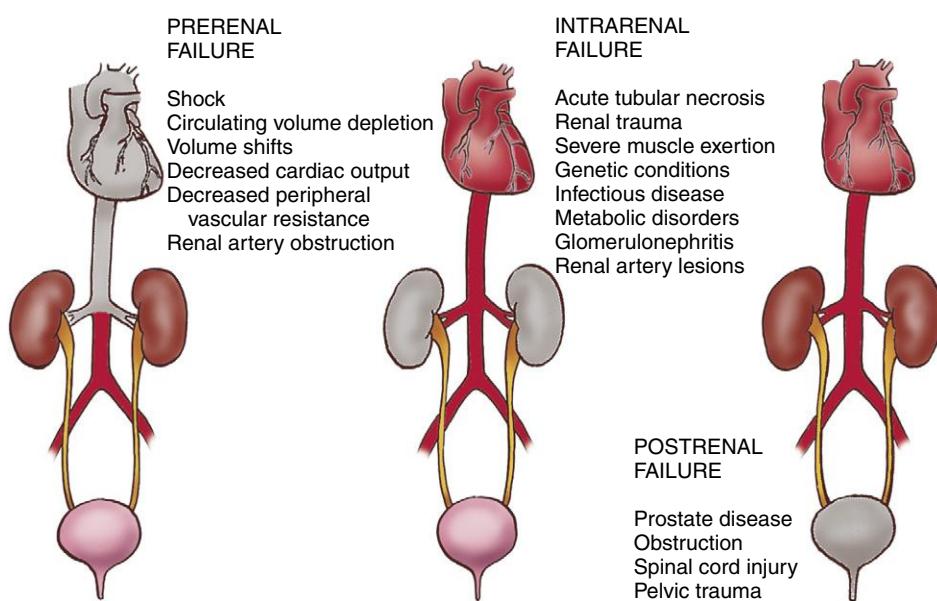
acute respiratory distress syndrome. See **adult respiratory distress syndrome**.

acute respiratory failure (ARF) [L, *acus* + *respirare*, respiratory, *fallere*, to deceive], a sudden inability of the lungs to maintain normal respiratory function. The condition may be caused by an obstruction in the airways or by failure of the lungs to exchange gases in the alveoli. See **respiratory failure**.

acute rheumatic arthritis, joint inflammation that occurs during the acute phase of rheumatic fever.

acute rhinitis. See **rhinitis**.

acute schizophrenia, a disorder consisting of various degrees of psychosis, characterized by the sudden onset of personality disorganization. Symptoms include disturbances in thought, mood, and behavior. Positive symptoms include delusions, which may be bizarre in nature; hallucinations, especially auditory; disorganized speech; inappropriate affect; and disorganized behavior. Negative symptoms include flat affect, lack of volition, alogia, and anhedonia. Episodes appear suddenly in persons whose previous behavior has been relatively normal and are usually



Causes of acute renal failure (Black and Hawks, 2009)

of short duration. Recurrent episodes are common, and in some instances a more chronic type of the disorder may develop. See also **schizoaffective disorder**, **schizophrenia**, **schizophreniform disorder**.

acute secondary myocarditis, a sudden, severe inflammation of the heart muscle, resulting from a disease of the endocardium or pericardium or a generalized infection. See also **myocarditis**.

acute septic arthritis. See **acute pyogenic arthritis**.

acute septic myocarditis [Gk, *septikos*, putrid, *mys*, muscle, *kardia*, heart, *itis*, inflammation], a severe inflammation of the myocardium associated with pus formation, necrosis, and abscess formation. See also **myocarditis**.

acute suppurative arthritis [L, *suppurare*, to form pus], a form of arthritis characterized by invasion of the joint space by pyogenic organisms and the formation of pus in the joint cavity. Failure to recognize and treat septic arthritis can result in morbidity and, sometimes, death. Duration of the illness is usually 4 to 6 days. It most commonly affects children from 5 to 10 years of age.

acute suppurative sinusitis [L, *acutus*, sharp, *suppurare*, to form pus, *sinus*, hollow; Gk, *itis*, inflammation], a purulent infection of the nasal sinuses. Symptoms are pain over the inflamed area, headache, chills, and fever.

acute tonsillitis [L, *acutus*, sharp, *tonsilla*; Gk, *itis*, inflammation], an inflammation of one or both tonsils associated with a catarrhal exudate over the tonsil or the discharge of caseous or suppurative material from the tonsillar crypts.

acute toxicity, the harmful effect of a toxic agent that manifests itself in seconds, minutes, hours, or days after ingestion or exposure.

acute transverse myelitis, an inflammation of the entire thickness of the spinal cord, affecting both the sensory and motor nerves. It can develop rapidly and is accompanied by necrosis and neurological deficit that commonly persist after recovery. Patients in whom spastic reflexes develop soon after the onset of this disease are more likely to recover. This disorder may result from a variety of causes, such as multiple sclerosis, measles, pneumonia, viral infections, and the ingestion of certain toxic agents such as carbon monoxide, lead, and arsenic. Such poisonous substances can destroy the entire circumference of the spinal cord, including the myelin sheaths, axons, and neurons, and can cause hemorrhage and necrosis. There is no effective treatment, and the prognosis for complete recovery is poor. Nursing care includes frequent assessment of vital signs, vigilance for signs of spinal shock, maintenance of a urinary catheter, and proper skin care.

acute tubular necrosis (ATN), acute renal failure with mild to severe damage or necrosis of tubule cells, usually resulting from nephrotoxicity, ischemia after major surgery, trauma (**crush syndrome**), severe hypovolemia, sepsis, or burns. See also **renal failure**.

acute tubulointerstitial nephritis, an early stage of tubulointerstitial nephritis similar to acute pyelonephritis but with involvement farther into the renal medulla to involve the tubules.

acute urethral syndrome [Gk, *ourethra*, urethra, *syn*, together, *dromos*, course], pelvic symptoms experienced by women that includes dysuria, urinary frequency, urinary tenesmus, lower back pain, and suprapubic aching and cramping. Clinical evidence of a pathogen or other factor to account for the symptoms may be absent, and further testing may be required.

acute vulvar ulcer, a nonvenereal, usually shallow lesion of the vulva, often associated with a febrile illness. Its cause is uncertain.

acyanotic /ā'sī-ənot'ik/ [Gk, *a*, not, *kyanos*, blue], lacking a blue appearance of the skin and mucous membranes.

The lack is suggestive of adequate oxygenation. Compare **cyanosis**.

cyanotic congenital defect, a heart defect present at birth that does not produce blue discoloration of the skin and mucous membranes under normal circumstances. However, the condition does increase the load on the pulmonary circulation and may lead to cyanosis, right ventricular failure, or other complications during physical exertion. A common example is **atrial septal defect**.

acyclovir /ā'sīklōvēr/, an antiviral agent with activity against herpesvirus types 1 and 2 and varicella zoster virus. Acyclovir is converted by a herpesvirus enzyme into a molecule (acyclovir triphosphate) that inhibits the synthesis of deoxyribonucleic acid (DNA) molecules in the virally infected cells, thereby inhibiting viral replication.

■ **INDICATIONS:** It is prescribed topically in an ointment for the treatment of herpes simplex lesions (cold sores) and both orally and systemically (oral and IV) in other types of herpes infections, including genital herpes, herpes encephalitis, chickenpox (varicella zoster), and shingles (herpes zoster).

■ **CONTRAINDICATION:** Known sensitivity to this drug prohibits its use.

■ **ADVERSE EFFECTS:** After topical use, irritation or pruritus may occur; after systemic use, diaphoresis, headache, and nausea may occur. When it is administered intravenously in the treatment of immunosuppressed patients, there may be pain at the site of the injection, and 1% to 10% of such patients experience acute renal failure.

acyesis /ā'sī-ē'sis/, 1. the absence of pregnancy. 2. sterility in women.

acyl /ā'sil/, an organic radical derived from an organic acid via removal of the hydroxyl group from the carboxyl group. It is represented as R—CO—.

acylation /ās'ilā'shōn/, the incorporation into a molecule of an organic compound of an acyl group, R—CO—.

-ad-, a suffix meaning ‘toward’ (a specified terminus): *cephalad*.

AD, abbreviation for **Alzheimer's disease**.

ad-, a prefix meaning ‘to, toward, addition to, intensification’: *adneural*, *adrenal*.

a.d., abbreviation for **auris dextra**.

A/D, 1. abbreviation for *analog-to-digital*. See **analog-to-digital converter**. 2. abbreviation for *anodal duration*. 3. abbreviation for *average deviation*.

ADA, 1. abbreviation for *American Dental Association*. 2. abbreviation for *American Diabetes Association*. 3. abbreviation for *American Dietetic Association*. 4. abbreviation for **adenosine deaminase**.

ADA, abbreviation for *American Dental Assistants Association*.

adactyly /ādak'tilē/ [Gk, *a* + *daktylos*, not finger or toe], a congenital defect in which one or more digits of the hand or foot are missing.

Adair-Dighton syndrome [Charles Adair-Dighton, British physician, b. 1885]. See **osteogenesis imperfecta**.

Adalat, a trademark for a calcium channel blocker (NIFEdipine).

adalimumab, an antirheumatic immunomodulating agent used to treat patients older than 18 years of age with moderate to severe rheumatoid arthritis.

adamantinoma, **adamantoblastoma**. See **ameloblastoma**.

Adam, Evelyn [b. 1929], a Canadian nursing theorist who applied the structure of a conceptual model for nursing in her book, *Être Infirmière* in 1979 (*To Be a Nurse*, 1980). Adam believes that a theory is useful to more than one discipline, but that a conceptual model for a discipline is useful only

to that discipline. A conceptual model consists of assumptions, beliefs and values, and major units. Adam developed Virginia Henderson's concepts within Dorothy E. Johnson's structure of a conceptual model. She describes the goal of nursing as maintaining or restoring the client's independence in the satisfaction of 14 fundamental needs. Each need has biological, physiological, and psychosocial aspects. The nurse complements and supplements the client's strength, knowledge, and will.

Adam's apple, *informal*. See **laryngeal prominence**.

Adams-Stokes syndrome [Robert Adams, Irish surgeon, 1791–1875; William Stokes, Irish physician, 1804–1878], a condition characterized by sudden, recurrent episodes of loss of consciousness caused by incomplete heart block. Seizures may accompany the episodes. Also called **Stokes-Adams syndrome**. See also **infranodal block**.

adapalene /ah-dap'ah-lēn/, a synthetic analog of retinoic acid used topically in the treatment of acne vulgaris.

adaptation /ad'ap-tā'shən/ [L, *adaptatio*, act of adapting], a change or response to stress of any kind, such as inflammation of the nasal mucosa in infectious rhinitis or increased crying in a frightened child. Adaptation may be normal, self-protective, and developmental, as when a child learns to talk; it may be all-encompassing, creating further stress, as in polycythemia, which occurs naturally at high altitudes to provide more oxygen-carrying erythrocytes but may also lead to thrombosis, venous congestion, or edema. The degree and nature of adaptation shown by a patient are evaluated regularly by the members of the health care team. They constitute a measure of the effectiveness of care, the course of the disease, and the ability of the patient to cope with stress. Compare **accommodation**.

adaptation model, (in nursing) a conceptual framework that focuses on the patient as an adaptive system, one in which nursing intervention is required when a deficit develops in the patient's ability to cope with the internal and external demands of the environment. These demands are classified into four groups: physiological needs, the need for a positive self-concept, the need to perform social roles, and the need to balance dependence and independence. The nurse assesses the patient's maladaptive response and identifies the kind of demand that is causing the problem. Nursing care is planned to promote adaptive responses for coping successfully with the current stress on the patient's well-being. This model, first proposed by Sister Callista Roy, is frequently used as a conceptual framework for programs of nursing education.

adaptation syndrome. See **general adaptation syndrome**.

adaptation to physical disability, 1. a nursing outcome from the Nursing Outcomes Classification (NOC) defined as adaptive response to a significant functional challenge due to a physical disability. See also **Nursing Outcomes Classification**. 2. adjustment or change enacted by a patient to accommodate a situation facilitated by members of the health care team; guided by the patient's needs and goals.

adapted clothing, clothing that has been modified, such as with taped hook and loop or Velcro fasteners, to permit disabled persons to dress themselves with minimal difficulty.

adapter [L, *adaptatio*, the process of adjusting], a device for joining or connecting two or more parts of a system to enable it to function properly, usually with tubing.

adaptive device /ad'ap-tiv/ [L, *adaptatio*, process of adapting; OFr, *devise*], any structure, design, instrument, contrivance, or equipment that enables a person with a disability to function independently. Examples include plate guards, grab bars, and transfer boards. Also called *self-help device*, *assistive device*.

adaptive hypertrophy [L, *adaptatio*, process of adapting; Gk, *hyper*, excessive, *trophe*, nourishment], a reactive increase in the amount of tissue that compensates for a loss of the same or similar tissue so that function is not impaired.

adaptive response, an appropriate reaction to an environmental demand.

adaptor RNA, obsolete. See **transfer RNA**.

ADA Seal of Acceptance, an approval given by the American Dental Association Council on Scientific Affairs to oral care products that are supported by adequate research evidence as to their safety and efficacy.

ADC, abbreviation for **AIDS-dementia complex**.

ADCC, abbreviation for *antibody-dependent cell-mediated cytotoxicity*.

ADC Van Disal /ā'dē-sē'vandī'sōl/, a term used as a mnemonic device for recalling the protocol of hospital admission orders. The letters stand for *admission authorization, diagnosis, condition, vital signs, activity, drugs, instructions, special studies, allergies, laboratory tests*.

ADD, abbreviation for **attention deficit disorder**.

Addams, Jane [1860–1935], an American social reformer. In Chicago in 1889 she founded Hull House, one of the first social settlements in the United States, where volunteers from many disciplines, including nursing, lived and worked in their professions. She played a central role in most of the social reforms of her time and provided inspiration to those in the nursing profession who were striving to establish high educational standards and better working conditions. She was co-recipient of the Nobel peace prize in 1931.

adder, any of numerous venomous elapid and viperine snakes. The death adder is found in Australia and New Guinea, and the puff adder is found in Africa and Arabia. See also **snakebite**.

addict /ad'ikt/ [L, *addicere*, to devote], a person who has become physiologically and psychologically dependent on a chemical such as alcohol or other drugs to the extent that normal social, occupational, and other responsible life functions are disrupted.

addiction /ādik'shən/, a compulsive, uncontrollable dependence on a chemical substance, habit, or practice to such a degree that either the means of obtaining or ceasing use may cause severe emotional, mental, or physiological reactions. Compare **habituation**.

addictive personality /ādik'tiv/, a personality marked by traits of compulsive and habitual use of a substance or practice in an attempt to cope with psychic pain engendered by conflict and anxiety.

Addison anemia. See **pernicious anemia**.

addisonian crisis. See **adrenal crisis**.

addisonism [Thomas Addison, London physician, 1793–1860], a condition characterized by the physical signs of Addison's disease, although loss of adrenocortical functions is not involved. The signs include an increase in the bronze pigmentation of the skin and mucous membranes caused by increased levels of melanocyte-stimulating hormone, as well as general debility.

Addison's crisis. See **adrenal crisis**.

Addison's disease [Thomas Addison], a life-threatening condition caused by partial or complete failure of adrenocortical function, often resulting from autoimmune processes, infection (especially tubercular or fungal), neoplasm, or hemorrhage in the gland. All three general functions of the adrenal cortex (glucocorticoid, mineralocorticoid, and androgenic) are lost. Also called **Addison's syndrome**, **adrenocortical insufficiency**. See also **adrenal crisis**.

■ **OBSERVATIONS:** The disease is characterized by increased bronze pigmentation of the skin and mucous membranes;

weakness; decreased endurance; anorexia; dehydration; weight loss; GI disturbances; salt cravings; anxiety, depression, and other emotional distress; and decreased tolerance to physical and emotional stress. The person's requirements for glucocorticoid, mineralocorticoid, and salt are increased by stress, as in infection, trauma, and surgical procedures. The onset is usually gradual, over a period of weeks or months. Laboratory tests reveal abnormally low blood concentrations of sodium and glucose, a greater than normal level of serum potassium, and a decreased urinary output of certain steroids. The diagnosis is established if the amount of cortisol in the plasma and steroid in the urine does not increase after stimulation with adrenocorticotrophic hormone.

■ **INTERVENTIONS:** Treatment includes replacement therapy with glucocorticoid and mineralocorticoid drugs, an adequate fluid intake, control of sodium and potassium balance, and a diet high in complex carbohydrates and protein. Follow-up care includes continued administration of glucocorticoid drugs.

■ **NURSING CONSIDERATIONS:** Complications include high fever, confused behavior, and adrenal crisis. With careful management, the patient's resistance to infection, capacity for work, and general well-being can be maintained. Nursing care includes administering corticosteroids and other drugs, observing the patient for signs of abnormal sodium and potassium levels, monitoring body weight and fluid intake and output, and encouraging adequate intake of nutrients. The patient also needs protection against stress while in the hospital and instruction in the importance of avoiding stress at home. The significance of emotional distress, the value of wearing a Medic Alert bracelet or tag, the signs of impending crisis, the use of a prepared kit for emergencies, and the importance of scrupulous attention to drug and diet regimens are emphasized before discharge. Discharge teaching also emphasizes the need to take cortisone after meals or with milk to prevent gastric irritation and the development of ulcers.



Addison's disease (Moll, 1997)

Addison's keloid. See **morphea**.

Addison's syndrome. See **Addison's disease**.

addition [L, *additio*, something added], a chemical reaction in which two complete molecules combine to form a new product, usually by attachment to carbon atoms at a double or triple bond of one of the molecules.

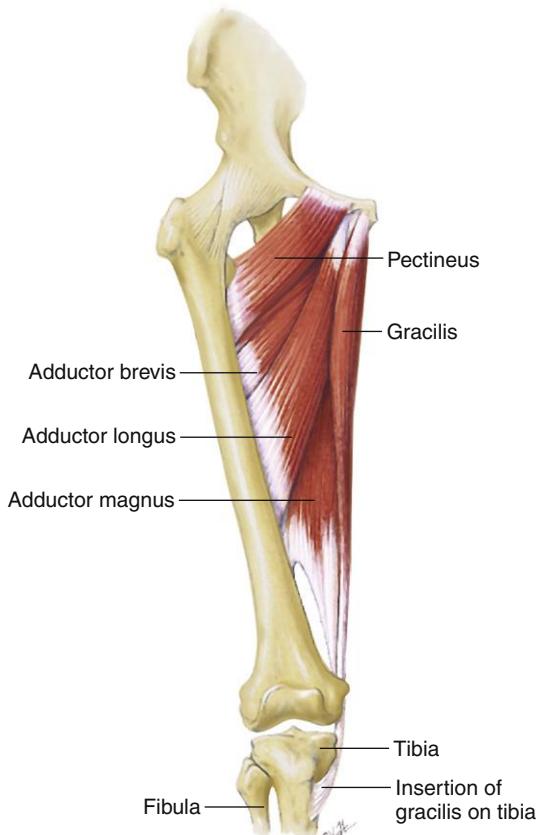
additive /ad'itiv/, any substance added intentionally or indirectly that becomes a part of the food, pharmaceutical, or other product. Additives may be introduced in growing, processing, packaging, storage, or cooking or other final preparation for consumption.

additive effect [L, *additio*, something added, *effectus*], the combined effect of drugs that, when used in combination, produce an effect that is greater than the sum of their separately measured individual effects.

adducent /ədoo'sənt/, an agent or other stimulus that causes a limb to be drawn toward the midline or axis of the body or causes the fingers or toes to move together.

adduction /əduk'shən/ [L, *adducere*, to bring to], the movement of a limb toward the midline or axis of the body. Compare **abduction**. —*adduct*, v.

adductor /ədukt'ər/, a muscle that draws a part toward the midline or axis of the body. Compare **abductor**.



Adductor brevis, adductor longus, and adductor magnus muscles of the anterior thigh

(Patton and Thibodeau, 2010)

adductor brevis, a somewhat triangular muscle in the thigh and one of the five medial femoral muscles. It acts to adduct and rotate the thigh laterally and to flex the leg. Compare **adductor longus**, **adductor magnus**, **gracilis**, **pectenius**.

adductor canal, a triangular channel beneath the sartorius muscle and between the adductor longus and vastus medialis through which the femoral vessels and the saphenous nerve pass. Also called *Hunter's canal*, *subsartorial canal*.

adductor hiatus, the opening in the tendon of insertion of the adductor magnus through which the femoral artery and vein pass into the popliteal space.

adductor longus, the most superficial of the three adductor muscles of the thigh and one of five medial femoral muscles. It functions to adduct and flex the thigh. Compare **adductor brevis**, **adductor magnus**, **gracilis**, **pectineus**.

adductor magnus, the long, heavy triangular muscle of the medial aspect of the thigh. The adductor magnus acts to adduct the thigh. The proximal portion acts to rotate the thigh medially and flex it on the hip; the distal portion acts to extend the thigh and rotate it laterally. Compare **adductor brevis**, **adductor longus**, **gracilis**, **pectineus**.

adductor pollicis, a large triangular muscle that is a powerful adductor of the thumb and opposes the thumb to the rest of the digits in gripping.

adefovir dipivoxil, an antiviral agent used to treat chronic hepatitis B.

ADEM, abbreviation for **acute disseminated encephalomyelitis**.

aden-. See **adeno-**.

adenalgia /ad'ənəl'jə/ [Gk, *aden*, gland, *algos*, pain], pain in any of the glands. Also called **adenodynia**.

adenectomy /ad'ənek'təmē/ [Gk, *aden* + *ektomē*, excision], the surgical removal of any gland.

Aden fever. See **dengue fever**.

-adenia, a suffix meaning '(condition of the) glands': *anadenia*, *heteradenia*.

adenine /ad'ənin/, a purine base that is a component of DNA, RNA, adenosine monophosphate (AMP), cyclic AMP, adenosine diphosphate (ADP), and adenosine triphosphate (ATP).

adenine arabinoside. See **vidarabine**.

adenine-D-ribose. See **adenosine**.

adenitis /ad'ənīt'is/, an inflammation of a lymph node. Acute adenitis of the cervical lymph nodes may accompany a sore throat and stiff neck, simulating mumps if severe. It is most often related to an oral, a pharyngeal, or an ear infection. Scarlet fever may cause acute suppurative cervical adenitis. Swelling of the lymph nodes in the back of the neck is often the result of a scalp infection, insect bite, or infestation by head lice. Inflammation of the lymph nodes of the mesenteric portion of the peritoneum often produces pain and other symptoms similar to those of appendicitis, but characteristically mesenteric adenitis is preceded by respiratory infection, the pain is less localized and less constant than in appendicitis, and the pain does not increase in severity. Generalized adenitis is a secondary symptom of syphilis. Therapy requires treatment of the primary infection by the administration of antimicrobial agents, application of warm compresses, and when fluctuation is present, incision and drainage. Also called **lymphadenitis**. Compare **acinitis**.

adeno-, **aden-** /ad'ənō-/ , prefix meaning 'gland': *adenocarcinoma*, *adenectomy*.

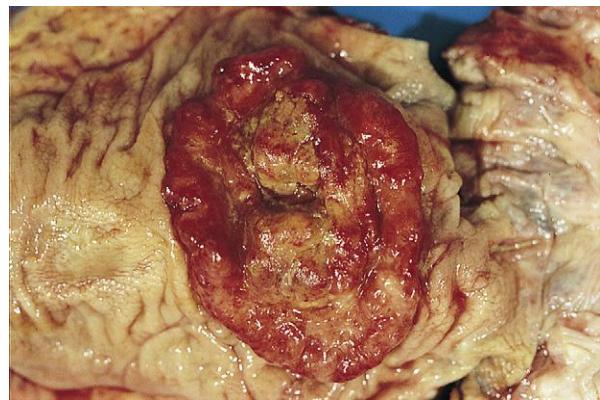
adenoacanthoma /ad'ənō·ak'anthō'mə/ [Gk, *aden* + *akantha*, thorn, *oma*, tumor], a neoplasm that may be malignant or benign, derived from glandular tissue with squamous differentiation shown by some of the cells.

adenoameloblastoma /ad'ənō·amēlōblastō'mə/ , pl. *adenoameloblastomas*, *adenoameloblastomata*, a benign tumor of the maxilla or mandible composed of ducts lined with columnar or cuboidal epithelial cells. It develops in tissue that normally gives rise to the teeth, and it most often occurs in young people.

adenoassociated virus (AAV), a defective virus belonging to a group of DNA viruses of the Parvoviridae family that can reproduce only in the presence of adenoviruses. It is not yet known what role, if any, these organisms have in causing disease. No specific antiviral is available. When not

replicating, it is integrated into the host genome and has been proposed as a vector for gene transfer.

adenocarcinoma /ad'ənōkär'sinō'mə/ pl. *adenocarcinomas*, *adenocarcinomata* [Gk, *aden* + *karkinos*, crab, *oma*], any one of a large group of malignant epithelial cell tumors of the glandular tissue. Specific tumors are diagnosed and named by cytological identification of the tissue affected; for example, an adenocarcinoma of the uterine cervix is characterized by tumor cells resembling the glandular epithelium of the cervix. —**adenocarcinomatous**, adj.



Adenocarcinoma (Damjanov, 2012)

adenocarcinoma in situ, a localized growth of abnormal glandular tissue that may become malignant. However, the abnormal cells do not extend beyond the basement membrane. It is most common in the endometrium and in the large intestine.

adenocarcinoma of the kidney. See **renal cell carcinoma**.

adenocarcinoma of the lung, a type of bronchogenic carcinoma made up of a discrete mass of cuboidal or columnar epithelial cells, generally at the lung periphery. Most of these tumors form glandular structures that contain mucin, although a few lack mucin and are solid. Growth is slow, but there may be early invasion of blood and lymph vessels by metastases while the primary lesion is still asymptomatic. There are two types of lung adenocarcinomas: **bronchioloalveolar carcinoma** and **bronchogenic adenocarcinoma**.

adenocarcinomatous. See **adenocarcinoma**.

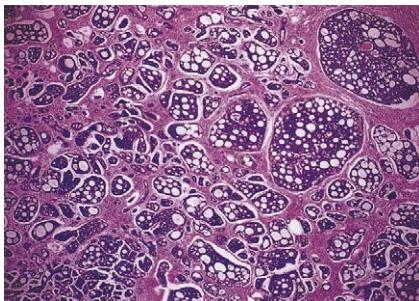
adenocoele /ad'ənōsēl'/, a cystic, glandular tumor.

adenochondroma /ad'ənōkondrō'mə/ pl. *adenochondromas*, *adenochondromata* [Gk, *aden* + *chondros*, cartilage, *oma*, tumor], a neoplasm of cells derived from glandular and cartilaginous tissues, as a mixed tumor of the salivary glands. Also called **chondroadenoma**.

adenocyst /ad'ənōsīst'/ [Gk, *aden* + *kytis*, bag], a benign tumor in which the cells form cysts. A kind of adenocyst is **papillary adenocystoma lymphomatosum**. Also called **adenocystoma**.

adenocystic carcinoma, an uncommon malignant neoplasm composed of cords of uniform small epithelial cells arranged in a sievelike pattern around cystic spaces that often contain mucus. The tumor occurs most frequently in the salivary glands, breast, mucous glands of the upper and lower respiratory tract, and, occasionally, in vestibular glands of the vulva. The malignant slow growth tends to spread along nerves, causing neurological damage. Facial paralysis often results from adenocystic carcinoma of the salivary gland. Blood-borne metastases to lungs and liver have been reported. Standard treatment involves surgery followed by radiation. Chemotherapy has not proven effective or safe.

Also called **adenoid cystic carcinoma**, **adenomyoepithelioma**, **cibriform carcinoma**, **cylindroma**.



Adenocystic carcinoma (Silverberg et al, 2006)

adenocystoma. See **adenocyst**.

adenodynia /ad'ənōdīnē-ə/. See **adenalgia**.

adenoepithelioma /ad'ənō-ep'i-thē'lē-ō'mə/ pl. **adenoepitheliomas**, **adenoepitheliomatā** [Gk, *aden* + *epi*, on, *thele* nipple, *oma*], a neoplasm consisting of glandular and epithelial components.

adenofibroma /ad'ənōfibrō'mə/ pl. **adenofibromas**, **adenofibromata** [Gk, *aden* + L, *fibra*, fiber, *oma*], a tumor of the connective tissues that contains glandular elements.

adenofibroma edematodes, a neoplasm consisting of glandular elements and connective tissue in which marked edema is present.

adenohypophysis /ad'ənō'hīpōfī'sis/ [Gk, *aden* + *hypo*, beneath, *phyein*, to grow], the anterior lobe of the pituitary gland. It secretes growth hormone, thyroid-stimulating hormone, adrenocorticotrophic hormone, melanocyte-stimulating hormone, follicle-stimulating hormone, luteinizing hormone, prolactin, beta lipotropin molecules, and endorphins. The release of hormones from the hypothalamus regulates these secretions. Also called **anterior pituitary**.

adenoid /ad'ənoid/ [Gk, *aden* + *eidos*, form], 1. having a glandular, particularly lymphoid, appearance. 2. See **adenoids**.

adenoidal speech, an abnormal manner of speaking caused by hypertrophy of the adenoidal tissue that normally exists in the nasopharynx of children. It is often characterized by hyponasality, with the consonants /m/, /n/, and /ng/ most affected. It may be corrected by a natural reduction of the swollen tissues or by surgical excision of the adenoids.

adenoid cystic carcinoma. See **adenocystic carcinoma**.

adenoidectomy /ad'ənoidek'tomē/ [Gk, *aden* + *eidos*, form, *ektomē*, excision], the removal of lymphoid tissue in the nasopharynx. This surgical procedure may be performed because the adenoids are enlarged, chronically infected, or causing obstruction. Normal adenoids may be excised as a prophylactic measure during tonsillectomy. Preoperative procedures usually include a partial thromboplastin time and for African-American patients a sickle cell preparation test. The operation is performed with general anesthesia in children, but local anesthesia may be used in adults. After removal of the adenoids, bleeding is stemmed with pressure, or vessels may be ligated with sutures or electrocoagulation current may be used. After surgery, the patient is observed for signs of hemorrhage, and the pulse, blood pressure, and respiration are checked every 15 minutes for the first hour and every 30 minutes for several hours thereafter. Compare **adenotonsillectomy**, **tonsillectomy**.

adenoid facies, a long face and open-mouth posture, sometimes seen in children with hypertrophy of the pharyngeal tonsils ("adenoids"). Chronic nasal airway obstruction is believed to affect facial growth characteristics.

adenoid hyperplasia, enlarged adenoid glands, especially in children. Enlarged adenoids, often in association with enlarged tonsils, are a frequent cause of recurrent otitis media, sinusitis, conductive hearing loss, and partial respiratory obstruction. Severe obstruction can result in alveolar hypoventilation and pulmonary hypertension with congestive heart failure. Treatment usually consists of an adenoidectomy. **adenoid hypertrophy** [Gk, *aden*, gland, *eidos*, form, *hyper*, excessive, *trophe*, nourishment], the unusual growth of the pharyngeal tonsil.

adenoiditis /ad'ənoidītis/, an inflammation of the adenoids.

adenoids, one of two masses of lymphatic tissue situated on the posterior wall of the nasopharynx behind the posterior nares. During childhood these masses often swell and block the passage of air from the nasal cavity into the pharynx, preventing the child from breathing through the nose. Also called **pharyngeal tonsil**. —*adenoidal*, adj.

adenoleiomyofibroma /ad'ənōlī'ōmī'ōfibrō'mə/ pl. **adenoleiomyofibromas**, **adenoleiomyofibromata** [Gk, *aden* + *leios*, smooth, *mys*, muscle; L, *fibra*, fiber; Gk, *oma*], a glandular tumor with smooth muscle, connective tissue, and epithelial elements.

adenolipoma /ad'ənōlipō'mə/ pl. **adenolipomas**, **adenolipomata** [Gk, *aden* + *lipos*, fat, *oma*], a benign neoplasm consisting of elements of glandular and adipose tissue.

adenolipomatosis /ad'ənōlip'ōmətō'sis/, a condition characterized by the growth of adenolipomas in the groin, axilla, and neck.

adenolymphoma. See **papillary adenocystoma lymphomatous**.

-adenoma, a suffix meaning a 'tumor composed of glandular tissue or glandlike in structure': **sarcoadenoma**, **splenadenoma**.

adenoma /ad'ənō'mə/ pl. **adenomas**, **adenomata** [Gk, *aden* + *oma*], a benign tumor of glandular epithelium in which the cells of the tumor are arranged in a recognizable glandular structure. An adenoma may cause excess secretion by the affected gland, such as an acidophilic adenoma resulting in an excess of growth hormone. Kinds of adenomas include **acidophilic adenoma**, **basophilic adenoma**, **fibroadenoma**, and **insulinoma**. —*adenomatoid*, **adenomatous**, adj.

adenoma sebaceum /sebā'sē-əm/, an abnormal skin condition consisting of multiple wartlike, yellowish red, waxy papules on the face that are not sebaceous. The lesions are composed chiefly of fibrovascular tissue and usually benign. See also **tuberous sclerosis**.



Adenoma sebaceum (du Vivier, 1993)

adenomatoid. See **adenoma**.

adenomatosis /ad'ənōmətō'sis/, an abnormal condition in which hyperplasia or tumor development affects two or more glands, usually the thyroid, adrenals, or pituitary.

adenomatous. See **adenoma**.

adenomatous goiter /ad'ənōt'əmōtəs/, an enlargement of the thyroid gland caused by an adenoma or numerous colloid nodules.

adenomatous polyp [Gk, *aden*, gland, *oma*, tumor, *polys*, many, *pous*, foot], a tumor that develops in glandular tissue or epithelium. It is characterized by benign neoplastic changes in epithelium.

adenomatous polyposis coli (APC), a gene associated with familial adenomatous polyposis (FAP), an inherited disorder characterized by the development of myriad polyps in the colon, often occurring in adolescents and young adults ages 15 to 25. Untreated, the condition nearly always leads to colon cancer. The gene is located on chromosome 5.



Familial adenomatous polyposis (Goldman et al., 2012)

adenomyoepithelioma. See **adenocystic carcinoma**.

adenomyofibroma /ad'ənōmī'ōfibrō'mā/ pl. *adenomyofibromas*, *adenomyofibromata* [Gk, *aden* + *mys*, muscle; L, *fibra*, fiber; Gk, *oma*], a fibrous tumor that contains glandular and muscular components.

adenomyoma /ad'ənōmī'ō'mā/, pl. *adenomyomas*, *adenomyomata*, a tumor of the endometrium of the uterus characterized by a mass of smooth muscle containing endometrial tissue and glands.

adenomyomatosis /ad'ənōmī'ōmōtō'sis/, an abnormal condition characterized by the formation of benign nodules resembling adenomyomas, found in the uterus or in parauterine tissue.

adenomyosarcoma /ad'ənōmī'ōsärkō'mā/, pl. *adenomyosarcomas*, *adenomyosarcomata*. See **Wilms' tumor**.

adenomyosis /ad'ənōmī'ō'sis/, 1. a benign neoplastic condition characterized by tumors composed of glandular tissue and smooth muscle cells. 2. a malignant neoplastic condition characterized by the invasive growth of uterine mucosa in the uterus, pelvis, colon, or oviducts.

adenopathy /ad'ənop'əthē/ [Gk, *aden* + *pathos*, suffering], an enlargement of any gland. —*adenopathic*, adj.

adenopharyngitis /ad'ənōfer'injī'tis/, an inflammation of the adenoids and pharynx.

adenosarcoma /ad'ənōsärkō'mā/ pl. *adenosarcomas*, *adenosarcomata* [Gk, *aden* + *sark*, flesh, *oma*], a mixed malignant glandular tumor of the soft tissues of the body. It contains both glandular and sarcomatous elements.

adenosarcorhabdomyoma /ad'ənōsär'kōrab'dōmī'ō'mā/, pl. *adenosarcorhabdomyomas*, *adenosarcorhabdomyomata*, a tumor composed of glandular and connective tissue and striated muscle elements.

adenosine /ə'dēn'əsīn, -sēn/, a compound derived from nucleic acid, composed of adenine and a sugar, D-ribose.

Adenosine is the major molecular component of the nucleotides adenosine diphosphate, adenosine monophosphate, and adenosine triphosphate and of the nucleic acids DNA and RNA. Also called **adenine-D-ribose**. See also **adenosine phosphate**.

adenosine deaminase (ADA) /dē'am'inās/, an enzyme that catalyzes the conversion of adenosine to the nucleoside inosine through the removal of an amino group. A deficiency of ADA can lead to severe combined immunodeficiency syndrome. See also **adenosine**.

adenosine diphosphate (ADP), a product of the hydrolysis of adenosine triphosphate.

adenosine hydrolase, an enzyme that catalyzes the conversion of adenosine into adenine and ribose.

adenosine kinase, an enzyme in the liver and kidney that catalyzes the transfer of a phosphate group from adenosine triphosphate to produce adenosine diphosphate.

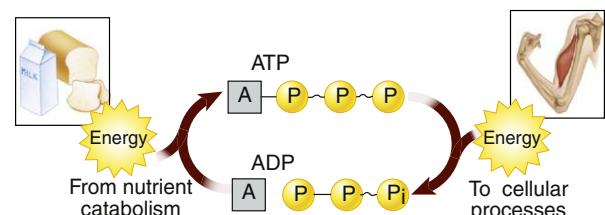
adenosine monophosphate (AMP), an ester, composed of adenine-D-ribose and phosphoric acid, that participates in energy released by working muscle. Also called **adenylic acid**.

adenosine phosphate, a compound consisting of the nucleotide adenosine attached through its ribose group to one, two, or three phosphate units, or phosphoric acid molecules. Kinds of adenosine phosphate, all of which are interconvertible, are **adenosine diphosphate**, **adenosine monophosphate**, and **adenosine triphosphate**.

adenosine 3',5'-cyclic monophosphate. See **cyclic adenosine monophosphate**.

adenosine triphosphatase (ATPase), an enzyme in skeletal muscle and other tissues that catalyzes the hydrolysis of adenosine triphosphate to adenosine diphosphate and inorganic phosphate. Among various enzymes in this group, mitochondrial ATPase is involved in obtaining energy for cellular metabolism, and myosin ATPase is involved in muscle contraction.

adenosine triphosphate (ATP), a compound consisting of the nucleotide adenosine (A) attached through its ribose group to three phosphoric acid molecules (P). Hydrolysis of ATP to adenosine diphosphate (D) releases energy. By coupling a less favorable reaction in the cell with this hydrolysis, the less favorable reaction may proceed, allowing one to think of ATP as the cellular energy currency, especially in muscle.



Adenosine triphosphate in metabolism

(Patton and Thibodeau, 2010)

adenosis /ad'ənōsīs/, 1. any disease of the glands, especially a lymphatic gland. 2. an abnormal development or enlargement of glandular tissue.

adenotomy /ad'ənot'əmē/ [Gk, *aden*, gland, *tomē*, a cutting], a dissection of or an incision into a gland.

adenotonsillectomy /ad'ənōtōn'silek'tōmē/, the surgical removal of the adenoids and tonsils. Compare **adenoidectomy**, **tonsillectomy**.

adenovirus /ad'ənōvī'rəs/ [Gk, *aden* + L, *virus*, poison], any one of the 49 medium-sized viruses of the

Adenoviridae family, pathogenic to humans, that cause conjunctivitis, upper respiratory tract infection, cystitis, or GI infection. After the acute and symptomatic period of illness, the virus may persist in a latent stage in the tonsils, adenoids, and other lymphoid tissue. Compare **rhinovirus**. —*adenoviral, adj.*

adenylate /ədēn'īlāt/, a salt or ester of adenylic acid.

adenylate cyclase, an enzyme that initiates the conversion of adenosine triphosphate to cyclic adenosine monophosphate, a mediator of many physiological activities.

adenylate kinase, an enzyme in skeletal muscle that makes possible the reaction ATP + AMP = 2ADP. Also called **myokinase**.

adenylic acid. See **adenosine monophosphate**.

adequate and well-controlled studies, the clinical and laboratory studies that the sponsors of a new drug are required by law to conduct to demonstrate the truth of the claims made for its effectiveness.

adermatoglyphia, the absence of fingerprints from birth. A rare mutation of a gene expressed in the skin. The palms, fingers, toes, and soles of an affected person are also smooth and devoid of normal subtle ridges.

adermia /ədūr'mē-ə/ [Gk, *a* + *derma*, without skin], a congenital or acquired skin defect or the absence of skin.

ADH, abbreviation for **antidiuretic hormone**.

ADHA, abbreviation for the **American Dental Hygienists' Association**.

adherence /adhir'ēns/, 1. the quality of clinging or being closely attached. 2. the process in which a person follows rules, guidelines, or standards, especially as a patient follows a prescription and recommendations for a regimen of care. —*adhere, v., adherent, adj.*

adherence behavior, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as the self-initiated actions to promote optimal wellness, recovery, and rehabilitation. See also **Nursing Outcomes Classification**.

adherence behavior: healthy diet, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as personal actions to monitor and optimize a healthy and nutritional dietary regimen. See also **Nursing Outcomes Classification**.

adherent pericardium. See **pericardial adhesion**.

adherent placenta [L, *adhaerens*, sticking to, *placenta*, flat cake], a placenta that remains attached to the uterine wall beyond the normal time after birth of the fetus. See also **placenta accreta**.

adhesin /adhē'sin/, a bacterial product that enables bacteria to adhere to and colonize a host. Adherence is often an essential step in pathogenesis. Adhesins are attractive candidates for vaccines and/or components of acellular vaccines such as those for pertussis.

adhesion /adhē'zhən/ [L, *adhaerens*, sticking to], a band of scar tissue that binds anatomical surfaces that normally are separate from each other. Adhesions most commonly form in the abdomen after abdominal surgery, inflammation, or injury. A loop of intestine may adhere to unhealed areas. Scar tissue constricting the bowel's lumen may cause intestinal obstruction, blocking intestinal flow and causing abdominal pain, nausea and vomiting, and distention. Nasogastric intubation and suction may relieve symptoms. If the intestinal obstruction does not resolve spontaneously, surgery to lyse adhesions may be necessary. See also **adhesiotomy**.

adhesiotomy /adhē'sē-ot'ōmē/ [L, *adhaerens* + Gk, *temnein* to cut], the surgical division or separation of adhesions, usually performed to relieve an intestinal obstruction. Also called **lysis**. See also **abdominal surgery**.

adhesive /adhē'siv/ [L, *adhaerens*, sticking to], the quality of a substance that enables it to become attached to another substance.

adhesive capsulitis, a shoulder condition characterized by stiffness, pain, and limited range of motion. It most often occurs in midlife and may be associated with shoulder surgery or injury. Also called *frozen shoulder*. See also **capsulitis**.

adhesive pericarditis. See **pericardial adhesion**.

adhesive peritonitis, an inflammation of the peritoneum, characterized by a fibrinous exudate that mats together the intestines and various other organs. This condition may be marked by an exudate of serum, fibrin, cells, and pus, accompanied by abdominal pain and tenderness, vomiting, constipation, and fever.

adhesive phlebitis. See **obliterative phlebitis**.

adhesive plaster. See **adhesive tape**.

adhesive pleurisy, an inflammation of the pleura with exudation. It causes obliteration of the pleural space through the fusion of the visceral pleura covering the lungs and the parietal pleura lining the walls of the thoracic cavity.

adhesive skin traction, a type of skin traction in which the therapeutic pull of traction weights is applied with adhesive straps that stick to the skin over the body structure involved, especially a fractured bone. Adhesive skin traction is a short-term treatment used only when continuous traction is desired and skin care for the affected area is easily maintained. It is not suitable for clients with fragile skin. Compare **nonadhesive skin traction**.

adhesive tape, a strong fabric covered on one side with an adhesive. Often water repellent, it may be used to hold bandages and dressings in place, to immobilize a part, or to exert pressure. Also called **adhesive plaster**.

ADI, abbreviation for **acceptable daily intake**.

adiadochokinesia /ādē-adōkō'kinēzħə, ēdē-ādōkō-/ , an inability to perform rapidly alternating movements, such as pronation and supination or flexion and extension. The activity is commonly included in a neurological examination.

adiaphoresis /ādē-afōrē'sis/, an absence or deficiency of perspiration.

adiastole /ādī-as'təlē/ [Gk, *a*, not, *dia*, across, *stellein*, to set], the absence or imperceptibility of the diastolic stage of the cardiac cycle. See also **diastole**.

adiathermance /ādī-āthür'məns/ [Gk, *a* + *dia*, not across, *therme*, heat], the quality of being unaffected by radiated heat.

adient /adē-ənt/ [L, *adire*, moving toward], characterized by a tendency to move toward rather than away from stimuli. Compare **abient**. —*adience, n.*

Adie's pupil /ādēz/ [William J. Adie, English physician, 1886–1935], an abnormal condition of the eyes marked by one pupil that reacts much more slowly to light changes or to accommodation or convergence than the pupil of the other eye. It is considered a pupillary muscle problem. There is no specific treatment. Also called **tonic pupil**.

Adie's syndrome [William J. Adie], Adie's pupil accompanied by depressed or absent tendon reflexes, particularly the Achilles tendon and patellar reflexes.

adip-. See **adipo-**.

adipectomy. See **lipectomy**.

adipic /ādip'ik/ [L, *adeps*, fat], pertaining to fatty tissue.

adipo-, adip-, combining forms meaning 'fat': *adipocyte*, *adiponecrosis*.

adipocyte /ad'ipōsēl/ [L, *adeps* + Gk, *kele*, hernia], a hernia containing fat or fatty tissue. Also called **lipocèle**.

adipocyte /ad'ipōsēt/, a fat (adipose) cell, potentially containing a large fat vacuole consisting mainly of triglycerides.

adipofibroma /ad'ipōfibrō'mə/ pl. *adipofibromas, adipofibromata* [L, *adeps + fibra*, fiber; Gk, *oma*], a fibrous neoplasm of the connective tissue with fatty components.

adipokinesis /ad'ipō'kinē'sis/, the mobilization of fat or fatty acids in lipid metabolism.

adipokinin /ad'ipōkī'nin/, a hormone of the adenohypophysis that causes mobilization of fat from adipose tissues.

adipometer /ad'ipom'ētər/, an instrument for measuring the thickness of a skin area as a guide for calculating the amount of subcutaneous fat.

adiponecrosis /ad'ipōnīkrō'sis/ [L, *adeps + Gk, nekros*, dead, *osis* condition], a rarely used term referring to necrosis of fatty tissue in the body. The condition may be associated with hemorrhagic pancreatitis. —*adiponecrotic, adj.*

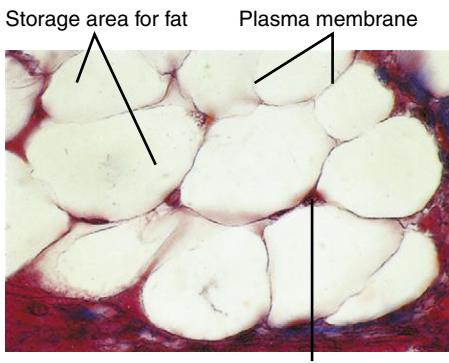
adiponecrosis subcutanea neonatorum, an abnormal dermatological condition of the newborn characterized by patchy areas of hardened subcutaneous fatty tissue and a bluish red discoloration of the overlying skin. The lesions, often a result of manipulation during delivery, spontaneously resolve from days to several weeks without scarring. Also called **pseudosclerema, subcutaneous fat necrosis**.

adipose /ad'ipōs/, tissue composed of fat-containing cells arranged in lobules. See also **fat**.

adipose capsule [L, *adeps*, fat, *capsula*, little box], a capsule of fatty tissue surrounding the kidney. Also called **renal fat**.

adipose degeneration. See **fatty degeneration**.

adipose tissue [L, *adeps*, fat; OFr, *tissu*], a collection of fat cells. See also **fatty tissue**.



Adipose tissue (© Ed Reschke; used with permission)

adipose tumor. See **lipoma**.

adiposis dolorosa. See **Dercum's disease**.

adiposogenital dystrophy /ad'ipō'sōjen'itōl/ [L, *adeps + genitalis*, generation], a disorder occurring in males, characterized by genital hypoplasia and feminine secondary sex characteristics, including female distribution of fat. It is caused by hypothalamic malfunction or by a tumor in the adenohypophysis. Hypothermia, hypotension, and hypoglycemia are frequently associated with the disorder. Diabetes insipidus also results from hyposecretion of antidiuretic hormone, which causes increased output of diluted urine, electrolyte imbalances, and thirst. In addition, involvement of the satiety center may induce overeating and result in pronounced obesity. If a tumor is present, there may be drowsiness and symptoms of increased intracranial pressure (for example, subtle locus of control changes and headache). Treatment may include the administration of testosterone and a weight-reduction program, excision or radiological ablation of a tumor, and replacement of hormones, as necessary. Also called *adiposogenital syndrome, Fröhlich's syndrome*.

adipsia /ād'ip-sē'ə/ [Gk, *a + dipsa*, not thirsty], an absence of thirst.

aditus /ād'itōs/ [L, going to], an approach or an entry.

adjunct /ād'jungkt/ [L, *adjungere*, to join], (in health care) an additional substance, treatment, or procedure used for increasing the efficacy or safety of the primary substance, treatment, or procedure or for facilitating its performance. —*adjunctive, adj.*

adjunctive group /ād'jungk'tiv/, a group with specific activities and focuses, such as socialization, perceptual stimulation, sensory stimulation, or reality orientation.

adjunctive psychotherapy, a form of psychotherapy that concentrates on improving general mental and physical well-being without trying to resolve basic emotional problems. Some kinds of adjunctive psychotherapy are **music therapy, occupational therapy, physical therapy, and recreational therapy**.

adjunct to anesthesia, one of a number of drugs or techniques used to enhance anesthesia but that are not classified as anesthetics. Adjuncts to anesthesia are used before anesthetic is administered as premedications and during anesthesia to augment anesthetic effects or diminish undesirable side effects. Premedications are given to reduce anxiety, sedate the patient, reduce nausea and vomiting, and reduce oral and respiratory secretions. Opioid analgesics, benzodiazepines, sedatives and hypnotics, phenothiazines, anticholinergics, antihistamines and antianxiety agents are common adjuncts to anesthesia.

adjustable axis face-bow. See **kinematic face-bow**.

adjustable orthodontic band /ādju'stābəl/, a thin metal ring, usually made of stainless steel, equipped with an adjusting screw to allow alteration in size, that is fitted to a tooth and allows the attachment of orthodontic appliances. See also **orthodontic band**.

adjusted age, the age of an infant based on due date or gestational age. For example, if a child is 8 months old, but was born prematurely by 2 months, the adjusted age is 6 months.

adjusted death rate. See **standardized death rate**.

adjustment, the changing of something to modify its relationship to something else. See also **accommodation**.

adjustment disorder [L, *adjuxtare*, to bring together], a temporary disorder of varying severity that occurs as an acute reaction to overwhelming stress in persons of any age who have no apparent underlying mental disorders. Symptoms include anxiety, withdrawal, depression, impulsive outbursts, crying spells, attention-seeking behavior, enuresis, loss of appetite, aches, pains, and muscle spasms. It can be persistent if symptoms continue for six months or more. It can develop in response to an identifiable stressor and result from situations such as separation of an infant from its mother, the birth of a sibling, loss or change of job, death of a loved one, or forced retirement. Symptoms usually recede and eventually disappear as stress diminishes. See also **anxiety disorder**.

adjuvant /ād'jyōvənt/ [L, *ad + juvare*, to help], 1. a substance, especially a drug, added to a prescription to assist in the action of the main ingredient. 2. (in immunology) a substance added to an antigen that enhances or modifies the antibody response to the antigen. 3. an additional treatment or therapy.

adjuvant chemotherapy, the use of anticancer drugs after or in combination with another form of cancer treatment, as after apparently complete surgical removal of cancer cells. The method is used when there is a significant risk that micrometastasis may still be present.

adjuvant radiotherapy, radiotherapy used in addition to surgical resection or chemotherapy in the treatment of cancer.

adjuvant therapy, the treatment of a disease with substances that enhance the action of drugs, especially drugs that promote the production of antibodies.

ADL, abbreviation for **activities of daily living**.

adlerian psychology [Alfred Adler, Viennese psychiatrist, 1870–1937], a branch of psychoanalysis that focuses on physical security, sexual satisfaction, and social integration. See also **individual psychology**.

ad lib. abbreviation of the Latin phrase *ad libitum*, meaning to be taken as desired.

ADME, abbreviation for the time course of drug distribution, representing the terms *absorption*, *distribution*, *metabolism*, and *elimination*.

Administration on Aging (AOA), the principal U.S. agency designated to carry out the provisions of the Older Americans Act of 1965. The AOA advises the U.S. Secretary of the Department of Health and Human Services and other federal departments and agencies on the characteristics and needs of older people and develops programs designed to promote their welfare.

admission, 1. the act of being received into a place or class of things. 2. a patient accepted for inpatient service in a hospital. 3. a concession or acknowledgment.

admission care, a nursing intervention from the Nursing Interventions Classification (NIC) defined as facilitating entry of a patient into a health care facility. See also **Nursing Interventions Classification**.

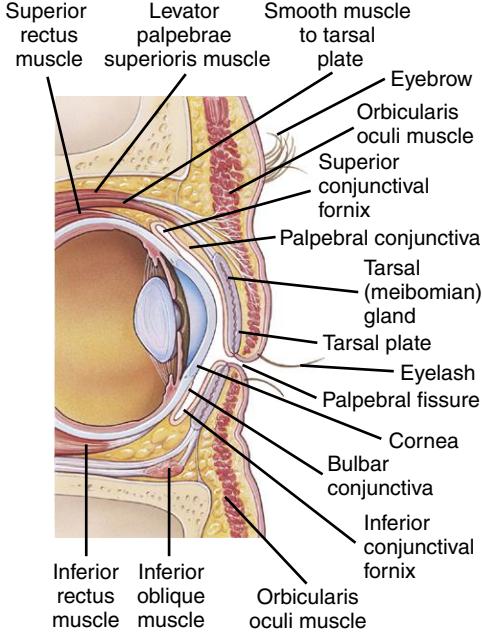
ADN, abbreviation for **Associate Degree in Nursing**.

ad nauseam [L, *ad*, to; Gk, *nausia*, seasickness], to the extent of inducing nausea and vomiting.

adneural /adnōō'zəl/, 1. located near or toward a nerve or nerve ending. 2. pertaining to the stage of a nervous disorder in which the symptoms are apparent. Also **adnerval**.

adnexa /adnek'sə/ sing. **adnexus** [L, *adnectere*, to tie together], tissue or structures in the body adjacent to or near another, related structure. The ovaries and the fallopian tubes are adnexa of the uterus. Also called **annexa**. —*adnexal*, adj.

adnexa oculi. See **accessory organs of the eye**.



Adnexa oculi (Thibodeau and Patton, 2007)

adnexa uteri. See **uterine appendages**.

adnexitomy /ad'neksek'tomē/ [Gk, *ektomē*, excision], the surgical removal of accessory structures or appendages of an organ.

adnexitis /ad'nekstītis/, an inflammation of the adnexal organs of the uterus, such as the ovaries or fallopian tubes.

adnexopexy /adnek'sōpek'sē/, a surgical procedure in which the fallopian tubes and ovaries are elevated and sutured to the abdominal wall.

adnexus. See **adnexa**.

-adol, a combining form designating an analgesic: Panadol, Toradol.

adolescence /ad'ĕlĕs'ĕns/ [L, *adolescere*, to grow up], 1. the period in development between the onset of puberty and adulthood. It usually begins between 11 and 13 years of age with the appearance of secondary sex characteristics and spans the teenage years, terminating at 18 to 20 years of age with the completion of the development of the adult form. During this period, the individual undergoes extensive physical, psychological, emotional, and personality changes. 2. the state or quality of being adolescent or youthful. See also **postpuberty**, **puberty**, **psychosexual development**, **psychosocial development**, **pubarche**.

adolescent, 1. pertaining to adolescence. 2. one in the state or process of adolescence; a teenager.

adolescent vertebral epiphysitis. See **Scheuermann's disease**.

adoption /ĕdop'shən/ [L, *adoptere*, to choose], a selection and inclusion in an established relationship or a choice of treatment protocol.

ADP, abbreviation for **adenosine diphosphate**.

ADPKD, abbreviation for **autosomal-dominant polycystic kidney disease**.

adrenal /ĕdrē'năl/ [L, *ad*, to, *ren*, kidney], pertaining to the adrenal glands, which are located atop the kidneys. Also called **suprarenal**.

adrenal cortex [L, *ad*, to, *ren*, kidney], the outer and greater portion of the adrenal gland, fused with the gland's medulla. In response to adrenocorticotrophic hormone secreted by the adenohypophysis, it secretes cortisol and androgens. Adrenal androgens serve as precursors that are converted by the liver to testosterone and estrogens. Renin from the kidney controls adrenal cortical production of aldosterone. Compare **adrenal medulla**. —*adrenocortical*, adj.

adrenal cortical carcinoma, a malignant neoplasm of the adrenal cortex that may cause adrenal virilism or Cushing's syndrome. Such tumors vary in size and may occur at any age. Metastases frequently occur in the lungs, liver, and other organs.



Adrenal cortical carcinoma (Silverberg et al, 2006)

adrenal crisis, an acute, life-threatening state of profound adrenocortical insufficiency in which immediate therapy is required. It is characterized by glucocorticoid deficiency, a drop in extracellular fluid volume, and hyperkalemia. Also called **crisis**. See also **Addison's disease**, **adrenal cortex**.

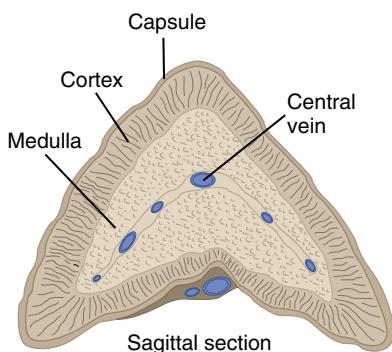
■ **OBSERVATIONS:** Typically, the patient appears to be in shock or coma with a low blood pressure, weakness, and loss of vasomotor tone. The person's medical history may include abrupt discontinuation of exogenous steroids or Addison's disease or reveal symptoms indicating its presence. Results of laboratory tests show hyperkalemia and hyponatremia.

■ **INTERVENTIONS:** An IV isotonic solution of sodium chloride containing a water-soluble glucocorticoid is administered rapidly. Vasopressor agents may be necessary to combat hypotension. If the patient is vomiting, a nasogastric tube is inserted to prevent aspiration and relieve hyperemesis. Total bed rest and monitoring of blood pressure, temperature, and other vital signs are mandatory. After the first critical hours, the patient is followed as for Addison's disease, and corticosteroid dosage is tapered to maintenance levels. Infection and a failure to increase the maintenance glucocorticoid (steroid) dose are common causes of crisis in people who have Addison's disease.

■ **NURSING CONSIDERATIONS:** Nursing care during adrenal crisis includes eliminating all forms of stimuli, especially loud noises or bright lights. The patient is not moved unless absolutely necessary and is not allowed to perform self-care activities. If the condition is identified and treated promptly, the prognosis is good. Discharge instructions include a reminder to the patient to seek medical attention in any stressful situation, whether physiological or psychological, to prevent a recurrence of the crisis.

adrenalectomy /ədré'nəlek'tomē/ [L, *ad* + *ren*; Gk, *ektomē*, excision], the total or partial surgical resection of one or both adrenal glands. It is performed to reduce the excessive secretion of adrenal hormones caused by an adrenal tumor or a malignancy of the breast or prostate. The incision is made under the twelfth rib in the rear flank area with the patient under general anesthesia. Preoperative laboratory tests include electrolytes, fasting blood glucose, glucose tolerance, and fluid status and adrenergic and blockade if needed. Hemodynamic monitoring and preoperative steroid replacement are needed. Before surgery a nasogastric tube may be inserted. Careful intraoperative positioning is necessary for the patient with Cushing's syndrome because of osteoporosis, fragile bones, and muscle wasting. In patients with pheochromocytoma, intraoperative manipulation of an adrenal tumor can cause a surge of catecholamines, resulting in a blood pressure increase. Postoperative care focuses on maintaining blood pressure with vasoconstrictors or vasodilators as needed, giving replacement doses of corticosteroids, and monitoring fluid and electrolyte status. When both glands are removed, the maintenance dosage of steroids continues for life. Stress and fatigue must be avoided. See also **Addison's disease**, **Cushing's syndrome**.

adrenal gland, either of two secretory organs perched atop the kidneys and surrounded by the protective fat capsule of the kidneys. Each consists of two parts with independent functions: the cortex and the medulla. Also called **suprarenal gland**. See also **adrenal cortex**, **adrenal medulla**.



Adrenal gland (Black and Hawks, 2009)

Adrenalin, a trademark for an adrenergic (**epINEPhrine**). **adrenaline**. See **epINEPhrine**.

adrenal insufficiency [L, *ad*, to, *ren*, kidney, *in*, not, *suficere*, to suffice], a condition in which the adrenal gland is unable to produce adequate amounts of cortical hormones. See also **Addison's disease**.

adrenalinism /ah-dren'al-izm/, any disorder of adrenal function, whether of decreased or of heightened function.

adrenalize /ədré'nəlīz/, to stimulate or excite.

adrenal medulla, the inner portion of the adrenal gland. Its cells secrete the catecholamines epinephrine and norepinephrine when stimulated by the sympathetic division of the autonomic nervous system. Compare **adrenal cortex**.

adrenal virilism, a condition characterized by hypersecretion of adrenal androgens, resulting in somatic masculinization. Excessive production of the hormone may be caused by a virilizing adrenal tumor, congenital adrenal hyperplasia, or an inborn deficiency of enzymes required to transform endogenous androgenic steroids to glucocorticoids. Girls born with adrenogenitalism may be pseudohermaphroditic with clitoral enlargement and labial fusion in infancy and later have low vocal pitch, acne, amenorrhea, and masculine distribution of hair and muscle development. Boys with congenital adrenogenitalism show precocious development of the penis, the prostate, and pubic and axillary hair, but their testes remain small and immature because negative feedback from the high level of adrenal androgens prevents the normal pubertal increase in pituitary gonadotropin levels. Children with the disorder are unusually tall, but their epiphyses close prematurely, and as adults they are abnormally short. Virilizing tumors are more common or more frequently diagnosed in women; they usually occur between 30 and 40 years of age but may arise later, after menopause. Signs of the tumor in women include hirsutism, amenorrhea, oily skin, ovarian changes, muscular hypertrophy, and atrophy of the uterus and breasts. Treatment may involve tumor resection, cortisol administration, and cosmetic surgery. Electrolytic hair removal may be indicated. Also called **adrenogenital syndrome**.

adrenarche /ad'rɪnärkē/ [L, *ad* + *ren*; Gk, *arche*, beginning], the intensified activity in the adrenal cortex that occurs at about 8 years of age and increases the elaboration of various hormones, especially androgens.

adrenergic /ad'rɪnur'jik/ [L, *ad* + *ren*; Gk, *ergon*, work], 1. pertaining to sympathetic nerve fibers of the autonomic nervous system that liberate norepinephrine at a synapse where a nerve impulse passes. 2. See **sympathomimetic**. Compare **antidiuretic**, **cholinergic**. See also **sympathomimetic**.

adrenergic blocking agent. See **antidiuretic**.

adrenergic bronchodilator, a drug that acts on the beta-2 sympathetic nervous system of the receptors to relax bronchial smooth muscle cells. Examples include drugs that contain epINEPhrine, epHEDrine, isoproterenol hydrochloride, or albuterol.

adrenergic fiber, a nerve fiber of the autonomic nervous system that releases the neurotransmitter norepinephrine and, in some areas, dopamine. Most postganglionic sympathetic nerve fibers are of this type.

adrenergic receptor [L, *ad* + *ren*, kidney; Gk, *ergon*, work; L, *recipere*, to receive], a site in a sympathetic effector cell that reacts to adrenergic stimulation. Two types of adrenergic receptors are recognized: **alpha-adrenergic**, which act in response to sympathomimetic stimuli, and **beta-adrenergic**, which block sympathomimetic activity. In general, stimulation of alpha receptors is excitatory of the function of the host organ or tissue, and stimulation of the beta receptors is inhibitory.

-adrenia, a combining form meaning '(degree or condition of) adrenal activity': *anadrenia, hypadrenia*.

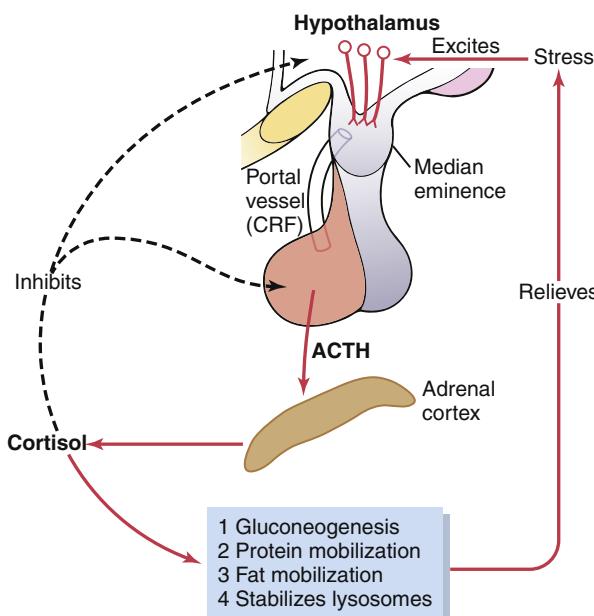
adrenocortical. See **adrenal cortex**.

adrenocortical cytomegaly, an abnormal enlargement of cells in the outer layer of the adrenal cortex.

adrenocortical hormone (ACTH) [L, *ad*, to, *ren*, kidney, *cortex*, bark; Gk, *hormaein*, to set in motion], any of the hormones secreted by the cortex of the adrenal gland, including glucocorticoids, mineralocorticoids, and androgens.

adrenocorticotrophic /ədrē'nōkōr'tikōtrop'ik/ [L, *ad* + *ren* + *cortex*, bark; Gk, *trope*, a turning], pertaining to stimulation of the adrenal cortex. Also spelled **adrenocorticotropic**.

adrenocorticotrophic hormone (ACTH), a hormone of the adenohypophysis that stimulates growth of the adrenal cortex and the synthesis and secretion of corticosteroids. ACTH secretion, regulated by corticotropin-releasing hormone from the hypothalamus, increases in response to a low level of circulating cortisol and to stress, fever, acute hypoglycemia, and major surgery. Under normal conditions a diurnal rhythm occurs in ACTH secretion, with an increase beginning after the first few hours of sleep and reaching a peak at the time a person awakens and a low in the evening. ACTH may be used in the treatment of rheumatoid arthritis, multiple sclerosis, and myasthenia. Normal ranges are from 15 to 100 pg/mL (10 to 80 ng/L) in the morning to less than 50 pg/mL (50 ng/L) in the evening. Normal values vary by laboratory. Also spelled **adrenocorticotropic hormone**, **corticotropin**.



Feedback mechanism of ACTH (Hall and Guyton, 2011)

adrenocorticotrophic hormone test, a blood test used to study the functioning of the adenohypophysis by measuring cortisol levels. The test is used to diagnose Cushing's syndrome and Addison's disease, which are characterized by overproduction and underproduction of cortisol, respectively.

adrenocorticotrophic hormone (ACTH) stimulation test with cosyntropin, a blood test performed on patients with adrenal insufficiency to indicate whether the adrenal gland

is normal and capable of functioning if stimulated or if the patient has Addison's disease or Cushing's syndrome.

adrenocorticotrophic hormone (ACTH) stimulation test with metyrapone, a blood or urine test similar to the ACTH stimulation test with cosyntropin. The test can confirm adrenal hyperplasia or adrenal adenoma or carcinoma. It can document that adrenal insufficiency exists as a result of pituitary disease rather than primary adrenal pathology. Metyrapone has been associated with life-threatening adrenal crisis in patients with primary insufficiency and should not be used on such patients.

adrenocorticotropin /-trop'in/, the adrenocorticotrophic hormone secreted by the adenohypophysis that stimulates secretion of corticosteroid hormones by the adrenal cortex.

adrenodoxin /ədrē'nōdok'sin/, a nonheme iron protein, produced by the adrenal glands, that participates in the transfer of electrons within animal cells.

adrenogenital syndrome (AGS). See **adrenal virilism**.

adrenoleukodystrophy (ALD), a rare hereditary neonatal-childhood metabolic disorder that is transmitted as a recessive sex-linked trait and affects mainly males. It is characterized by adrenal atrophy and widespread cerebral demyelination, producing progressive mental deterioration, aphasia, apraxia, eventual blindness, and tetraplegia. In the neonate form the prognosis is poor, with death occurring usually in 1 to 5 years. The childhood form may be chronic and treatable for a few years with a special diet. ALD was formerly classified under Schilder's disease.

adrenomegaly /-meg'älē/ [L, *ad* + *ren*; Gk, *megal*, large], an abnormal enlargement of one or both adrenal glands.

adrenomimetic /-mimet'ik/, mimicking the functions of the adrenal hormones.

adrenotropic /-trop'ik/, having a stimulating effect on the adrenal glands.

Adriamycin RDF, a trademark for an antibiotic antineoplastic agent (**DOXOrubicin hydrochloride**).

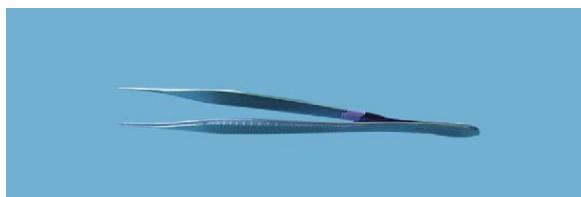
Adrucil, a trademark for an antineoplastic (**fluorouracil**).

ADRV, abbreviation for **adult rotavirus**.

ADS, abbreviation for *antidiuretic substance*.

Adson-Brown forceps [Alfred W. Adson, American neurosurgeon, 1887–1951; James B. Brown, American plastic surgeon, 1899–1971], a thumb forceps similar to the Adson forceps, having fine teeth at the tip, used for grasping delicate tissue. Also called **Brown-Adson forceps**.

Adson forceps [Alfred W. Adson], a small thumb forceps having a fine tip, with or without teeth.



Adson tissue forceps (Tighe, 2012)

Adson's maneuver [Alfred W. Adson], a test for thoracic outlet syndrome. It is performed with the patient sitting with hands on the thighs. The examiner palpates both radial pulses as the patient takes a deep breath and holds it while extending the neck and turning the head toward the affected side. If the radial pulse on the affected side is significantly diminished or there is numbness or tingling in the hand, the result is regarded as positive.

adsorbent /adsôrb'ĕnt/, a substance, such as activated charcoal, that takes up another by the process of adsorption, as by the attachment of one substance to the surface of the other.

adsorption /adsôrp'shōn/ [L, *ad + sorbere*, to suck in], a natural process whereby molecules of a gas or liquid adhere to the surface of a solid. The phenomenon depends on an assortment of factors such as surface tension and electrical charges. Many biological reactions involve adsorption. Adsorption is the principle on which chromatography is based and which allows for the separation of a mixture into component fractions for qualitative analysis. See also **chromatography**. —*adsorb*, v.

ADT, abbreviation for *Accepted Dental Therapeutics*, a journal published by the Council on Dental Therapeutics of the American Dental Association.

adult /əd'ult/, ad'ult/ [L, *adultus*, grown up], 1. one who is fully developed and matured and who has attained the intellectual capacity and emotional and psychological stability that are characteristic of maturity. 2. a person who has reached full legal age. Compare **child**. 3. any fully grown and mature organism.

adult celiac disease. See **celiac disease**.

adult ceroid lipofuscinosis. See **Kufs' disease**.

adult day-care center, a facility for the supervised care of older adults, providing activities such as meals and socialization one or more days a week during specified daytime hours. The participants, primarily persons with physical and/or mental limitations who need socialization, physical assistance, and/or psychological assistance, return to their homes each evening. The program is often used as respite by family members caring for an older person who cannot be left alone safely in the home.

adult ego state, (in psychiatry) a part of the self that analyzes and solves problems, using information received from the parent ego and child ego states. It is assumed to be fully developed in a normal individual at the age of 12. The term is used in transactional analysis.

adulteration /ədul'terāshōn/ [L, *adulterare*, to defile], the debasement or dilution of the purity of any substance, process, or activity by the addition of extraneous material.

adult hemoglobin. See **hemoglobin A**.

adulthood, the phase of development characterized by physical and mental maturity.

adult nurse practitioner, a registered nurse who has received additional education in the primary health care of adults. The additional education may be obtained through a master's degree program or a nondegree-granting continuing education certificate program.

adult-onset diabetes. See **type 2 diabetes mellitus**.

adult polycystic disease (APD). See **polycystic kidney disease**.

adult respiratory distress syndrome (ARDS), severe pulmonary congestion characterized by diffuse injury to alveolar-capillary membranes. Fulminating sepsis, especially when gram-negative bacteria are involved, is the most common cause. ARDS may occur after trauma; near-drowning; aspiration of gastric acid; paraquat ingestion; inhalation of corrosive chemicals, such as chlorine, ammonia, or phosgene; or the use of certain drugs, including barbiturates, chlordiazepoxide, heroin, methadone hydrochloride, propoxyphene hydrochloride, and salicylates. Other causes include diabetic ketoacidosis, fungal infections, high altitude, pancreatitis, tuberculosis, and uremia. Also called **acute respiratory distress syndrome**, **congestive atelectasis**, **hemorrhagic lung**, **noncardiogenic pulmonary edema**, **pump lung**, **shock lung**, **stiff lung**, **wet lung**.

■ **OBSERVATIONS:** Signs and symptoms include dyspnea, tachypnea, adventitious breath sounds, hypoxemia, and

decreased lung compliance. Changes occurring within the lung include damage to the alveolar-capillary membranes, leakage of plasma proteins into the alveoli, dilution of surfactant, cessation of surfactant production, hemorrhage, interstitial edema, impaired gas exchange, and ventilation-perfusion defects.

■ **INTERVENTIONS:** Treatment includes establishing an airway, administering oxygen, improving the underlying condition, removing the cause of ARDS, suctioning the respiratory passages as necessary, and reducing oxygen consumption. When ventilation cannot be maintained and there is evidence of a rising partial pressure of carbon dioxide in arterial blood, mechanical ventilation is necessary. Positive end-expiratory pressure (PEEP) is widely used in the treatment of ARDS. All interventions for ARDS are supportive; there is no cure.

■ **NURSING CONSIDERATIONS:** The patient with ARDS requires constant and meticulous care, reassurance, and observation for changes in respiratory function and adequacy, including signs of hypercapnia, hypoxemia (especially confusion), skin flushing, and behavior changes such as agitation and restlessness. Increasing hypoxia may be signaled by tachycardia, elevated blood pressure, increased peripheral resistance, and fulminating respiratory failure. If PEEP is being used, the patient is carefully observed for a sudden disappearance of breath sounds accompanied by signs of respiratory distress—an indication that pneumothorax may be present. Respiratory therapy, sterile suction techniques, and position changes are continued as necessary. The patient's weight is measured frequently, chest x-ray films are evaluated, and bacteriological cultures of secretions are analyzed for the causative organism. Throughout treatment, ventilation is carefully monitored through analysis of arterial blood gases. ARDS has a 50% mortality rate.



Diffuse alveolar damage in adult respiratory distress syndrome (Finkbeiner, Ursell, and Davis, 2009)

adult rickets. See **osteomalacia**.

adult rotavirus (ADRV), a form of rotavirus that causes severe diarrhea in adults. The virus resembles the usual rotavirus and its genome, but it is not antigenically related and does not react against rotavirus antibodies. ADRV antibodies have been found in adults in China and Australia.

advanced burn life support (ABLS), assessment and management of burn patients provided by emergency care personnel from the scene of injury through the first 24 hours

following injury. It includes evaluation of the patient, airway management and ventilatory support, fluid resuscitation, and determination of whether the patient should be transferred to a burn center.

advanced cardiac life support (ACLS), emergency medical procedures in which basic life support efforts of cardiopulmonary resuscitation are augmented by establishment of an IV fluid line, possible defibrillation, drug administration, control of cardiac arrhythmias, endotracheal intubation, and use of ventilation equipment.

advance directive [Fr, *avancer*, to move forward; L, *dirigere*, to direct], an advance declaration of treatment preferences in case a person is unable to communicate his or her wishes.

See **durable power of attorney for health care, living will**.

advanced life support (ALS), a higher level of emergency medical care, usually provided by EMT-intermediates or paramedics. Typically ALS includes invasive techniques such as IV therapy, intubation, and/or drug administration.

advanced practice nurse (APN), a registered nurse having education beyond the basic nursing education and certified by a nationally recognized professional organization in a nursing specialty, or meeting other criteria established by a Board of Nursing. The Board of Nursing establishes rules specifying which professional nursing organization certifications can be recognized for advanced practice nurses and sets requirements of education, training, and experience. Designations recognized as advanced practice nursing include **certified nurse-midwife, certified registered nurse anesthetist, clinical nurse specialist, nurse practitioner**.

Advanced Trauma Life Support, An educational program developed by the American College of Surgeons emphasizing a standardized approach to the care of patients in emergency situations.

advancement /ad'vens'/ [Fr, *avancer*, to move forward], a surgical technique in which a muscle or tendon is detached and then reattached at an advanced point.

adventitia /ad'ventish'ə/ [L, *adventitius*, coming from abroad], the outermost layer, composed of connective tissue with elastic and collagenous fibers, of an artery or another structure.

adventitious, 1. pertaining to an accidental condition or an arbitrary action. 2. not hereditary. 3. occurring at an inappropriate place, such as a coating on an artery.

adventitious bursa, an abnormal bursa that develops as a response to friction or pressure.

adventitious crisis, a rare accidental and unexpected tragedy that may affect an entire community or population, such as an earthquake, flood, or airplane crash. In addition to injuries, loss of life, and property damage, an adventitious crisis often results in long-term psychological effects.

adventitious cyst. See **pseudocyst**.

adventitious sound, a breath sound that is not normally heard, such as a crackle, gurgle, rhoncus, or wheeze. It may be superimposed on normal breath sounds.

adverse drug effect /ad'vers/, ad'vers/, an unintended reaction to a drug administered at normal dosage.

adverse drug reaction, any unintended effect on the body as a result of the use of therapeutic drugs, drugs of abuse, or the interaction of two or more pharmacologically active agents. Also called **drug reaction**.

adverse reaction, any harmful, unintended effect of a medication, diagnostic test, or therapeutic intervention.

advocacy /ad'vekəs'ē/, 1. a process whereby a nurse or other health care professional provides a patient with the information to make certain decisions, usually related to some aspect of the patient's health care. 2. a method by which patients, their families, attorneys, health professionals, and citizen groups can work together to develop programs that ensure the availability of high-quality health care for a community. 3. pleading a cause on behalf of another, such as a nurse pleading for better care of a patient or for the patient's desires to be honored.

adynamia /ad'inā'mē-ə/ [Gk, *a* + *dynamis*, not strength], a lack of physical strength resulting from a pathological condition. See also **asthenia**. —*adynamic*, adj.

adynamia episodica hereditaria, a condition of infancy, characterized by periodic muscle weakness and episodes of flaccid paralysis. It is inherited as an autosomal-dominant trait. Also called **hyperkalemic periodic paralysis**.

adynamic fever, a malignant or putrid fever accompanied by great muscular debility. Also called **asthenic fever**.

adynamic ileus. See **paralytic ileus**.

AE amputation. See **above-elbow amputation**.

AECMN, abbreviation for **Association for the Education of Children with Medical Needs**.

AEC syndrome. See **Hay-Wells syndrome**.

Abnormal (adventitious) lung sounds

Type	Physiology	Auscultation	Sound	Possible condition
Crackles	Air passing through fluid in small airways, or sudden opening of deflated, weakened airways	More commonly heard during inspiration	Fine high-pitched or coarse low-pitched popping sounds that are short and discontinuous	Pneumonia, heart failure, atelectasis, emphysema
Rhonchi	Large airway obstructed by fluid	Heard commonly during expiration	Low-pitched, continuous snoring sound	Chronic obstructive pulmonary disease (COPD), bronchospasm, pneumonia
Wheezes	Air passing through narrowed airways	Can be heard throughout inspiration and expiration	High-pitched, whistling sound	Airway obstruction, bronchospasm as in asthma, COPD
Pleural friction rub	Rubbing of inflamed pleura	May occur throughout respiratory cycle; heard best at base of lung at end of expiration	Scratching, grating, rubbing, creaking	Inflamed pleura, pulmonary infarction

AED, abbreviation for **automated external defibrillator**. **Aedes** /ā·ēdēz/ [Gk, *aedes*, unpleasant], a genus of mosquito prevalent in tropical and subtropical regions. Several species are capable of transmitting pathogenic organisms to humans, including dengue fever, equine encephalitis, St. Louis encephalitis, tularemia, and yellow fever.

-aemia. See **-emia**.

aequator. See **equator**.

aer-. See **aero-**.

aeration [Gk, *aer*, air], 1. the exchange of carbon dioxide for oxygen by blood in the lungs. 2. the process of exposing a tissue or fluid to air or artificially charging it with oxygen or another gas, such as carbon dioxide. —*aerate*, v.

aero-, aer-, combining forms meaning ‘air or gas’: *aerobe*, *aeration*.

Aerobacter aerogenes. See **Enterobacter cloacae**.

aerobe /erōb/ [Gk, *aer* + *bios*, life], a microorganism able to live and grow in the presence of free oxygen. An aerobe may be **facultative** or **obligate**. Compare **anaerobe**, **microaerophile**. —*aerobic*, adj.

aerobic /erō'bik/, 1. pertaining to the presence of air or oxygen. 2. able to live and function in the presence of free oxygen. 3. requiring oxygen for the maintenance of life. 4. a chemical requiring the presence of oxygen.

aerobic capacity, the maximal amount of physiological work that an individual can do as measured by oxygen consumption. It is determined by a combination of aging and cardiovascular conditioning and is associated with the efficiency of oxygen extraction from the tissue.

aerobic exercise, any physical exercise that requires additional effort by the heart and lungs to meet the striated muscles’ increased demand for oxygen. Aerobic exercise increases the breathing rate and ultimately raises heart and lung efficiency. Prolonged aerobic exercise (at least 20 minutes five times a week) is recommended for the maintenance of a healthy cardiovascular system. Examples of aerobic exercise include running, jogging, swimming, and vigorous dancing or cycling. Compare **anaerobic exercise**. See also **active exercise**, **passive exercise**.

aerobic glycolysis. See **glycolysis**.

aerobics. See **aerobic exercise**.

AeroBid /är'o-bid/, a trademark for an oral inhalation preparation of **flunisolide**.

adermectasia. See **subcutaneous emphysema**.

aeodontalgia /er'ōdental'jə/ [Gk, *aer* + *odous*, tooth, *algos*, pain], a painful sensation in the teeth caused by a change in atmospheric pressure, as may occur at high altitudes.

aerodynamics, the study of air or other gases in motion or of bodies moving in air.

aeodynamic size, pertaining to the behavior of various aerosol particle sizes and densities.

aeroembolism. See **air embolism**.

Aeromonas /er'ōmōnəs/, a genus of pathogenic rod-shaped gram-negative bacteria (schizomycetes) found in fresh and salt water, soil, and sewage. Various species affect fish, amphibians, reptiles, and animals as well as humans, causing wound infections and gastroenteritis.

aerophagy /erōf'äjē/ [Gk, *aer* + *phagein*, to eat], the excessive swallowing of air, usually an unconscious process associated with anxiety, resulting in abdominal distension or belching, gastric distress, and flatulence. It is often interpreted by the patient as signs of a physical disorder. Also called **aerophagia**.

aerosinusitis /er'ōsī'nōsītēs/ [Gk, *aer* + L, *sinus*, curve; Gk, *itis*], inflammation, edema, or hemorrhage of the frontal sinuses, caused by an expansion of air within the sinuses when the barometric pressure is decreased, as in an aircraft at high altitudes. Also called **barosinusitis**.

aerosol /er'ōsōl/ [Gk, *aer*; L, *solutus*, in dissolved], 1. nebulized particles suspended in a gas or in air. 2. a pressurized gas containing a finely nebulized medication for inhalation therapy. 3. a pressurized gas containing a nebulized chemical agent for sterilizing the air of a room.

aerosol bronchodilator therapy, the use of drugs that relax the respiratory tract smooth muscle tissue when administered as tiny droplets or a mist to be inhaled.

aerosol therapy, the use of an aerosol for respiratory care in the treatment of bronchopulmonary disease. Aerosol therapy allows the delivery of medications, humidity, or both to the mucosa of the respiratory tract and pulmonary alveoli. Agents delivered by aerosol therapy may relieve spasm of the bronchial muscles and reduce edema of the mucous membranes, liquify bronchial secretions so that they are more easily removed, humidify the respiratory tract, and administer antibiotics locally by depositing them in the respiratory tract.

aerospace medicine /er'ōspās/, a branch of medicine concerned with the physiological and psychological effects of living and working in an artificial environment beyond the atmospheric and gravitational forces of the earth. The stress of extraterrestrial travel requiring long periods of weightlessness is a major concern. See also **aviation medicine**.

aerotherapy /er'ōther'āpē/, the use of air in treating disease, as in hyperbaric oxygenation.

erotitis /er'ōtītēs/ [Gk, *aer* + *otikos*, ear, *itis*], an inflammation of the ear caused by changes in atmospheric pressure. Also called **barotitis**.

erotitis media, inflammation or bleeding in the middle ear caused by a difference between the air pressure in the middle ear and that of the atmosphere, as occurs in sudden altitude changes, scuba diving, and hyperbaric chambers. Symptoms are pain, tinnitus, diminished hearing, and vertigo. Also called **barotitis media**.

Æsculapius /ĕskyōōlā'pēəs/, the ancient Greek god of medicine. According to legend, Æsculapius, the son of Apollo, was trained by the centaur Chiron in the art of healing; he became so proficient that he not only cured sick patients but also restored the dead to life. Because Zeus feared that Æsculapius could help humans escape death altogether, he killed the healer with a bolt of lightning. Later, Æsculapius was raised to the stature of a god and was worshipped also by the Romans, who believed he could prevent pestilence. Serpents were regarded as sacred by Æsculapius, and he is symbolized in modern medicine by a staff with a serpent entwined about it. See also **staff of Æsculapius**.

aesthesia. See **esthesia**.

-aesthesia, **-esthesia**, suffixes meaning ‘(condition of) feeling, perception, or sensation’: *allesthesia*, *hypercrysesthesia*.

-aesthetic. See **-esthetic**.

aesthetics. See **esthetics**.

aesthetic surgery. See **cosmetic surgery**.

AF, 1. abbreviation for **atrial fibrillation**. 2. abbreviation for **atrial flutter**.

af-. See **ad-**.

AFB, abbreviation for **acid-fast bacillus**.

afebrile /afē'bēl, afēb'rēl/ [Gk, *a* + *febris*, not fever], without fever. Also **aptyretic**. Compare **febrile**.

affect /əfēkt/ [L, *affectus*, influence], an outward, observable manifestation of a person’s expressed feelings or emotions, such as flat, blunted, bland, or bright. —*affective*, adj.

affection /əfek'shōn/ [L, *affectus*, influence], 1. an emotional state expressed by a warm or caring feeling toward another individual. 2. a disease process affecting all or a part of the human body.

affective disorder. See **mood disorder**.

affective intimacy, a measure of well-being in a family group that focuses on whether members feel close to one another yet do not lose their individuality.

affective learning, the acquisition of behaviors involved in expressing feelings in attitudes, appreciations, and values.

affective melancholia, a form of severe depression characterized by overwhelming sadness and a lack of interest in normally pleasant activities. The condition may occur in the depressed phase of a bipolar disorder.

affective psychosis, a psychological reaction, such as psychotic depression or mania, in which the ego's functioning is impaired and there is loss of reality orientation. The primary clinical feature is a severe disorder of mood or emotions.

affect memory, a particular emotionally expressed feeling that recurs whenever a significant experience is recalled.

afferent /af'ərənt/ [L, *ad + ferre*, to carry], proceeding toward a center, as applied to arteries, veins, lymphatic vessels, and nerves. Compare **efferent**.

afferent glomerular arteriole. See **vas afferens**.

afferent nerve [L, *ad + ferre*, to bear, *nervus*], a nerve fiber that transmits impulses from the periphery toward the central nervous system.

afferent pathway [L, *ad + ferre*, to bear; AS, *paeth + weg*], the course or route taken, usually by a linkage of neurons, from the periphery of the body toward the central nervous system.

afferent tract [L, *ad + ferre*, to bear, *tractus*], a pathway for nerve impulses traveling inward or toward the brain, the center of an organ, or another body structure. Also called **ascending tract**.

affidavit /af'idā'veit/ [L, he has pledged], a written statement that is sworn to before a notary public or an officer of the court.

affiliated hospital /əfil'e-ā'tid/ [L, *ad + filius*, to son], a hospital that is associated to some degree with a medical school, a health profession, a health program, or another health care institution.

affinity /əfin'itē/ [L, *affinis*, related], the measure of the binding strength of the antigen-antibody reaction.

affirmation [L, *affirmare*, to make firm], (in psychology) autosuggestion, the point at which a tendency toward positive reaction or belief is observed by the therapist.

affirmative defense /əfur'matīv/ [L, *affirmare*, to make firm], (in law) a denial of guilt or wrongdoing based on new evidence rather than on simple denial of a charge, as a plea of immunity according to Good Samaritan legislation. The defendant bears the burden of proof in an affirmative defense.

affusion /afyoo'zhən/ [L, *affundere*, to pour out], a culturally based form of therapy in which water is sprinkled or poured over the body or a particular body part. It is used for fever or other conditions.

afibrinogenemia /af'i-brinō'jenē-mē-ə/ [Gk, *a*, not; L, *fibra*, fiber; Gk, *genein*, to produce, *haima*, blood], Congenital absence of fibrinogen from the plasma associated with moderate to severe bleeding. Also spelled *afibrinogenaemia*.

aflatoxins /af'lātōks'ins/ [Gk, *a*, not; L, *flavus*, yellow; Gk, *toxikon*, poison], a group of carcinogenic and toxic factors produced by *Aspergillus flavus* food molds. The mycotoxins cause liver necrosis and liver cancer in laboratory animals and are believed to be responsible for a high incidence of liver cancer among people in tropical regions of Africa and Asia who may consume moldy grains, peanuts, or other *Aspergillus*-contaminated foods.

AFMC, abbreviation for **Association of Faculties of Medicine of Canada**.

AFO, abbreviation for **ankle-foot orthosis**.

AFP, abbreviation for **alpha-fetoprotein**.

African hemorrhagic fever. See **Ebola virus disease**.

African lymphoma. See **Burkitt's lymphoma**.

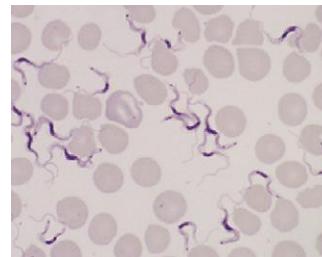
African relapsing fever. See **Dutton's relapsing fever**.

African sleeping sickness. See **African trypanosomiasis**.

African tick fever, a tick-borne or spotted fever caused by *Rickettsia africae* that develops into a diffuse rash. Multiple eschars, lymphangitis, lymphadenopathy, and edema are common. See also **relapsing fever**.

African tick typhus, 1. a rickettsial infection transmitted by ixodid (hard) ticks and characterized by fever, chills, maculopapular rash, headache, myalgia, arthralgias, and swollen lymph nodes. At the onset of the infection, a local lesion called tache noire appears at the site of the tick bite. The rash usually begins on the forearms and spreads over the rest of the body. The fever may persist into the second week, but death or complications are rare. 2. a tick-borne rickettsial disease of the eastern hemisphere similar to Rocky Mountain spotted fever but less severe.

African trypanosomiasis, a disease caused by the parasite *Trypanosoma brucei gambiense* (West African or Gambian trypanosomiasis) or *T. brucei rhodesiense* (East African or Rhodesian trypanosomiasis), transmitted to humans by the bite of the tsetse fly. African trypanosomiasis occurs only in the savannahs and woodlands of central and east Africa, where tsetse flies are found. The disease progresses through two phases: Stage 1 is marked by fever, lymphadenopathy, splenomegaly, and myocarditis. Stage 2 is marked by symptoms of central nervous system involvement, including lethargy, sleepiness, headache, convulsions, and coma. The disease is fatal unless treated, though it may be years before the patient reaches the neurological phase. Antimicrobial medications specific for the treatment of trypanosomiasis (suramin sodium, pentamidine isothionate, organic arsenicals difluoromethylorthanine, and eflornithine) are available in the United States only from the Centers for Disease Control and Prevention. Kinds of African trypanosomiasis are **Gambian trypanosomiasis** and **Rhodesian trypanosomiasis**. Also called **African sleeping sickness, sleeping sickness**. See also **trypanosomiasis**.



African trypanosomiasis: parasites in blood

(Kumar et al, 2010)

Afrin, a trademark for an adrenergic vasoconstrictor (**oxy-metazoline hydrochloride**).

afterbirth [AS, *aefter + ME, burth*], the placenta, the amniotic, the chorion, and some amniotic fluid, blood, and blood clots expelled from the uterus after childbirth.

aftercare [AS, *aefter + caru*], health care offered a patient after discharge from a hospital or another health care facility. The patient may require a certain amount of medical or nursing attention for a health problem that no longer demands inpatient status.

afterdepolarization /-dēpō'lērīzā'shən/, a membrane potential depolarization that follows an action potential. In cardiac muscles, it may be early (during phases 2 and 3 of

the action potential) or delayed (during phase 4), and it is thought to cause atrial and ventricular tachycardia, especially in the setting of a long Q-T interval or digitalis poisoning. Also called **afterpotential**.

aftereffect, a physical or psychological effect that continues after the stimulus is removed.

afterimage, a visual sensation that continues after the stimulus ends. The image may appear in colors complementary to those of the stimulus.

afterload [AS, *aefter* + ME *lod*], the load, or resistance, against which the left ventricle must eject its volume of blood during contraction. The resistance is produced by the volume of blood already in the vascular system and by the constriction of the vessel walls.

afterloading, a technique in which an unloaded applicator or needle is placed within a patient at the time of an operative procedure and subsequently loaded with a radioactive source. The loading is done under controlled conditions in which health care personnel are protected against radiation exposure. See also **remote afterloading**.

aftermovement, an involuntary contraction of a muscle that causes a continued movement of a limb after a strong exertion against resistance has stopped. It is often demonstrated in abduction of the arm. Also called **Kohnstamm's phenomenon, rebound effect**.

afterpain [AS, *aefter* + Gk, *poinē*, penalty], one of many contractions of the uterus common during the first days after childbirth. Afterpains tend to be strongest during breastfeeding, in multiparas, after the birth of large babies, and after overdistention of the uterus. They usually resolve spontaneously but may require analgesia. The nurse reassures the mother that afterpains are normal and are an indication that the uterus is contracting as it should.

afterperception, the apparent perception of a stimulus that continues after the stimulus is removed.

afterpotential. See **afterdepolarization**.

afterpotential wave /-pōtēn'shōl/, either of two smaller waves, positive or negative, that follow the main spike potential wave of a nerve impulse, as recorded on an oscillograph tracing of an action potential that propagates along a nerve fiber.

Ag, symbol for the element **silver**.

ag-. See **ad-**.

AGA, abbreviation for **appropriate for gestational age**.

against medical advice (ama), a phrase pertaining to a client's decision to discontinue a therapy despite the advice of medical professionals.

agalactia /ā'gəlak'shə/ [Gk *a* + *gala*, not milk], the inability of the mother to secrete enough milk to breastfeed a neonate immediately after childbirth.

agsalidase beta, a miscellaneous agent used to treat Fabry disease.

■ **CONTRAINdications:** Known hypersensitivity to this drug prohibits its use.

agamete /ā'gam'ēt/ [Gk *a* + *gamos* not marriage], 1. any of the unicellular organisms, such as bacteria and protozoa, that reproduce asexually by multiple fission instead of by the production of gametes. 2. any asexual reproductive cell, such as a spore or merozoite, that forms a new organism without fusion with another gamete. See also **fungus**.

—*agametic, agamic, agamous, adj.*

agamic /ā'gam'ik/, reproducing asexually, without the union of gametes; asexual.

agammaglobulinemia /āgam'āglob'yōōlinē'mē-ə/ [Gk *a* + *gamma*, not gamma (third letter of Greek alphabet); L, *globulus*, small sphere; Gk, *haima*, blood], the absence of gamma globulin from the serum, associated with an

increased susceptibility to infection. The condition may be transient, congenital, or acquired. The transient form is common in infancy before 6 weeks of age, when the infant becomes able to synthesize the immunoglobulin. The congenital form is rare and sex-linked, affecting male children; it results in decreased production of antibodies. The acquired form usually occurs in malignant diseases such as leukemia, myeloma, or lymphoma. Also spelled **agammaglobulinaemia**. See also **Bruton's agammaglobulinemia, immune gamma globulin**.

agamogenesis /āgam'ōjēn'ōsis/ [Gk, *a* + *gamos*, not marriage, *genein*, to produce], asexual reproduction, as by budding, binary fission of cells, or parthenogenesis. —*agamocytogenic, agamogenetic, agamogenic, agamogonic, adj.*

agamont. See **schizont**.

agamous. See **agamete**.

ganglionic megacolon. See **Hirschsprung's disease**.

aganglionosis /āgāng'lē-ənō'sis/ [Gk, *a*, not, *gagglion*, knot, *osis*, condition], an absence of parasympathetic ganglion cells in the myenteric plexus, a diagnostic sign of congenital megacolon.

agar-agar /ā'gära'gär/ [Malay], a dried hydrophilic, colloidal product obtained from certain species of red algae. Because it is unaffected by bacterial enzymes, it is widely used as the basic ingredient in solid culture media in bacteriology. Agar-agar is also used as a suspending medium, as an emulsifying agent, and as a bulk laxative. Also called **agar**.

agarose /āg'ärōs/, an essentially neutral fraction of agar used as a medium in electrophoresis, particularly for separation of serum proteins, hemoglobin variants, and lipoprotein fractions.

agastria /āgas'trē-ə/ [Gk, *a* + *gaster*, without stomach], the absence of a stomach. —*agastric, adj.*

AGC, abbreviation for **absolute granulocyte count**. Also called the absolute neutrophil count (ANC).

age [L, *aetus*, lifetime], 1. a stage of development at which the body has arrived, as measured by physical and laboratory standards, to what is normal for a male or female of the same chronological age. See also **mental age**. 2. to grow old.

age-associated mental impairment, progressive decline in cognitive function that occurs as the result of the normal aging process. It can be caused by a number of factors, including nutrient deficiencies, the damaging effect of free radicals, adverse effects of medication, altered hormone balance, and decreased oxygen supply to brain cells.

aged /ājd/, a state of having grown older or more mature than others of the population group.

ageism /ājizəm/ [L, *aetas*, lifetime], an attitude that discriminates, separates, stigmatizes, or otherwise disadvantages older adults on the basis of chronological age.

agency [L, *agere*, to do], 1. (in law) a relationship between two parties in which one authorizes the other to act on his or her behalf as agent. It usually implies a contractual arrangement between two parties managed by a third party, the agent. 2. the business of any power or firm empowered to act for another.

Agency for Healthcare Research and Quality (AHRQ), a governmental agency of the U.S. Department of Health and Human Services. Its mission is to support research "to improve the outcomes and quality of health care, reduce its costs, address patient safety and medical errors, and broaden access to effective service." The agency systematically develops statements and recommendations to help individuals, institutions, and agencies make better decisions about health care based on research that provides evidence-based information. It publishes scientific

information for other agencies and organizations on which to base clinical guidelines, performance measures, and other quality-improvement tools through its evidence-based practice centers, outcomes research findings for clinicians, and technology reviews. It provides access to scientific evidence, recommendations on clinical preventive services, and information on how to implement recommended preventive services in clinical practice. The agency was formerly called the Agency for Health Care Policy and Research.

Agency for Toxic Substances and Disease Registry (ATSDR), an agency of the U.S. Department of Health and Human Services, charged with performing specific functions concerning the effect on public health of hazardous substances in the environment. These functions include public health assessments of waste sites, health consultations concerning specific hazardous substances, health surveillance and registries, emergency responses to release of hazardous substances, applied research in support of public health assessments, information development and dissemination, and education and training concerning hazardous substances.

agenesia. See **agenesis.**

agenesia corticalis /ə'jenēz̄hə/ [Gk, *a* + *genein*, not to produce; L, cortex], the failure of the cortical cells of the brain, especially the pyramidal cells, to develop in the embryo, resulting in infantile cerebral paralysis and severe mental retardation.

agenesis /ə'jenēz̄s/ [Gk, *a* + *genein*, not to produce], 1. a congenital absence of an organ or part, usually caused by a lack of primordial tissue and failure of development in the embryo. 2. impotence or sterility. Also called **agenesia**. Compare **dysgenesis**. —*agenic*, adj.



Agenesis of the corpus callosum (Kumar et al, 2010)

agenetic fracture /ā'jenet'ik/, a spontaneous fracture caused by a defect or imperfection in bone development.

ageniocephaly /ājen'ē-ōsef'əlē/ [Gk, *a* + *genein*, not to produce, *kephale*, head], a form of otocephaly in which the brain, cranial vault, and sense organs are intact but the lower jaw is malformed. Also called *ageniocephalia*. —*ageniocephalic*, *ageniocephalous*, adj.

agenitalism /ājen'itəliz'əm/, any condition caused by the lack of sex hormones and the absence or malfunction of the ovaries or testes.

agenosomia /ājen'əsō'mē-ə/, a congenital malformation characterized by the absence or defective formation of the genitals and protrusion of the intestines through an incompletely developed abdominal wall.

agenosomus /ājen'əsō'məs/ [Gk, *a* + *genein*, not to produce, *soma*, body], a fetus with agenossomia.

agent [L, *agere*, to do], (in law) a party authorized to act on behalf of another and to give the other an account of such actions.

Agent Orange, a U.S. military code name for a mixture of two herbicides, 2,4-D and 2,4,5-T, used as a defoliant during the Vietnam War between 1961 and 1971. The herbicides were unintentionally contaminated with the highly toxic chemical dioxin, which is believed to cause cancer and birth defects in animals and has been established as a cause of chloracne and porphyria cutanea tarda in humans. See also **dioxin**.

age of consent, (in medical jurisprudence) the age at which an individual is legally free to act as an adult, without parental permission for activities such as marrying, having sexual intercourse, or giving permission for medical treatment or surgery. The specific age of consent varies from 13 to 21, according to local laws.

age of majority, the age at which a person is considered to be an adult in the eyes of the law. It varies by activity from state to state.

age-specific, a description of data in which the age of the individual is significant for epidemiological or statistical purposes.

age 30 transition, (in psychiatry) a period between 28 and 33 years of age when an individual may reevaluate the choices made in his or her twenties. See also **midlife transition**.

ageusia /əgyoo'sē-ə/ [Gk, *a* + *geusis*, without taste], a loss or impairment of the sense of taste. Also called *ageustia*, *gustatory anesthesia*.

agger /ag'ər, əj'ər/, a small protuberance or eminence of tissue, such as the curved elevation above the atrium of the nose.

agglomeration [L, *agglomerare*, to gather into a ball], a mass or cluster of individual units. —*agglomerate*, v.

agglutinant /əgloo'tənənt/ [L, *agglutinare*, to glue], something that causes adhesion, such as a circulating antibody stimulated by the presence of an antigen to adhere to it.

agglutination /əgloo'tinā'shən/ [L, *agglutinare*, to glue], the clumping of cells or particulate antigens as a result of interaction and crosslinking with agglutinins. —*agglutinate*, v.

agglutination-inhibition test, a serological technique useful in testing for certain unknown soluble antigens. The unknown antigen is mixed with a known agglutinin. If a reaction occurs, the agglutinin can no longer adhere to the cells or particles that carry its corresponding antigen, and the unknown antigen is thus identified.

agglutination reaction, the formation of an aggregate after the mixing of a soluble antibody with particulate antigen molecules in an aqueous medium. The visible aggregates are formed when specific antibody cross-links the antigens.

agglutination titer, the highest dilution of a serum that will produce clumping of cells or particulate antigens. It is a measure of the concentration of specific antibodies in the serum.

agglutinin /əgloo'tinīn/, an antibody that interacts with antigens, resulting in agglutination. Usually multivalent, agglutinins react with insoluble antigens in stable suspension to form a cross-linking lattice that may clump or precipitate. Agglutinins are used in blood typing and in identifying or estimating the strength of immunoglobulins or immune sera. Compare **precipitin**. See also **blood typing**, **hemagglutination**.

agglutinin absorption, the removal of an antibody from immune serum via treatment with homologous antigen. The

antibody attaches to the antigen, followed by centrifugation and separation of the antigen-antibody complex from the serum.

agglutinogen /ag'lütin'əjin/ [L, *agglutinare* + Gk, *genein*, to produce], any antigenic substance that causes agglutination by the production of agglutinin.

aggregate /ag'rägät/ [L, *ad* + *gregare*, to gather together], 1. the total of a group of substances or components making up a mass or complex. Data on individual patients can be aggregated to allow conclusions about the patient population to be made. 2. See **aggregation**.

aggregate anaphylaxis, an exaggerated immune reaction of immediate hypersensitivity induced by an antigen that forms a soluble antigen-antibody complex.

aggregation /ag'rägä'shən/ [L, *ad* + *gregare*, to gather together], an accumulation of substances, objects, or individuals, as in the clumping of blood cells or the clustering of clients with the same disorder. —**aggregate**, v.

aggression /əgrēsh'ən/ [L, *aggressio*, to attack], a forceful behavior, action, or attitude that is expressed physically, verbally, or symbolically. It may arise from innate drives or occur as a defense mechanism, often resulting from a threatened ego. It is manifested by either constructive or destructive acts directed toward oneself or against others. Kinds of aggression are **constructive aggression**, **destructive aggression**, and **inward aggression**.

aggression self-control, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as self-restraint of assaultive, combative, or destructive behaviors toward others. See also **Nursing Outcomes Classification**.

aggressive infantile fibromatosis, an uncommon condition, present at birth or developed during infancy or childhood, characterized by fast-growing, firm, painless, single or multiple nodules involving subcutaneous tissue, muscle, fascia, and tendons and seen anywhere on the body. Tumors are locally invasive but do not metastasize and have a high tendency to recur after excision.

aggressive periodontitis, the rapid destruction of the clinical periodontal attachment and the bone surrounding the tooth or teeth. It can occur localized or generalized in an otherwise clinically healthy patient but with probable selective immune dysfunction. Currently, no association between aggressive periodontitis and oral hygiene has been established. Formerly classified as early onset periodontitis, juvenile periodontitis, or localized juvenile periodontitis.

aggressive personality, a personality with behavior patterns characterized by irritability, impulsivity, destructiveness, or violence in response to frustration.

aggressive-radical therapy, (in psychiatry) a form of therapy that introduces the political and social viewpoints of the therapist into the therapeutic process. Proponents of this technique believe that making all values explicit, sometimes through actual didactic input, enables the patient to view the solution of an emotional conflict and the raising of political consciousness as one and the same.

aging [L, *aetas*, lifetime], the process of growing old. Biological aging results in part from a failure of body cells to function normally or to produce new body cells to replace

Normal physiological changes associated with aging

- Thinning hair
- Loss of elasticity in skin
- Loss of height (due to changes in posture and joint compression)
- Difficulty in hearing high frequency sounds
- Lens changes resulting in presbyopia
- Decreased muscle mass
- Decrease in brain weight and blood flow
- Changes in sleep patterns

those that are dead or malfunctioning. Normal cell function may be lost through infectious disease, malnutrition, exposure to environmental hazards, or genetic influences. Among body cells that exhibit early signs of aging are those that normally cease dividing after reaching maturity. Sociological and psychological theories of aging seek to explain the other influences on aging caused by the environment, engagement, personality, and nonbiological influences. See also **assessment of the aging patient**.

agitated depression, a severe depressive disorder characterized by severe anxiety accompanied by continuous physical restlessness, and, frequently, somatic symptoms. Psychomotor agitation is prominent. Delusions, as well as depression with psychotic features, may also be present. See also **depression**.

agitation, a state of chronic restlessness and increased psychomotor activity generally observed as an expression of emotional tension and characterized by purposeless, restless activity. Pacing, talking, crying, and laughing sometimes are characteristic and may serve to release nervous tension associated with anxiety, fear, or other mental stress. —**agitate**, v.

agitation level, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as severity of disruptive physiological and behavioral manifestations of stress or biochemical triggers. See also **Nursing Outcomes Classification**.

agitographia /aj'itōgraf'ē-ə/ [L, *agitare* + Gk, *graphein*, to write], a condition characterized by abnormally rapid writing in which words or parts of words are unconsciously omitted. The condition is commonly associated with agitophasia.

agitophasia /aj'itōfā'zhə/ [L, *agitare* + Gk, *phasis*, speech], a condition characterized by abnormally rapid speech in which words, sounds, or syllables are unconsciously omitted, slurred, or distorted. The condition is commonly associated with agitographia. Also called *agitolalia*.

Agiistrodon /ag-kis'trōdōn/, a genus of venomous pit vipers. *A. contortrix* is the copperhead, and *A. piscivorus* is the cottonmouth. See also **snakebite**.

aglossia /əglos'ē-ə/ [Gk, *a* + *glossa*, without tongue], congenital absence of the tongue.

agnathia /ag'nath'ē-ə/ [Gk, *a*, *gnathos*, not jaw], a developmental defect characterized by total or partial absence of the lower jaw. Also called **agnathy**. Compare **synotia**. See also **otocephaly**. —**agnathous**, adj.

agnathocephalus /ag'nath'əsēf'ələs/, a fetus with agnathocephaly.

agnathocephaly /ag'nath'əsēf'əlē/ [Gk, *a* + *gnathos* + *kephale*, head], a congenital malformation characterized by the absence of the lower jaw, defective formation of the mouth, and placement of the eyes low on the face with fusion or approximation of the zygomas and the ears. Also called *agnathoccephalia*. See also **otocephaly**. —**agnathoccephalic**, **agnathoccephalous**, adj.

agnathus /ag'nath'əs/ [Gk, *a* + *gnathos*, without jaw], a fetus with agnathia.

agnathy. See **agnathia**.

agnogenic myeloid metaplasia. See **myeloid metaplasia**.

agnosia /ag'nōz'ēə/ [Gk, *a* + *gnosis*, not knowledge], total or partial loss of the ability to recognize familiar objects or persons through sensory stimuli as a result of organic brain damage or dementia. The condition may affect any of the senses and is classified accordingly as auditory, visual, olfactory, gustatory, or tactile agnosia. Also called *agnosis*. See also **autotopagnosia**.

-agnosia, -agnosia, suffixes meaning '(condition of the) loss of the faculty to perceive': *autotopagnosia, paragnosia*.

-agogue, -agog, suffixes meaning an 'agent promoting the expulsion of a (specified) substance': *lymphagogue, uragogue*.

agonal /ag'ōnəl/ [Gk, *agon*, struggle], pertaining to death and dying.

agonal respiration. See **Cheyne-Stokes respiration.**

agonal thrombus, a mass of blood platelets, fibrin, clotting factors, and cellular elements that forms in the heart of a dying patient.

agonist /ag'ōn̄ist/ [Gk, *agon*, struggle], 1. a contracting muscle whose contraction is opposed by another muscle (an antagonist). 2. a drug or other substance having a specific cellular affinity that produces a predictable response.

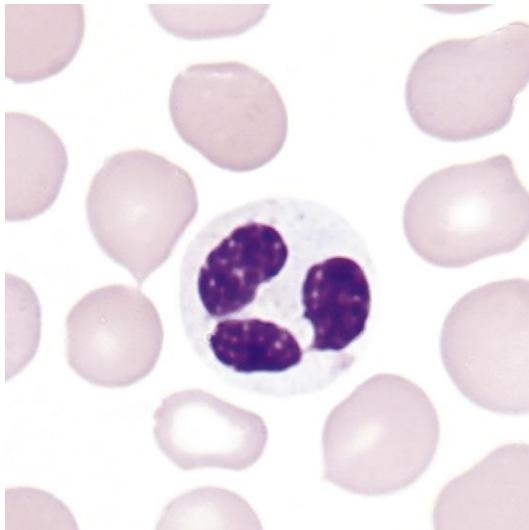
agony /ag'ōnē/ [Gk, *agon*], severe physical or emotional anguish or distress, as in pain.

agoraphobia /ag'ōrəfōb'ēə/ [Gk, *agora*, marketplace, *phobos*, fear], an anxiety disorder characterized by a fear of being in an open, crowded, or public place, such as a field, tunnel, bridge, congested street, or busy department store, where escape is perceived as difficult or help not available in case of sudden incapacitation.

-agra, a suffix meaning a ‘pain or painful seizure’: *cardi-agra*, *trachelagra*.

agranular endoplasmic reticulum. See **endoplasmic reticulum.**

agranulocyte /āgrān'yōōlōsīt/ [Gk, *a*, not; L, *granulum*, small grain; Gk, *kytos*, cell], a leukocyte category characterized by the absence of cytoplasmic granules. Lymphocytes and plasma cells are agranulocytic. Compare **granulocyte**. —*agranulocytic*, adj.



Agranulocyte (Carr and Rodak, 2008)

agranulocytosis /āgrān'yōōlō-sītō'sis/, severe reduction in the number of granulocytic leukocytes (basophils, eosinophils, and neutrophils). Reduction in polymorphonuclear neutrophils is neutropenia, whereby the body is severely depleted in its ability to defend itself from bacterial infection. The acute disease may be an adverse reaction to a medication or the result of the effect of radiation therapy or chemotherapy on bone marrow.

agraphesthesia. See **graphesthesia.**

agraphia /āgraf'ē-ə/ [Gk, *a* + *graphein*, not to write], a loss of the ability to write, resulting from injury to the language center in the cerebral cortex. See also **absolute agraphia**. Compare **dysgraphia**. —*agraphic*, adj.

A:G ratio, the ratio of albumin to globulin in the blood serum. On the basis of differential solubility with a neutral salt solution, the normal values are 3.5 to 5 g/dL for albumin and 2.5 to 4 g/dL for globulin.

agrimony, an herb found in Asia, Europe, and the United States.

■ **USES:** Agrimony is used for mild diarrhea, gastroenteritis, intestinal secretion of mucus, inflammation of the mouth and throat, cuts and scrapes, and amenorrhea. There is insufficient reliable information to assess its effectiveness.

■ **CONTRAINdications:** Agrimony is not recommended during pregnancy and lactation, in children, or in those with known hypersensitivity to it or to roses.

Agrobacterium, an environmental gram-negative, aerobic, rod-shaped bacillus. *A. tumefaciens* has been implicated in health care-associated urinary tract infections, peritonitis, wound infections, prosthetic valve endocarditis, and sepsis.

agrypnia. See **insomnia.**

agrypnocoma /āgrip'nōkō'mə/ [Gk, *agrypnos*, sleepless], a coma in which there is some degree of wakefulness. The condition may be manifested by extreme lethargy or drowsiness accompanied by delirium.

agrypnotic /ag'ripnot'ik/, 1. an insomniac. 2. a medication or other substance that prevents sleep. 3. causing wakefulness.

AGS, 1. abbreviation for *American Geriatrics Society*. 2. abbreviation for **adrenogenital syndrome**. See **adrenal virilism.**

agyria /ājī'rē-ə/, a congenital lack or underdevelopment of the convolutionary pattern of the cerebral cortex. The cortical tissue is reduced, leading to severe mental retardation. Also called **lissencephalia**, **lissencephaly**.

AHA, abbreviation for *American Hospital Association*.

“aha” reaction /āhā/, (in psychology) a sudden realization or inspiration, experienced especially during creative thinking. Some psychologists associate great scientific discoveries and artistic inspirations with this reaction, which is not necessarily related to intelligence. The term has apparently replaced “aha” experience, formerly used by psychologists, especially those of the Gestalt school, to label experiences in which an individual utters “Aha!” during a moment of revelation.

AHCPR, abbreviation for *Agency for Health Care Policy and Research*. See **Agency for Healthcare Research and Quality.**

AHF, abbreviation for **antihemophilic factor**.

AHH, abbreviation for **aryl hydrocarbon hydroxylase**.

AHIMA, abbreviation for *American Health Information Management Association*.

AHRQ, abbreviation for *Agency for Healthcare Research and Quality*.

Ahumada-del Castillo syndrome /ā'hōōmā'dādēl'kāstē-yōō/ [Juan Carlos Ahumada, b. 1890, Argentine gynecologist; Enrique B. del Castillo 1897–1969, Argentine physician and endocrinologist], a form of secondary amenorrhea that may be associated with a pituitary gland tumor. It is characterized by both galactorrhea and amenorrhea, with low gonadotropin secretion, in the absence of a pregnancy.

AI, 1. abbreviation for **artificial intelligence**. 2. abbreviation for **artificial insemination**.

AICC, abbreviation for **antiinhibitor coagulant complex**.

AICD, abbreviation for **automatic implanted cardioverter defibrillator**.

aid, assistance given a person who is ill, injured, or otherwise unable to cope with the normal demands of life.

AID, abbreviation for **artificial insemination**

AIDS /ādz/, abbreviation for **acquired immunodeficiency syndrome**.

AIDS-associated retinopathy. See **HIV-associated retinopathy**.

AIDS cholangiopathy, biliary duct disease that is a complication of acquired immunodeficiency syndrome. The most common effect is primary sclerosing cholangitis; some

patients also have dysfunction of the sphincter of Oddi. This syndrome is most commonly caused by *Cryptosporidium parvum*, but it can also be caused by *Microsporidium*, cytomegalovirus, and *Cyclospora cayetanensis*. Its occurrence has been reduced by the advent of highly active antiretroviral therapy.

AIDS-dementia complex (ADC), a neurological effect of encephalitis experienced by nearly one third of all patients with acquired immunodeficiency syndrome (AIDS). The condition is characterized by memory loss and by varying levels and forms of dementia. It may be caused by the destruction of brain neurons by the human immunodeficiency virus as autopsies indicate that the density of the neurons may be 40% lower in patients with AIDS than in healthy persons. Also called *AIDS-related dementia*.

AIDS nephropathy, 1. the former name for **HIV-associated nephropathy**. 2. any kidney disease that is associated with HIV.

AIDS-related complex (ARC), a stage before AIDS, with symptoms such as swollen lymph glands, long-lasting night sweats, fevers, and unusual weight loss. See also **AIDS-wasting syndrome**.

AIDS serology test (AIDS screen, HIV antibody test, Western blot test, ELISA), a test used to detect the antibody to the human immunodeficiency virus. Home testing kits are now available in addition to the tests performed by health care providers.

AIDS-wasting syndrome, a syndrome associated with progressed acquired immunodeficiency syndrome (AIDS). Signs and symptoms may include weight loss, fever, malaise, lethargy, thrush, and immunological abnormalities characteristic of AIDS. Formerly called **AIDS-related complex (ARC)**.

AIH, abbreviation for **artificial insemination—husband**.

AILD, abbreviation for **angioimmunoblastic lymphadenopathy with dysproteinemia**.

ailment [OE, *eglan*], any disease, physical disorder, or complaint, generally of a chronic, acute, or mild nature.

ainhum, a condition of unknown origin, seen chiefly in dark-skinned individuals, consisting of a linear constriction that causes spontaneous amputation of the fourth or fifth toe. See **autoamputation**.

air [Gk, *aer*], the colorless, odorless gaseous mixture constituting the earth's atmosphere. It consists of 78% nitrogen; 20% oxygen; almost 1% argon; small amounts of carbon dioxide, hydrogen, and ozone; traces of helium, krypton, neon, and xenon; and varying amounts of water vapor.

air abrasion, a type of microabrasion in which a jet of air blows tiny particles against the tooth or cavity surface.

air bath, 1. a tub that utilizes jets under the water surface to mix air into the solution. 2. the exposure of the naked body to warm air for therapeutic purposes. Also called **balneum pneumaticum**.

airborne contaminant, a material in the atmosphere that can affect the health of persons in the same or nearby environments. Particularly vulnerable are the tissues of the upper respiratory tract and lungs, including the terminal bronchioles and alveoli. The effects depend in part on the solubility of the inhaled matter. Inhaled contaminants may cause tissue damage, tissue reaction, disease, or physical obstruction. Some airborne contaminants, such as carbon monoxide, may have little or no direct effect on the lungs but can be absorbed into the bloodstream and carried to other organs or damage the blood itself. Biologically inert gases may dilute the atmospheric oxygen below the normal blood saturation value, thereby disturbing cellular respiration.

Airborne Precautions, guidelines recommended by the Centers for Disease Control and Prevention for reducing the risk of airborne transmission of infectious agents. Airborne

droplet nuclei consist of small-particle residue (5 µm or smaller in size) of evaporated droplets that may remain suspended in the air for a long time. Airborne transmission occurs by dissemination of either airborne droplet nuclei or dust particles containing the infectious agent. Microorganisms carried in this manner can be widely dispersed by air currents and may be inhaled or deposited on a susceptible host from the source patient. Special air handling and ventilation are required to prevent airborne transmission. Airborne precautions apply to patients known or suspected to be infected with epidemiologically important pathogens that can be transmitted by the airborne route. Examples include measles (rubeola), varicella zoster virus infections, Legionella infection, disseminated zoster, and tuberculosis. Compare **Contact Precautions, Droplet Precautions**. See also **Standard Precautions, Transmission-Based Precautions**.

airstream splint, a device for temporarily immobilizing fractured or otherwise injured extremities. See **air splint**.

air compressor, a mechanical device that compresses air for storage and is used in handpieces and other air-driven medical and dental tools.

air embolism, the abnormal presence of air in the cardiovascular system, resulting in obstruction of blood flow. Air embolism may occur if a large quantity of air is inadvertently introduced by injection (for example, during IV therapy or surgery) or by trauma (for example, with a puncture wound). Also called **aeroembolism**. See also **decompression sickness, embolus**. Compare **fat embolism, gas embolism**.

air entrainment, the movement of room air into the chamber of a jet nebulizer used to treat respiratory diseases. Air entrainment increases the rate of nebulization and the amount of liquid administered per unit of time.

airflow pattern, the pattern of movement of respiratory gases through the respiratory tract. The pattern is affected by factors such as gas density and viscosity.

air fluidization, the process of blowing temperature-controlled air through a collection of microspheres to create a fluidlike movement. The technique is used in special



Air-fluidized bed

(© Hill-Rom Services, Inc.)

mattresses designed to reduce pressure against a patient's skin. See also **air-fluidized bed**.

air-fluidized bed, a bed with body support provided by thousands of tiny soda-lime glass beads suspended by pressurized, temperature-controlled air. The patient rests on a polyester filter sheet that covers the beads. The special bed is designed for use by patients with or at risk for posterior pressure ulcers or with posterior burns, grafts, or donor areas. The pressure against the patient's skin surface is less than the capillary refilling. The improved capillary blood flow to the skin speeds the growth of granulation tissue.

air hunger, a form of respiratory distress characterized by gasping, labored breathing, or dyspnea.

airplane splint, a splint used to immobilize a shoulder during healing from injury or surgery. The splint holds the arm in an abducted position at or below shoulder level, with the elbow bent. It extends to the waist and may be made of plastic or wire, or it may be supported by a plaster body.

air pollution [L, *polluere*, to defile], contamination of the air by noxious fumes, aromas, or toxic chemicals.

air pump, a pump that forces air into or out of a cavity or chamber.

air sac, a small, terminal cavity in the lung, consisting of the alveoli connected to one terminal bronchiole.

air sickness, a form of kinesia caused by air travel and, in some cases, by traveling on land at high elevations. See also **kinesia**. Compare **car sickness, seasickness**.

air spaces, the alveolar ducts, alveolar sacs, and alveoli of the respiratory tract.

air splint, a device for temporarily immobilizing fractured or otherwise injured extremities. It consists of an inflatable cylinder that can be closed at either end and becomes rigid when filled with air under pressure. Also called **airstream splint**.

air swallowing, the intake of air into the digestive system, usually involuntarily, during eating, drinking, or chewing of gum. Air swallowing may also be an effect of anxious behavior. The problem occurs commonly in infants as a result of faulty feeding methods.

air thermometer, a thermometer using air as its expandable medium. See also **thermometer**.

airway [Gk, *aer* + AS, *weg*, way], 1. a tubular passage for movement of air into and out of the lung. An airway with a diameter greater than 2 mm is defined as a large, or central, airway such as a mainstream bronchus; one smaller than 2 mm is considered a small, or peripheral, airway such as a terminal bronchus. 2. a respiratory anesthesia device. 3. an oropharyngeal tube used for mouth-to-mouth resuscitation.

airway conductance (G_{aw}), the instantaneous rate of gas flow in the airway per unit of pressure difference between the mouth, nose, or other airway opening and the alveoli. It is the reciprocal of airway resistance.

airway division, one of the 18 segments of the bronchopulmonary system. The segments are usually numbered from 1 to 10 for the right lung, which has three lobes, and from 1 to 8 for the left lung, which has two lobes.

airway insertion and stabilization, a nursing intervention from the Nursing Interventions Classification (NIC) defined as insertion or assistance with insertion and stabilization of an artificial airway. See also **Nursing Interventions Classification**.

airway management, a nursing intervention from the Nursing Interventions Classification (NIC) defined as facilitation of patency of air passages. See also **Nursing Interventions Classification**.

airway obstruction, a mechanical impediment to the delivery of air to the lungs or to the absorption of oxygen in the lungs.

■ **OBSERVATIONS:** If the obstruction is minor, as in sinusitis or pharyngitis, the person is able to breathe, but not normally.

If the obstruction is acute, the person may grasp the neck, gasp, become cyanotic, and lose consciousness.

■ **INTERVENTIONS:** Acute airway obstruction requires rapid intervention to save the person's life. In cases of obstruction caused by a bolus of food, a collection of mucus, or a foreign body, the object may be removed manually, by suction, or with the Heimlich maneuver. Obstruction caused by an inflammatory or allergic reaction may be treated with bronchodilating drugs, corticosteroids, intubation, and administration of oxygen. An emergency tracheotomy may be required if the obstruction cannot be mechanically or pharmacologically relieved within a few minutes.

■ **NURSING CONSIDERATIONS:** The patient is usually very apprehensive and may physically resist assistance. Medical help is summoned, and emergency care is begun and includes removing the obstruction, administering oxygen, and performing cardiopulmonary resuscitation, if necessary. See also **aspiration**.

airway resistance (R_{aw}), a measure of the impedance to airflow through the bronchopulmonary system. It is the reciprocal of airway conductance.

airway suctioning, a nursing intervention from the Nursing Interventions Classification (NIC) defined as removal of airway secretions by inserting a suction catheter into the patient's oral airway and/or trachea. See also **Nursing Interventions Classification**.

AIUM, abbreviation for *American Institute of Ultrasound in Medicine*.

AK amputation, abbreviation for above-knee amputation. See **transfemoral amputation**.

akaryocyte /äkär'ē-əsīt/ [Gk, *a*, not, *karyon*, kernel], a cell without a nucleus, such as an erythrocyte.

akathisia /äk'āthēz'ēə/ [Gk, *a* + *kathizein*, not to sit], a pathological condition characterized by restlessness and agitation, such as an inability to sit still. —*akathisiac*, adj.

akeratosis /äker'ätō'sis/, a skin condition in which there is a lack of a layer of the epidermis.

akinesia /ä'kinēz'ēə, ä'kīnēz'ēə/ [Gk, *a*, *kinesis*, without movement], an abnormal state of motor and psychic hypoactivity. Also called akinesis. —*akinetic*, adj.

akinesis, the absence or loss of the power of voluntary movement.

akinesthesia /äkin'esthēz'ēə/, a loss of the sense of movement.

akinetic apraxia, the inability to perform a spontaneous movement. See also **apraxia**.

akinetic mutism, a state of apparent alertness in which a person is unable or refuses to move or to make sounds, resulting from a neurological or psychological disturbance.

akinetic seizure, a type of seizure disorder observed in children. It is a brief, generalized seizure in which the child suddenly falls to the ground.

Akineton, a trademark for a peripheral anticholinergic (*biperiden hydrochloride*).

-akusis. See **-acusia**.

Al, symbol for the element **aluminum**.

-al, a suffix designating a compound containing a member of the aldehyde group: *chloral*, *ethanal*.

-al, -ale, suffixes meaning 'characterized by' or 'pertaining to': *appendiceal*, *meningeal*.

ala /älə/ pl. *alae* [L, wing], 1. any winglike structure. 2. the axilla. —*alar*, adj.

Ala, abbreviation for the amino acid **alanine**.

ALA, abbreviation for **aminolevulinic acid**.

ala auris. See **auricle**.

ala cerebelli /ser'əbelē/ , a winglike structure of the central lobule of the cerebellum.

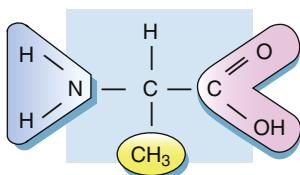
ala cinerea /sinir'ē-ə/, the triangular area on the floor of the brain's fourth ventricle from which the autonomic fibers of the vagus nerve arise.

alactasia. See **lactase deficiency**.

Alagille's syndrome /ä-läzhēl'/ [Daniel Alagille, French pediatrician, b. 1925], an autosomal-dominant syndrome of neonatal jaundice, cholestasis with peripheral pulmonary stenosis, and occasionally septal defects or patent ductus arteriosus, resulting from a low number or an absence of intrahepatic bile ducts. It is characterized by unusual facies and ocular, vertebral, and nervous system abnormalities.

ala nasi /nā'sī/, the outer flaring cartilaginous wall of the outer side of each nostril.

alanine (Ala or A) /äl'ənēn/, a nonessential, nonpolar (neutral) amino acid found in many food protein sources as well as in the body. It is degraded in the liver to produce important biomolecules such as pyruvate and glutamate. Its carbon skeleton also can be used as an energy source.



Chemical structure of alanine

alanine aminotransferase (ALT), an enzyme normally present in the serum and tissues of the body, especially the tissues of the liver. This enzyme catalyzes the transfer of an amino group from alanine to alpha-ketoglutarate, forming pyruvate and glutamate. The reaction is reversible. The enzyme is released into the serum as a result of tissue injury and increases in persons with acute liver damage. Normal findings are 5 to 35 IU/L. Also called **alanine transferase, glutamic pyruvic transferase, serum glutamic pyruvic transaminase (SGPT)**. Compare **aspartate aminotransferase**.

alanine aminotransferase (ALT) test, a blood test that measures levels of alanine aminotransferase. Formerly called glutamate pyruvate transaminase test.

alanine transferase, an intracellular enzyme in amino acid and carbohydrate metabolism found in high concentration in brain, liver, and muscle. An increased level indicates necrosis or disease in these tissues. See also **alanine aminotransferase**.

Al-Anon, an international organization that offers guidance, counseling, and support for the relatives, friends, and associates of alcoholics. See also **Alateen, Alcoholics Anonymous, Narcotics Anonymous**.

ala of the ethmoid, a small projection on each side of the crista galli of the ethmoid bone. Each ala fits into a corresponding depression of the frontal bone.

ala of the ilium, the upper flaring portion of the ilium.

ala of the sacrum, the flat extension of bone on each side of the sacrum.

alar. See **ala**.

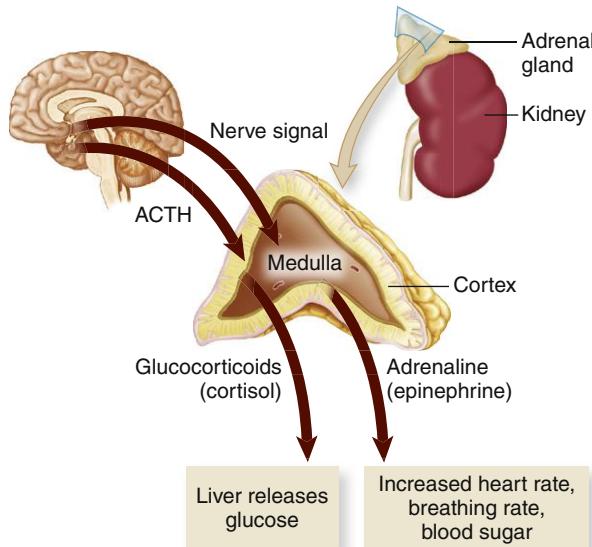
ALARA, acronym for *as low as reasonably achievable*. It refers to the principle that all radiation exposure, both to patients and to radiological personnel, should be minimized in diagnostic imaging.

alar fold, 1. a fringed margin on either side of an infrapatellar fat pad in the knee joint formed by the synovial membrane. The synovial membrane covering the lower part of the infrapatellar fat pad is raised into a sharp midline fold directed posteriorly, the infrapatellar synovial fold, which attaches to the margin of the intercondylar fossa of the femur. 2. a fold extending from the nostril to the ventral nasal concha.

alar lamina [L, *ala*, wing, *lamina*, thin plate], the postero-lateral area of the embryonic neural tube through which sensory nerves enter.

alar ligament, one of a pair of ligaments that connect the axis to the occipital bone and limit rotation of the cranium. Also called **check ligament, odontoid ligament**. Compare **membrana tectoria**.

alarm reaction, the first stage of the general adaptation syndrome. It is characterized by the release of adrenocorticotrophic hormone (ACTH) by the pituitary gland and of epinephrine by the adrenal medulla, which cause increased blood glucose levels and a faster respiration rate, increasing the oxygen level of the blood. These actions provide the body with increased energy for dealing with stress.



Alarm reaction (Patton and Thibodeau, 2010)

alar process [L, *ala*, wing, *processus*], a projection of the cribriform plate of the ethmoid bone articulating with the frontal bone.

alaryngeal speech /ä'lä-rin'jē-əl spech/ [Gk, *a*, without + *larynx*; ME, *speche*], methods of speech communication used after laryngectomy, including communication with an electrolarynx, a tracheosophageal voice prosthesis and use of esophageal speech.

alastrim /äl'əstrim/ [Port, *alastrar*, to spread], a mild form of smallpox, with little rash. It is thought to be caused by a weak strain of the poxvirus that causes smallpox. Unlike smallpox, however, alastrim is rarely fatal. Also called **Cuban itch, Kaffir pox, milkpox, pseudosmallpox, pseudovariola, variola minor, West Indian smallpox, whitepox**. See also **smallpox**.

Alateen, an international organization that offers guidance, counseling, and support for the children of alcoholics. See also **Al-Anon, Alcoholics Anonymous**.

alatrofloxacin /ah-lat'ro-floksah-sin/, a broad-spectrum antibacterial that is the prodrug of trovalfloxacin, to which it is rapidly converted after IV infusion; it is used in the form of the mesylate salt.

alatrofloxacin/trovalfloxacin, a quinolone antibiotic.

■ **INDICATIONS:** This drug is used to treat nosocomial pneumonia, community-acquired pneumonia, chronic bronchitis, acute sinusitis, complicated intraabdominal infections, infections of the skin and skin structure, urinary tract infections, chronic bacterial prostatitis, urethral gonorrhea in males, pelvic inflammatory disease, and cervicitis caused by susceptible organisms.

■ **CONTRAINDICATIONS:** Known hypersensitivity to quinolones, seizure disorders, cerebral atherosclerosis, and photosensitivity prohibit the use of this drug.

■ **ADVERSE EFFECTS:** Life-threatening side effects include pseudomembranous colitis and thrombocytopenia. Other adverse effects include headache, dizziness, insomnia, anxiety, nausea, flatulence, vomiting, diarrhea, abdominal pain, vaginitis, crystalluria, rash, pruritus, and photosensitivity.

ala vomeris /vō'marɪs/, an extension of bone on each side of the upper border of one of the unpaired facial bones in the skull.

alb-, a prefix meaning ‘white’: *albinism, albumin*.

alba /al'bə/, literally, ‘white,’ as in *linea alba*.

albedo /al'bē'dō/ pl. *albedos* [L, *albus*, white], a whiteness, as a surface reflection.

albendazole /al-ben'dah-zōl/, a broad-spectrum anthelminitic used against many parasites, including those that cause echinococcosis and cysticercosis.

Albers-Schönberg disease /-shōn'burg, -shōn'-/ [Heinrich E. Albers-Schönberg, German radiologist and surgeon, 1865–1921], a form of osteopetrosis characterized by excessive marblelike calcification of bones, causing spontaneous fractures. The condition, often discovered by chance during x-ray examination, is transmitted as an autosomal-dominant trait. See also **osteopetrosis**.

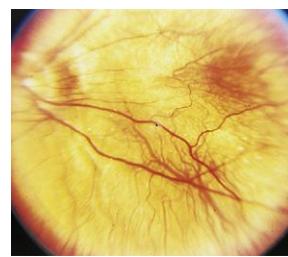
Albert's disease [Eduard Albert, Austrian surgeon, 1841–1900], an inflammation of the bursa that lies between the Achilles tendon and the calcaneus. It is most frequently caused by injury but may also result from the wearing of poorly fitted shoes, increased strain on the tendon, or rheumatoid arthritis. Treatment includes an intrabursal injection of corticosteroid with lidocaine hydrochloride and warm compresses. If treatment is delayed, the inflammation may cause erosion of the calcaneus. Also called **anterior Achilles bursitis**.

albicans /al'bikənz/ [L, *albus*, white], white or whitish. See also **corpus albicans**.

albinism /al'bīniz'əm/, a rare inherited disorder characterized by a lack of melanin in the skin. Total albinos have pale skin that does not tan, white hair, pink eyes, nystagmus, astigmatism, and photophobia. Albinos are prone to severe sunburn, actinic dermatitis, and skin cancer. Compare **piebald, vitiligo**.



White hair and pale skin in albinism (Saadeh et al, 2007)



Pale fundus in albinism (Zitelli and Davis, 2007)

Albini's nodule /äl'be'nōz/ [Giuseppe Albini, Italian physiologist, 1827–1911], a gray nodule the size of a small grain, sometimes seen on the free edges of the atrioventricular valves of infants. Albini's nodules are the remains of fetal structures.

albino /al'bīnō/ [L, *albus*, white], an individual with albinism.

albinuria /al'bīnūrēə/, white or colorless urine.

Albl's ring, a calcified ring-shaped shadow of a cerebral aneurysm visible on a skull radiograph.

Albright's hereditary osteodystrophy. See **pseudohypoparathyroidism**.

Albright's syndrome /äl'bīts/ [Fuller Albright, American physician and endocrinologist, 1900–1969], a disorder characterized by fibrous dysplasia of bone, isolated brown macules on the skin, and endocrine dysfunction. It causes precocious puberty in girls but not in boys. The bone lesions are reddish gray, gritty fibromas containing areas of coarse fiber that may be confined to one bone or that occur in several areas, frequently causing deformities, pain, and pathological fractures. Treatment may involve osteotomy, curettage, and bone grafts. Also called *Albright-McCune-Sternberg syndrome, osteitis fibrosa disseminata*.



Albright's syndrome

(du Vivier, 1993/Courtesy Dr. David Atherton)

albumin /al'būmīn/ [L, *albus*, white], a water-soluble, heat-coagulable protein; the most abundant protein in blood plasma. Various albumins are found in practically all animal tissues and in many plant tissues. Determination of the levels and kinds of albumin in urine, blood, and other body tissues is the basis of a number of laboratory diagnostic tests.

albumin A, a blood serum constituent that gathers in cancer cells and is deficient in the circulation of cancer patients.

albuminuria, urine that contains a high level of albumin salts and has a low specific gravity.

albumin/creatinine ratio, the ratio of albumin to creatinine in the urine, calculated as a measure of albuminuria.

albumin (human), a plasma-volume expander.

- **INDICATIONS:** It is prescribed in the treatment of hypoproteinemia, hyperbilirubinemia, and hypovolemic shock.
- **CONTRAINDICATIONS:** Severe anemia, heart failure, and allergic reaction to albumin prohibit its use.
- **ADVERSE EFFECTS:** Among the most serious adverse reactions are chills, hypertension, fever, and urticaria.

albumin microsphere sonicated, a microbubble, mean size 2 to 4.5 mm, created by heat treatment and sonication of diluted human albumin in the presence of octafluoropropane gas; sonicated albumin microspheres are injected intravenously as a diagnostic adjunct in echocardiography.

albuminous liver. See **amyloid liver**.

albumin test [L, *albus*, white], any of several tests for the presence of albumin in the urine. One type of albumin test depends on the change in color of a chemically treated strip of paper in the presence of albumin.

albuminuria, the presence of albumin in the urine, a common sign of renal or chronic disease. See also **proteinuria**.

-albuminuria, a suffix meaning a '(specified) condition characterized by excess serum proteins in the urine': *nocturnalbuminuria*, *pseudalbuminuria*.

albuterol, a beta-2 receptor adrenergic agent.

- **INDICATION:** It is prescribed in the treatment of bronchospasm in patients with reversible obstructive airway disease, including asthma.
- **CONTRAINDICATION:** Known sensitivity to this drug prohibits its use.

- **ADVERSE EFFECTS:** Among the most serious adverse reactions are tachycardia, insomnia, dizziness, and hypertension.

alcalase, an enzyme found in certain laundry detergents. It is a cause of enzymatic detergent asthma.

Alcaligenes, an environmental gram-negative bacillus that can be found in the GI tract of humans and that can cause nosocomial infections in the compromised host.

alclometasone /al-klo-met'ah-sōn/, a synthetic corticosteroid used topically in the dipropionate form for the relief of inflammation and pruritus.

alclometasone dipropionate, a topical corticosteroid.

- **INDICATIONS:** It is prescribed for the relief of symptoms of inflammation and pruritus of corticosteroid-responsive dermatoses.

- **CONTRAINDICATIONS:** It is contraindicated in patients with hypersensitivity to the drug. Children may absorb proportionally greater amounts of the drug per area of skin surface and should be treated with the smallest amount of the drug needed.

- **ADVERSE EFFECTS:** Among adverse reactions are burning, stinging, and itching.

Alcock's canal [Benjamin Alcock, Irish anatomist, b. 1801], a canal formed by the obturator internus muscle and the obturator fascia through which the pudendal nerve and vessels pass. Also called **pudendal canal**.

alcohol /al'koh'l/ [Ar *alkohl*, subtle essence], 1. a preparation containing at least 92.3% and not more than 93.8% by weight of ethyl alcohol, used as a topical antiseptic and solvent. 2. a clear, colorless, volatile liquid that is miscible with water, chloroform, or ether, obtained by the fermentation of carbohydrates with yeast. 3. a compound derived from a hydrocarbon by replacing one or more hydrogen atoms with an equal number of hydroxyl groups. Depending on the number of hydroxyl groups, alcohols are classified as **monohydric alcohol**, **dihydric alcohol**, and **trihydric alcohol**. — **alcoholic**, *adj.*, *n.*

alcohol abuse cessation behavior, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as

personal actions to eliminate alcohol use that poses a threat to health. See also **Nursing Outcomes Classification**.

alcohol bath, an obsolete procedure for decreasing an elevated body temperature. It is no longer used because of the danger of inhaled fumes and absorption through the skin causing toxicity.

alcoholic, 1. pertaining to alcohol or its effects on other substances. 2. a person who has developed a dependency on alcohol through abuse of the substance.

alcoholic ataxia [Ar, *alkohl*, essence; Gk, *ataxia*, disorder], a loss of coordination in performing voluntary movements associated with peripheral neuritis as a result of alcoholism. A similar form of ataxia may occur with neuritis resulting from other toxic agents. See also **Wernicke's encephalopathy**.

alcoholic blackout, a form of amnesia in which a person has no memory of what occurred during a period of alcohol abuse and intoxication.

alcoholic cardiomyopathy [Ar, *alkohl*, essence; Gk, *kardia*, heart, *mys*, muscle, *pathos*, disease], a cardiac disease associated with alcohol abuse and characterized by an enlarged heart and low cardiac output. Treatment consists of abstinence from alcohol and results in marked reduction in heart size in over half of patients.

alcoholic cirrhosis. See **Laënnec's cirrhosis**.

alcoholic coma [Ar, *alkohl* + Gk, *koma*, deep sleep], a state of unconsciousness that results from severe alcoholic intoxication.

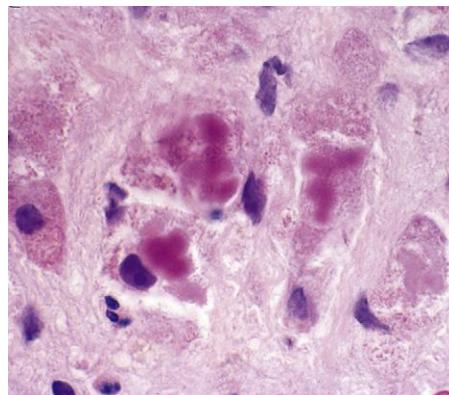
alcoholic dementia [Ar, *alkohl* + L, *de*, away, *mens*, mind], a deterioration of normal cognitive and intellectual functions associated with long-term alcohol abuse.

alcoholic dyspepsia, a digestive disorder characterized by abdominal discomfort and provoked by the consumption of alcohol.

alcoholic fermentation, the conversion of carbohydrates to ethyl alcohol.

alcoholic hallucinosis, a form of alcoholic psychosis characterized primarily by auditory hallucinations occurring in a clear sensorium, abject fear, and delusions of persecution. The condition develops in acute alcoholism as withdrawal symptoms shortly after prolonged and heavy alcohol intake is stopped or reduced, usually within 48 hours. Constitutes a medical emergency. Also called **acute hallucinosis**. See also **hallucinosis**.

alcoholic hepatitis, an acute toxic liver injury associated with excess ethanol consumption. It is characterized by necrosis, inflammation caused by the accumulation of polymorphonuclear leukocytes, and in many instances Mallory bodies.



Alcoholic hepatitis (Kumar et al, 2007)

alcoholic hepatopathy, a liver disease resulting from alcoholism, progressing in time to fibrosis and cirrhosis.

alcoholic ketoacidosis, the fall in blood pH (acidosis) sometimes seen in alcoholics and associated with a rise in the levels of serum ketone bodies.

alcoholic neuropathy, damage to the peripheral nerves as a result of alcohol consumption. Also called **alcoholic paralysis**.

alcoholic-nutritional cerebellar degeneration, a sudden, severe incoordination in the lower extremities characteristic of poorly nourished alcoholics. The patient walks, if at all, with an ataxic or a wide-based gait. Treatment consists of improved nutrition, abstinence from alcohol, and physical therapy. See also **alcoholism**.

alcoholic paralysis [Ar, *alkohl*, essence; Gk, *paralyein*, to be palsied]. See **alcoholic neuropathy**.

alcoholic psychosis, any of a group of severe mental disorders in which the ego's functioning is impaired, including pathological intoxication, delirium tremens, Korsakoff's psychosis, and acute hallucinosis. It is characterized by brain damage or dysfunction that results from excessive alcohol use.

Alcoholics Anonymous (AA), an international nonprofit organization, founded in 1935, consisting of abstinent alcoholics whose purpose is to stay sober and help others recover from the disease of alcoholism through a 12-step program, including group support, shared experiences, and faith in a higher power. The AA program, which emphasizes both medical and religious resources for help in overcoming alcoholism, consists of attending meetings and coping with abstinence "one day at a time." Meetings are held at convenient times in public locations such as factories, schools, churches, hospitals, and other community buildings. Similar groups who work with the children, relatives, friends, and associates of alcoholics are **Al-Anon** and **Alateen**.

alcoholic trance, a state of automatism resulting from ethanol intoxication.

alcoholism /al'kəhōliz'əm/, the dependence on excessive amounts of alcohol, associated with a cumulative pattern of deviant behaviors. Alcoholism is a chronic illness with a slow, insidious onset, which may occur at any age. The cause is unknown, but genetic, cultural and psychosocial factors are suspect, and families of alcoholics have a higher incidence of the disease.

■ **OBSERVATIONS:** The most frequent medical consequences of alcoholism are central nervous system depression and cirrhosis. The severity of each may be greater in the absence of food intake. Alcoholic patients also may suffer from alcoholic gastritis, peripheral neuropathies, auditory hallucinations, and cardiac problems. Abrupt withdrawal of alcohol in addiction causes weakness, sweating, and hyperreflexia. The severe form of alcohol withdrawal is delirium tremens.

■ **INTERVENTIONS:** Extreme caution should be used in administering drugs to alcoholic patients because of the possibility of additive central nervous system depression and toxicity caused by inability of the liver to metabolize the drugs. Treatment consists of psychotherapy (especially group therapy by organizations such as Alcoholics Anonymous), or administration of drugs such as disulfiram that cause an aversion to alcohol. See also **acute alcoholism**, **chronic alcoholism**.

alcohol poisoning, poisoning caused by the ingestion of any of several alcohols, of which ethyl, isopropyl, and methyl are the most common. Ethyl alcohol (ethanol) is found in beverages, hairspray, and mouthwashes; ordinarily, it is lethal only if large quantities are ingested in a brief period. Isopropyl (rubbing) alcohol is more toxic. Methyl alcohol (methanol) is extremely poisonous: in addition to

nausea, vomiting, and abdominal pain, it may cause blindness; death may follow the consumption of only 2 oz. Treatment for alcohol poisoning may include gastric lavage and other supportive interventions.

alcohol withdrawal syndrome, the clinical symptoms associated with cessation of alcohol consumption. These may include tremor, hallucinations, autonomic nervous system dysfunction, and seizures. See also **delirium tremens**.

ALD, abbreviation for **adrenoleukodystrophy**.

Aldactazide, a trademark for a fixed-combination drug containing a thiazide diuretic (**hydrochlorothiazide**) and a potassium-sparing diuretic (**spironolactone**).

Aldactone, a trademark for a potassium-sparing diuretic (**spironolactone**).

aldehyde /al'dēhīd'/ [Ar, *alkohl* + L, *dehydrogenatum*, dehydrogenated], any of a large category of organic compounds derived from the oxidation of a corresponding primary alcohol, as in the conversion of ethyl alcohol to acet-aldehyde, also known as ethanal. Each aldehyde is characterized by a carbonyl group (—CO—) attached directly to a hydrogen (—CHO) in its formula and can be converted into a corresponding acid by oxidation, as in the conversion of acetaldehyde to acetic acid.

aldesleukin, an antineoplastic agent.

■ **INDICATIONS:** This drug is used to treat metastatic renal cell carcinoma in adults and metastatic melanoma. It is also used as a phase II treatment in HIV in combination with zidovudine.

■ **CONTRAINdications:** Known hypersensitivity to this drug and abnormal thallium stress or pulmonary function tests prohibit this drug's use. This drug also must not be used in patients with organ allografts.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include mental status changes, dizziness, sensory dysfunction, syncope, motor dysfunction, headache, impaired memory, depression, sleep disturbances, hallucinations, rigors, neuropathy, sinus tachycardia, dysrhythmias, bradycardia, PVCs, PACs, myocardial ischemia, reversible visual changes, stomatitis, anorexia, GI bleeding, dyspepsia, constipation, jaundice, ascites, dysuria, dry skin, purpura, petechiae, urticaria, arthralgia, myalgia, pulmonary congestion, tachypnea, pleural effusion, wheezing, and infection. Common side effects include fever, chills, hypotension, nausea, vomiting, diarrhea, pruritus, erythema, rash, and dyspnea. Life-threatening side effects include myocardial infarction, cardiac arrest, capillary leak syndrome, cerebrovascular accident, intestinal perforation, oliguria, anuria, proteinuria, hematuria, renal failure, thrombocytopenia, leukopenia, coagulation disorders, leukocytosis, eosinophilia, exfoliative dermatitis, pulmonary edema, respiratory failure, and apnea.

Aldoclor, a trademark for a fixed-combination antihypertensive drug containing a diuretic (**chlorothiazide**), and an antihypertensive (**methyldopa**).

aldolase /al'dələs/, enzyme found in muscle tissue that catalyzes the step in anaerobic glycolysis involving the breakdown of fructose 1,6-biphosphate to glyceraldehyde 3-phosphate. The enzyme can also catalyze the reverse reaction. Normal adult findings are 3 to 8.2 Sibley-Lehninger units/dL or 22 to 59 mU at 37° C. See also **glycolysis**.

aldolase test, a blood test that can be useful in indicating muscular or hepatic cellular injury or disease.

Aldomet, a trademark for an antihypertensive (**methyldopa**).

Aldoril, a trademark for a fixed-combination drug containing a thiazine diuretic (**hydrochlorothiazide**) and an antihypertensive (**methyldopa**).

aldose /al'dōs/, the chemical form of monosaccharides in which the carbonyl group is an aldehyde.

aldosterone /al'dōstərōn', aldōs'tərōn/, a mineralocorticoid steroid hormone produced by the adrenal cortex with action in the renal tubule to retain sodium, conserve water by reabsorption, and increase urinary excretion of potassium.

aldosterone test, a blood or 24-hour urine test used to diagnose aldosteronism.

aldosteronism /al'dōstərō'nizəm, aldōs'-/, a condition characterized by the hypersecretion of aldosterone, occurring as a primary disease of the adrenal cortex or, more often, as a secondary disorder in response to various extraadrenal pathological processes. Primary aldosteronism, also called **Conn's syndrome**, may be caused by adrenal hyperplasia or by an aldosterone-secreting adenoma. Secondary aldosteronism is associated with increased plasma renin activity and may be induced by nephrotic syndrome, cirrhosis, idiopathic edema, congestive heart failure, trauma, burns, or other kinds of stress. Also called **hyperaldosteronism**.

■ **OBSERVATIONS:** In many cases the only manifestation of Conn's syndrome is mild to moderate hypertension. Other signs and symptoms include episodic weakness, fatigue, paresthesia, polyuria, polydipsia, and nocturia. Glycosuria, hyperglycemia, and personality disturbances are occasionally manifested. Laboratory tests may show decreased plasma renin activity (measured after restricted sodium and/or diuretic therapy), increased aldosterone levels (measured after sodium loading), normal blood chemistry values, or hypernatremia and hypokalemia. A CT scan may be used to detect the presence of an adenoma.

■ **INTERVENTIONS:** Treatment includes regular monitoring and control of blood pressure and hypokalemia with spironolactone, amiloride hydrochloride, or angiotensin-converting enzyme inhibitors. A low-sodium diet, cessation of tobacco use, weight reduction (if indicated), and regular exercise are also advised. A unilateral adrenalectomy is performed if an adenoma or a carcinoma is present, and chemotherapy with mitotane may be an option.

■ **NURSING CONSIDERATIONS:** Nurses should focus on blood pressure monitoring and education. Instruction is needed in the use and expected side effects of medications, including gynecomastia, menstrual irregularities, and reduced libido with spironolactone. Dietary management (low sodium) should be addressed and a regular exercise regimen established and monitored. Counseling or referrals should be made for those who use tobacco products. The patient and a family member should be taught to monitor blood pressure on a regular basis.

aldosteronoma /al'dōstir'ənō'ma/, pl. *aldosteronomas, aldosteronomata*, an aldosterone-secreting adenoma of the adrenal cortex that is usually small and occurs more frequently in the left than the right adrenal gland. Aldosteronism with sodium retention, expansion of the extracellular fluid volume, and hypertension may occur.

-aldrate, a suffix designating an antacid aluminum salt.

Aldurazyme, a trademark for **laronidase**.

alefacept, an immunosuppressive agent.

■ **INDICATION:** This drug is used to treat adults with moderate to severe plaque psoriasis.

■ **CONTRAINDITION:** Known hypersensitivity to this drug prohibits its use.

alemtuzumab /al'em-tuz'u-mab/, a recombinant, DNA-derived, humanized monoclonal antibody directed against the CD antigen CD52; it is administered intravenously as an antineoplastic drug in the treatment of B cell chronic lymphocytic leukemia.

alendronate, a bone-resorption inhibitor.

■ **INDICATIONS:** This drug is used to treat osteoporosis in postmenopausal women and Paget's disease.

■ **CONTRAINDICATION:** Known hypersensitivity to bisphosphonates prohibits the use of this drug.

■ **ADVERSE EFFECTS:** Side effects include anemia, hypokalemia, hypomagnesemia, hypophosphatemia, osteonecrosis of the jaw, abdominal pain, anorexia, constipation, nausea, vomiting, bone pain, hypertension, urinary tract infection, and fluid overload.

Aleppo boil /əlep'ō/. See **cutaneous leishmaniasis**.

alertness [Fr, *alerter*], a measure of being mentally quick, active, and keenly aware of the environment.

aleukemia, an acute form of leukemia characterized by a diminished total white blood cell count in the peripheral blood, accompanied by a loss of normal bone marrow function. Also spelled **aleukaemia**.

aleukemic leukemia /ā'lükēmik/, a type of leukemia in which the total leukocyte count remains within normal limits or is low and few abnormal forms appear in the peripheral blood. Diagnosis requires bone marrow biopsy. It occurs in 30% of all patients with leukemia, regardless of the specific type. Also called **aleukocytemic leukemia, subleukemic leukemia**.

aleukemic myelosis. See **myeloid metaplasia**.

aleukia /ālōō'kē-ə/ [Gk, *a* + *leukos*, not white], a marked reduction in or complete absence of leukocytes or platelets. Compare **leukopenia, thrombocytopenia**. See also **aplastic anemia**.

aleukocytemic leukemia. See **aleukemic leukemia**.

aleukocytosis /ālōō'kōsītō'sis/, absence of leukocytes from the blood.

Alexander's deafness [Gustav Alexander, Austrian otologist, 1873–1932], congenital deafness caused by cochlear aplasia involving chiefly the organ of Corti and adjacent ganglion cells of the basal coil of the cochlea; high-frequency hearing loss results.

Alexander's disease /al'eg-zan'dōrz// [W. Stewart Alexander, English pathologist, 20th century], an infantile form of leukodystrophy, characterized by a collection of eosinophilic material at the surface of the brain and around its blood vessels, resulting in brain enlargement. It also causes macrocephaly, seizures, and spasticity.

Alexander technique [Frederick Matthias Alexander, Australian actor, 1869–1955, who developed and taught the technique], a bodywork technique that uses psychophysical reeducation to correct dysfunctional habits of posture and movement. It is based on the principle that human movement is most fluid when the head leads and the spine follows to improve postural balance, coordination, and breathing; relieve stress and chronic pain; and improve general well-being.

alexandrite laser, a laser whose active medium is alexandrite doped with chromium, emitting light in the mid-infrared spectrum, tunable between 701 and 826 nm, and used usually at 755 nm. It is used for hair removal and other dermatological procedures.

alexia. See **word blindness**. —*alexic*, adj.

alexithymia /əlek'sithī'mē-ə, -thim'ē-ə/, an inability to experience and communicate feelings consciously.

alfa. See **alpha**.

alfacalcidol /al'fah-kal'si-dol/, a synthetic analog of calcitriol, to which it is converted in the liver. It is used in the treatment of hypocalcemia, hypophosphatemia, rickets, and osteodystrophy associated with various medical conditions, including chronic renal failure and hypoparathyroidism. Alfacalcidol is administered orally or intravenously.

alfalfa, an herb that is grown throughout the world.

■ **USES:** This herb is used for poor appetite, hay fever and asthma, and high cholesterol. It may also be used as a nutrient source.

■ CONTRAINDICATIONS: Alfalfa is not recommended during pregnancy and lactation, in children, in persons using blood thinners, or in those with known hypersensitivity to it.

alfuzosin, an antiadrenergic agent.

■ INDICATION: This drug is used to treat symptoms of benign prostatic hyperplasia.

■ CONTRAINDICATIONS: Known hypersensitivity to this drug and moderate to severe hepatic impairment prohibit its use.

■ ADVERSE EFFECTS: Adverse effects of this drug include postural hypotension within a few hours of administration, chest pain, tachycardia, fatigue, nausea, abdominal pain, dyspepsia, constipation, impotence, priapism, general body pain, rash, upper respiratory infection, bronchitis, and sinusitis. Common side effects include dizziness and headache.

ALG, abbreviation for **antilymphocyte globulin**. See **antithymocyte globulin**.

alg-. See **algesi-**.

alga pl. *algae* /al'gē/ [L, seaweed], any of a large group of mostly photosynthetic protists, found worldwide in fresh water, in salt water, and on land. —*algal*, adj.

algesi-, alg-, alge-, algo-, algo-, prefixes meaning ‘pain’: *algesia*, *algophobia*.

-algesia, a suffix meaning ‘(condition of) sensitivity to pain’: *asphalgesia*, *hyperthermalgesia*.

-algesic, a suffix meaning ‘sensitivity to pain’: *analgesic*, *paralgesic*.

-algia, -algy, suffixes meaning ‘pain, painful condition’: *epigastralgia*, *metrralgia*.

-algic, a suffix meaning ‘pain’: *cardialgic*, *tibialgic*.

algid /al'jid/ [L, *algere*, to be cold], chilly or cold.

algid malaria [L, *algere*, to be cold], a rare complication of tropical malaria (occurring in 0.37% of cases) caused by the protozoan *Plasmodium falciparum*. It is characterized by cold skin, profound weakness, and severe diarrhea. See also **falciparum malaria**, **malaria**.

alginate /al'jī-nāt/, a salt of alginic acid, extracted from marine kelp. The calcium, sodium, and ammonium alginates have been used in foam, cloth, a thickening agent for foods, pharmaceutical preparations, and gauze for absorbent surgical dressings. Soluble alginates, such as those of sodium, potassium, or magnesium, form a viscous sol that can be changed into a gel by a chemical reaction with compounds such as calcium sulfate; this makes them useful as materials for taking dental impressions.

alg-. See **algesi-**.

algodystrophy /al'gōdīs'trōfē/, a painful wasting of the muscles of the hands, often accompanied by tenderness and a loss of bone calcium. The condition may begin in the hand or in the shoulder and spread over the entire limb, causing contractions, edema, and cyanosis of the skin. It may also occur in the feet or legs. It may be associated with injury, heart disease, stroke, or a viral infection. Also called **complex regional pain syndrome**. See also **reflex sympathetic dystrophy**.

algolagnia /al'gōlag'nē-ə/ [Gk, *algos*, pain, *lagneia*, lust], a form of sexual perversion characterized by sadism or masochism. See also **sadomasochism**.

algologist /al'gōlōjist/, 1. a person who specializes in the study of or the treatment of pain. 2. a person who specializes in the study of algae. Also called **phycologist**.

algology, 1. the branch of medicine concerned with the study of pain. 2. the branch of science concerned with the study of algae. Also called **phycology**.

algophobia [Gk, *algos*, pain, *phobos*, fear], an anxiety disorder characterized by an abnormal, pervasive fear of experiencing pain or of witnessing pain in others.

algor [L, cold], the sensation of cold or a chill, particularly in the first stage of a fever.

algorithm /al'gōrith'm/ , 1. a step-by-step procedure for the solution to a problem by a computer, using specific mathematical or logical operations. Compare **heuristic**. 2. an explicit protocol with well-defined rules to be followed in solving a health care problem.

algor mortis, the reduction in body temperature and accompanying loss of skin elasticity that occur after death. Also called **death chill**.

algospasm /al'gōspaz'əm/, an acute, painful spasm of the muscles.

aliasing, an artifact that is caused by undersampling of signal data in diagnostic imaging.

Alice in Wonderland syndrome, perceptual distortions of space and size, as experienced by the character Alice in the Lewis Carroll story. Similar hallucinogenic experiences have been reported by individuals using drugs of abuse and by patients with certain neurological diseases.

alienation /äl'yānā'shən/ [L, *alienare*, to estrange], the act or state of being estranged or isolated. See also **depersonalization**. —*alien*, adj., *alienate*, v.

alignment /əlīn'mēnt/ [Fr, *aligner*, to put in a straight line], 1. the arrangement of a group of points or objects along a line. 2. the placement or maintenance of body structures in their proper anatomical positions, such as straightening of the teeth or repair of a fractured bone. Also spelled **alinement**.

aliment [L, *alimentum*, to nourish], something that nourishes or feeds. —*alimentary*, adj.

alimentary bolus. See **bolus**.

alimentary canal. See **digestive tract**.

alimentary duct. See **thoracic duct**.

alimentary system. See **digestive system**.

alimentary tract. See **digestive tract**.

alimentation, nourishment. See also **feeding**.

Alimta, a trademark for **temozolamide**.

alinement. See **alignment**.

aliphatic /al'ifat'ik/ [Gk, *aleiphar*, oil], pertaining to fat or oil, specifically hydrocarbon compounds that are open chains of carbon atoms, such as the fatty acids, rather than aromatic ring structures. Aliphatic compounds do not have conjugated unsaturated cyclic structures as are found in aromatic compounds such as benzene and naphthalene.

aliphatic acid, an acid containing a hydrocarbon fragment derived from a nonaromatic hydrocarbon.

aliphatic alcohol, an alcohol containing a hydrocarbon fragment derived from a fatty, nonaromatic hydrocarbon. Examples include ethyl alcohol and isopropyl alcohol, both of which have fat-solvent properties as well as bactericidal effects.

-alis, a suffix meaning ‘pertaining to’ something specified.

aliskiren, an antihypertensive.

■ INDICATIONS: This drug is used to treat hypertension, alone or in combination with other antihypertensives.

■ CONTRAINDICATIONS: Second and third trimester pregnancy and known hypersensitivity to this drug prohibit its use.

■ ADVERSE EFFECTS: Adverse effects of this drug include orthostatic hypotension, hypotension, headache, dizziness, renal stones, increased uric acid, rash, and hyperkalemia. Life-threatening side effects include angioedema.

alitretinoin, a second-generation retinoid.

■ INDICATION: It is used to treat the cutaneous lesions of Kaposi’s sarcoma.

■ CONTRAINDICATIONS: Known hypersensitivity and pregnancy prohibit this drug’s use.

■ ADVERSE EFFECTS: Side effects include rash, stinging, warmth, redness, erythema, blistering, crusting, peeling, contact dermatitis, and pain at the site of application.

alkalemia [Ar, *al* + *galiy*, wood ash; Gk, *haima*, blood], increased pH of the blood, above the normal range of 7.35 to 7.45. Also spelled *alkalaemia*.

alkali /al'kəlī/ [Ar, *al* + *galiy*, wood ash], a compound with the chemical characteristics of a base. Usually used with reference to hydroxides of Group I metals and ammonium, alkalis combine with fatty acids to form soaps, turn red litmus blue, and enter into reactions with carbon dioxide that form water-soluble carbonates. See also **acid**, **base**.

—**alkaline**, *adj*, **alkalinity**, *n.*, **alkalinize**, **alkalize**, *v.*

alkali burn, damage to tissue caused by exposure to an alkaline compound such as lye. Treatment includes washing the area with copious amounts of water to remove the chemical. The victim is immediately taken to a medical facility for assessment of tissue damage. Compare **acid burn**.

—**alkaline**, a suffix meaning ‘alkali’: *subalkaline*.

alkaline ash /al'kəlin/, residue in urine having a pH higher than 7.0.

alkaline ash-producing foods, foods that may be ingested to produce an alkaline pH in the urine, thereby reducing the incidence of acidic urinary calculi, or that may be avoided to reduce the incidence of alkaline calculi. Some foods that result in alkaline ash are milk, cream, buttermilk, fruit (except prunes, plums, and cranberries), vegetables (except corn and lentils), almonds, chestnuts, coconuts, and olives.

alkaline bath, a bath taken in water containing sodium bicarbonate, used especially for skin disorders.

alkaline phosphatase, an enzyme present in all tissues and in high concentration in bone, kidneys, intestines, biliary ducts, plasma, and teeth. It may be elevated in serum in some diseases of the bone and liver and some other illnesses. Normal serum concentrations in adults are 1.5 to 4.5 Bodansky units; in children, 5 to 14 Bodansky units. See also **acid phosphatase**.

alkaline phosphatase test (ALP), a blood test used to determine a variety of liver and bone disorders such as extrahepatic and intrahepatic obstructive biliary disease, cirrhosis, hepatic tumors, hepatotoxic drugs, hepatitis, osteoblastic metastatic tumors, Paget's disease, rheumatoid arthritis, and hyperparathyroidism.

alkaline reflux gastritis, chronic gastritis caused by the reflux of alkaline intestinal contents after a partial gastrectomy.

alkaline reserve, the additional amount of sodium bicarbonate that the body produces to maintain a normal arterial pH (7.35 to 7.45) when the carbon dioxide level increases as a result of hypoventilation. The alkaline reserve is maintained by the kidneys, which control the excretion of bicarbonate ions in urine.

alkalinity /al'kəlin'itē/, the acid-base relationship of any solution that has a lower concentration of hydrogen ions or a higher concentration of hydroxide ions than pure water, which is an arbitrarily neutral standard with a pH of 7.0 at 25°C.

alkalinization /al'kəlinəzāshən/, 1. the act of making a substance alkaline, as through the addition of a base. 2. the state of becoming alkaline. —**alkalinize**, *v.*

alkali poisoning, a toxic condition caused by the ingestion of an alkaline agent such as liquid ammonia, lye, and some detergent powders. Compare **acid poisoning**.

alkali reserves [Ar, *al* + *galiy*, wood ash, + L, *reservare*, to save], the volume of carbon dioxide or carbonates at standard temperature and pressure in 100 mL of blood plasma. The principal buffer in blood is bicarbonate, which represents most of the alkali reserve. Hemoglobin phosphates and additional bases also act as buffers. If the alkali reserve is low, acidosis exists; if it is high, alkalosis exists.

alkalize. See **alkalinization**.

alkaloid /al'kəloid/ [Ar, *al* + *galiy*; Gk, *eidos*, form], any of a large group of nitrogen-containing organic compounds produced by plants, including many pharmacologically active substances, such as atropine, caffeine, cocaine, morphine, nicotine, and quinine.

alkalosis /al'kəlō'sis/ [Ar, *al* + *galiy* + Gk, *osis*, condition], an abnormal condition of body fluids, characterized by a tendency toward a blood pH level greater than 7.45 caused by an excess of alkaline bicarbonate or a deficiency of acid. There are two types: **respiratory alkalosis** and **metabolic alkalosis**. When a buffer system, such as carbon dioxide retention or bicarbonate excretion, prevents a shift in pH, it is labeled **compensated alkalosis**. The treatment of uncompensated alkalosis involves the correction of dehydration and various ionic deficits to restore the normal acid-base balance in which the ratio of carbonic acid to bicarbonate is 20:1. Compare **acidosis**.

alkane, a saturated aliphatic hydrocarbon containing no double or triple bonds in the carbon chain, such as propane. Also called **paraffin**.

alkaptonuria /al'kap'tōnōōr'ē-ə/ [Ar, *al* + *galiy* + Gk, *haptēin* to possess, *ouron* urine], a rare inherited disorder marked by the excretion of large amounts of homogentisic acid in the urine, which is the result of the incomplete metabolism of the amino acids tyrosine and phenylalanine. The presence of the acid is indicated by darkening of urine when exposed to air or by brown or blue discoloration of the ears or eyes. Other indications are restricted joint mobility, kidney stones, and vascular hypertension. See also **ochronosis**. —**alkaptonuric**, *adj*.



Alkaptonuria (Moll, 1997)

alkene /al'kēn/, an unsaturated aliphatic hydrocarbon containing one double bond in the carbon chain, such as ethylene. Also called **olefin**.

Alkeran, a trademark for an alkylating antineoplastic agent (**melphalan**).

alkyl /al'kil/, a hydrocarbon fragment derived from an alkane by the removal of one of the hydrogen atoms.

alkylamine /al'kiləmēn/, an amine in which an alkyl group replaces one to three of the hydrogen atoms that are attached to the nitrogen atom of ammonia, such as methylamine (amino-methane).

alkylating agent /al'kilā'ting/, any substance that contains an alkyl radical and is capable of replacing a free hydrogen atom in an organic compound, or one that acts by a similar mechanism. This type of chemical reaction results in interference with DNA synthesis and RNA transcription, which in turn results in interference with mitosis and cell division, especially in rapidly proliferating tissue, causing cell death. Alkylating agents are radiometric in that their action is similar to that of irradiation. The agents are useful in the treatment of cancer and are a common class of chemotherapy agents. Agents include cyclophosphamide, mechlorethamine, thiotapec, busulfan, carbustine, lomustine, streptozocin altretamine, and procarbazine. Adverse effects include myelosuppression, particularly anemia and nausea, vomiting, and alopecia.

alkylation, a chemical reaction in which an alkyl group is transferred from an alkylating agent. When such organic

reactions occur with a biologically significant cellular constituent such as deoxyribonucleic acid, they result in interference with mitosis and cell division.

alkyne /al'kīn/, an unsaturated aliphatic hydrocarbon containing at least one triple bond in the carbon chain, such as acetylene.

ALL, 1. abbreviation for **acute lymphocytic leukemia**.
2. abbreviation for **acute lymphoid leukemia**.

all-. See **allo-**.

allachesthesia /al'eksthe'zha/ [Gk, *allache*, elsewhere], an abnormality of touch sensation in which a stimulus is perceived to be at a point distant from where it is actually applied.

allanto-, a combining form meaning ‘allantois’: *allantoidoangiopagus*, *allantotoxicon*.

allantoic. See **allantois**.

allantoidoangiopagus /al'əntoi'dō-an'jē-ōp'āgəs/ [Gk, *allantoëides*, sausagelike, *angeion*, vessel, *pagos*, fixed], conjoined monozygotic twin fetuses of unequal size that are united by the vessels of the umbilical cord. Also called **omphaloangiopagus**. See also **omphalosite**. —*allantoidoangiopagous*, adj.

allantoin /əlan'tō-in/, a chemical compound (5-ureidohydantoin), C₄H₆N₄O₃, that occurs as a white crystallizable substance found in many plants and in the allantoic and amniotic fluids and fetal urine of primates. It is also present in the urine of mammals other than primates as a product of purine metabolism. The substance, which can be produced synthetically by the oxidation of uric acid, was once used to promote tissue growth in the treatment of suppurating wounds and ulcers.

allantois /əlan'tōis/ [Gk, *allas*, sausage, *eidos*, form], a tubular extension of the endoderm of the yolk sac that extends with the allantoic vessels into the connecting stalk of the embryo. In human embryos, allantoic vessels become the umbilical vessels and the chorionic villi. See also **body stalk**, **umbilical cord**, **yolk sac**. —**allantoic**, adj.

allele /əlēl'/, 1. one of two or more alternative forms of a gene that occupy corresponding loci on homologous chromosomes. Each allele encodes a phenotypic feature or a certain inherited characteristic. An individual normally has two alleles for each gene, one contributed by the mother and one by the father. If both alleles are the same, the individual is homozygous; if the alleles are different, the individual is heterozygous. In heterozygous individuals, one of the alleles is usually dominant, and the other is recessive. In humans, for example, the allele for brown eyes is dominant, and the allele for blue eyes is recessive. 2. one of two or more contrasting characteristics transmitted by alternative forms of a gene. Also called **allelomorph**. —*allelic*, adj.

allello-, combining form meaning ‘another’: *allelocatalysis*, *allelomorph*.

allelomorph. See **allele**.

Allen-Doisy test [Edgar Allen, U.S. endocrinologist, 1892–1943; Edward Doisy, U.S. biochemist and Nobel laureate, 1893–1986], a bioassay test for estrogen and gonadotropins in which ovariectomized mice or rats are injected with an estrogenic substance. The appearance of cornified cells on vaginal smears and the disappearance of leukocytes constitute a positive reaction.

Allen's test [Edgar Van Nuys Allen, American physician, 1893–1986], a test for the patency of the radial artery after insertion of an indwelling monitoring catheter. The patient's hand is formed into a fist while the nurse compresses the ulnar artery. Compression continues while the fist is opened. If blood perfusion through the radial artery is adequate, the hand should flush and resume its normal pinkish coloration.

The accuracy and utility of the Allen's test has been questioned in the research literature.



Allen's test (Custalow, 2005)

allergen /al'ərjin/ [Gk, *allos*, other, *ergein*, to work, *genein*, to produce], an environmental substance that can produce a hypersensitive reaction in the body but may not be intrinsically harmful. Common allergens include pollen, animal dander, house dust, feathers, and various foods. Studies indicate that one of six Americans is hypersensitive to one or more allergens. Methods of identifying specific allergens affecting individuals include the patch test, the scratch test, the radioallergosorbent test, and the Prausnitz-Küstner test. See also **allergic reaction**, **allergy**. —**allergenic**, adj.

allergenic /al'ərjēn'ik/, provoking allergic reactions.

allergenic extract, a protein-containing extract purified from a substance to which a person may be sensitive. The extract may be used for diagnosis or for hyposensitization therapy.

allergic /əlur'jik/. See also **allergy**.

allergic alveolitis. See **diffuse hypersensitivity pneumonia**.

allergic arthritis, appearance of symptoms of arthritis such as swollen joints after the ingestion of allergenic foods or medications.

allergic asthma, a form of asthma caused by exposure of the bronchial mucosa to an inhaled airborne antigen. The antigen causes the production of antibodies that bind to mast cells in the bronchial tree. The mast cells then release histamine, which stimulates contraction of bronchial smooth muscle and causes mucosal edema. Hyposensitization treatments are more effective for pollen sensitivity than for allergies to house dust, animal dander, mold, and insects. Psychological factors may provoke asthma attacks in bronchi already sensitized by antigens. Medication, including immunotherapy, can help relieve allergy symptoms. Often a diurnal pattern of histamine release occurs, causing variable degrees of bronchospasm at different times of the day. Also called **atopic asthma**, **extrinsic asthma**. See also **asthma**, **asthma in children**, **asthmatic eosinophilia**, **status asthmaticus**.

allergic bronchopulmonary aspergillosis, a form of aspergillosis that occurs in asthmatics when the fungus *Aspergillus fumigatus*, growing within the bronchial lumen, causes a type I or type III hypersensitivity reaction. The characteristics of the condition are similar to those of asthma, including dyspnea and wheezing. Chest examination and



Aspergillus fumigatus (Centers for Disease Control and Prevention
Public Health Image Library ID#4297, Dr. Libero Ajello, 1963)

pulmonary function tests may reveal airway obstruction. Serological tests usually reveal precipitating antibodies to *A. fumigatus*. Bacteriological and microscopic examination of sputum may reveal *A. fumigatus* in addition to Charcot-Leyden crystals. Eosinophilia is usually also present. Compare **aspergillosis**.

allergic conjunctivitis, an inflammation of the conjunctiva caused by an allergy. Common allergens that cause this condition are pollen, grass, topical medications, air pollutants, occupational irritants, and smoke. This condition is bilateral, usually starts before puberty, and commonly recurs in a seasonal pattern. Also called **redeye**. See also **conjunctivitis**.

■ **OBSERVATIONS:** Common signs include itching, burning, and swelling around the eyes and excessive tearing. Eosinophils predominate in stained blood smears. The diagnosis is usually based on the results of cultures and sensitivity tests to identify the causative allergen.

■ **INTERVENTIONS:** Oral antihistamines and vasoconstrictor and corticosteroid eyedrops, such as predniSONE are typically prescribed.

■ **NURSING CONSIDERATIONS:** Cold compresses may be administered.

allergic contact dermatitis. See **allergic dermatitis**.

allergic coryza, acute rhinitis caused by exposure to any allergen to which the person is hypersensitive.

allergic dermatitis [Ger, *allergie*, reaction; Gk, *derma*, skin, *itis*, inflammation], a delayed type IV allergic reaction of the skin resulting from cutaneous contact with a specific allergen, with varying degrees of erythema, edema, and vesication. Such allergens include dyes, perfumes, poison ivy, certain chemicals, and metals. Also called **allergic contact dermatitis**.



Allergic dermatitis from metal fastener on jeans
(Weston, Lane, and Morelli, 2007)

allergic granulomatosis. See **Churg-Strauss syndrome**.
allergic interstitial nephritis, acute interstitial nephritis that is part of an allergic reaction, such as to medication. See also **interstitial nephritis**.

allergic interstitial pneumonitis. See **diffuse hypersensitivity pneumonia**.

allergic proctitis, in children, allergic gastroenteropathy having its focus in the rectum; in adults, rectal irritation possibly caused by chemicals in the rectum, such as after medical procedures or anal intercourse.

allergic purpura [Gk, *allos*, other, *ergein*, to work; L, *purpura*, purple], a chronic disorder of the skin associated with urticaria, erythema, asthma, and rheumatic joint swellings. Unlike in other forms of purpura, the platelet count, the bleeding time, and blood clotting are normal. Nonthrombocytopenic purpura is due to sensitization to foods, drugs, and insect bites.

allergic reaction, an unfavorable physiological response to an allergen to which a person has previously been exposed and to which the person has developed antibodies. The response may be characterized by a variety of symptoms, including urticaria, eczema, dyspnea, bronchospasm, diarrhea, rhinitis, sinusitis, laryngospasm, and anaphylaxis. Allergic reactions may be immediate or delayed. Eosinophilia is usually present and is revealed in the differential white blood cell count.

allergic response: localized, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as severity of localized hypersensitive immune response to a specific environmental (exogenous) antigen. See also **Nursing Outcomes Classification**.

allergic response: systemic, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as severity of systemic hypersensitive immune response to a specific environmental (exogenous) antigen. See also **Nursing Outcomes Classification**.

allergic rhinitis, inflammation of the nasal passages, usually associated with watery nasal discharge and itching of the nose and eyes, caused by a localized sensitivity reaction to an allergen, such as house dust, animal dander, or pollen. The condition may be seasonal, as in hay fever, or perennial, as in allergy to dust or animals. Treatment may include the local, systemic, or topical administration of antihistamines or steroids, avoidance of the antigen, and hyposensitization by injections of diluted antigen in gradually increasing amounts.



Allergic salute (Courtesy Parkland Health and Hospital System
Community Oriented Primary Care Clinic, Dallas, Texas)

allergic vasculitis, an inflammatory condition of the blood vessels that is induced by allergens such as iodides, penicillin, sulfonamides, and thioureas. It is characterized by itching, malaise, and a slight fever and by the presence of papules, vesicles, urticarial wheals, or small ulcers on the skin.

allergist /al'ärjist/, a physician who specializes in the diagnosis and treatment of allergic disorders.

allergy /al'ärjē/ [Gk, *allos*, other, *ergein*, to work], a hypersensitive reaction to common, often intrinsically harmless, substances most of which are environmental. More than 50 million Americans have allergic reactions to airborne or inhaled allergens, such as cigarette smoke, house dust, and pollens. Symptoms of mild allergies, such as those associated with rhinitis, conjunctivitis, and urticaria, can be suppressed by antihistamines, with glucocorticoids administered as supplements to primary therapy. Severe allergic reactions, such as anaphylaxis and angioedema of the glottis, can cause systemic shock and death and commonly require immediate therapy with subcutaneous epINEPHrine or IV steroids, such as dexamethasone. See also **allergic reaction**, **allergy testing**. —**allergic**, adj.

allergy blood test, a blood test used to measure serum immunoglobulin E, which is an effective method of diagnosing allergy and of specifically identifying the allergen. This test can be helpful when the results of an allergy skin test are questionable, when the allergen is not available in a form for dermal injection, when the allergen may incite an anaphylactic reaction if injected into the patient, or when skin testing is particularly difficult (for example, in infants or patients with dermatographia or widespread skin disease).

allergy immunotherapy. See **antianaphylaxis**.

allergy management, a nursing intervention from the Nursing Interventions Classification (NIC) defined as identification, treatment, and prevention of allergic responses to food, medications, insect bites, contrast material, blood, and other substances. See also **Nursing Interventions Classification**.

allergy skin test, a skin test used to detect allergic reactions. Properly performed, it is considered the most convenient and least expensive test for detecting such reactions. The test involves injecting or topically scratching an allergen into the skin and then evaluating the wheal (swelling) and flare (redness) responses that follow. Positive reactions usually occur within 20 minutes.

allergy testing, any one of the various procedures used in identifying the specific allergens. Such tests are helpful in prescribing treatment to prevent allergic reactions or to reduce their severity. The most common is allergy skin testing, which exposes the patient to small quantities of the suspected allergens. Factors considered in performing allergy tests include the medical history of the patient, the allergy history, the environment, and the diet. Individuals to be tested are usually instructed to discontinue the use of any antihistamines at least 24 hours before the test because these drugs can interfere with normal test responses. The most common kinds of allergy testing are the **intradermal**, **scratch**, **patch**, **conjunctival**, **Prausnitz-Küstner**, **radioallergosorbent**, and **use** tests.

allesthesia /al'esthē'zha/, a referred pain or other sensation that is perceived at a remote site on the same or opposite side of the body stimulated. Also called **alloesthesia**.

all fours position, the sixth stage in the Rood system of ontogenetic motor patterns. In this stage, the lower trunk and lower extremities are brought into a co-contraction pattern while stretching of the trunk and limb girdles develops co-contractions of the trunk flexors and extensors.

allicin /al'i-sin/ [*Allium*, the genus of garlic], an oily substance extracted from garlic, having antibacterial activity.

allied health personnel. See **paramedical personnel**.

alligator forceps, a forceps with long, thin, angular handles and heavy interlocking teeth; used in a variety of surgeries including orthopedics and ear, nose and throat procedures. Also called **alligator clamp**.

Allis forceps, a curved forceps with serrated edges, used for grasping tissues. Also called **Allis clamp**.

allo-, **all-**, combining forms meaning 'differing from the normal, reversal, or referring to another': **allopathy**, **allergic**.

alloantigen. See **isoantigen**.

allodiploid /al'ödip'loid/ [Gk, *allos*, other, *diploos*, double, *eidos*, form], 1. an individual, an organism, a strain, or a cell that has two genetically distinct sets of chromosomes derived from different ancestral species, as occurs in hybridization. 2. also **allodiploidic**, pertaining to such an individual, an organism, a strain, or a cell. Compare **allopolyploid**, **autodiploid**. —**allodiploidy**, n. **autopolyploid**.

alloeroticism, **alloerotism**. See **heteroeroticism**.

alloesthesia. See **allesthesia**.

alloamy. See **cross fertilization**.

allogenic /al'öjen'ik/ [Gk, *allos* + *genein*, to produce], 1. (in genetics) denoting an individual or cell type that is from the same species but genetically distinct. 2. (in transplantation biology) denoting tissues, particularly stem cells from either bone marrow or peripheral blood, that are from the same species but antigenically distinct; homologous. Also spelled **allogeneic**. Compare **syngeneic**, **xenogeneic**.

allogenic graft. See **allograft**.

allograft /al'ögraft/ [Gk, *allos*, other + *graphion*, stylus], surgical transplantation of tissue between two genetically dissimilar individuals of the same species, such as between two humans who are not monozygotic twins. Tissues commonly used for allografts include cornea, cartilage, bone, artery, and cadaver skin stored in a skin-tissue bank. Also called **allogenic graft**, **homogenous graft**, **homograft**, **homologous graft**. Compare **autograft**, **isograft**, **xenograft**. See also **graft**.

allohexaploid. See **allopolyploid**.

allokeratoplasty /al'öker'ätoplás'tē/, the repair of a cornea with synthetic transparent material.

allometric. See **allometry**.

allometric growth, the increase in size of different organs or parts of an organism at various rates. Also called **heterauxesis**. Compare **isometric growth**. See also **allometry**.

allometron /əlom'itron/, a quantitative change in the proportional relationship of the parts of an organism as a result of evolution.

allometry /əlom'itri/ [Gk, *allos* + *metron*, measure], the measurement and study of the changes in proportions of the various parts of an organism in relation to the growth of the whole or of such changes within a series of related organisms. See also **allometric growth**. —**allometric**, adj.

allomorphism /al'ömôr'fizəm/ [Gk, *allos*, other, *morphe*, form], 1. a change in crystalline form without a change in chemical composition. 2. a change in the shape of a group of cells caused by pressure or other physical factors.

allopathic physician /al'öpäth'ik/, a physician who practices allopathy. Almost all practicing physicians in the United States are allopathic. Compare **chiropractor**, **homeopathist**, **osteopath**.

allopathy /əlop'äthē/ [Gk, *allos* + *pathos*, suffering], a system of medical therapy in which a disease or an abnormal condition is treated by creating an environment that is antagonistic to the disease or condition; for example, an antibiotic toxic to a pathogenic organism is administered to treat an infection. Compare **chiropractic**, **homeopathy**, **osteopathy**. —**allopathic**, adj.

allopentaploid. See **allopolyploid**.

alloplast /al'öplast/ [Gk, *allos*, other, *plassein*, to mold], a graft made of plastic, metal, or other material foreign to the human body. —**alloplastic**, adj.

alloplastic maneuver [Gk, *allos* + *plassein*, to mold], (in psychology) a process that is part of adaptation, involving an

adjustment or a change in the external environment. Compare **autoplastics maneuver**.

alloplasty /al'ōplas'tē/ [Gk, *allos*, other, *plassein*, to mold], plastic surgery in which materials foreign to the human body are implanted. —*alloplastic*, adj.

allopolyploid /al'ōpol'iploid/ [Gk, *allos* + *polyplous*, many times, *eidos* form], 1. an individual, an organism, a strain, or a cell that has more than two genetically distinct sets of chromosomes derived from two or more different ancestral species, as occurs in hybridization. Such individuals are referred to as allotrioploid, allotetraploid, allopentaploid, allohexaploid, and so on, depending on the number of haploid sets of chromosomes they contain. Compare **allodiploid**, **autodiploid**. See also **mosaic**. 2. also **allopolyploidic**, pertaining to such an individual, organism, strain, or cell. Also called **alloploid**. —*allopolyploidy*, **autopolyploid**, n.

allopurinol /al'ōpyūr'ōnôl/, a xanthine oxidase inhibitor uricosuric agent.

■ **INDICATIONS:** It is prescribed in the treatment of gout and other hyperuricemic conditions.

■ **CONTRAINDICATIONS:** It is not prescribed for children (except those with hyperuricemia resulting from malignancy), lactating mothers, or people suffering an acute attack of gout. Known hypersensitivity to this drug prohibits its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are blood dyscrasias and severe rashes and other allergic reactions. GI and ophthalmological disturbances also may occur.

allorhythmia /al'ōrith'mēə/, an irregular heart rhythm that occurs repeatedly.

all-or-none law, 1. the principle in neurophysiology stating that a stimulus must be strong enough to reach threshold to trigger a nerve impulse. Once threshold is achieved, the entire impulse is discharged. A weak stimulus will not produce a weak reaction. 2. the principle that the heart muscle or nerve, under any stimulus above a threshold level, will respond either with a maximal strength response or with none at all. Also called **Bowditch's law**.

allostatic load, a term coined as a more precise alternative to the term **stress**, used to refer to environmental challenges that cause an organism to begin efforts to maintain stability (allostasis).

allosteric sites /al'ōstĕr'ik/ [Gk, *allos* + *stereos*, solid], the sites, other than the active site or sites, of an enzyme that bind regulatory molecules.

allotetraploid. See **allopolyploid**.

allotransplantation, the transplantation of an allograft.

allotrio-, a prefix meaning 'strange or foreign': *allotriodontia*, *allotriogeustia*.

allotriodontia /əlōt'rē-ōdōn'shə/, 1. the development of a tooth in an abnormal location, such as in a dermoid tumor. 2. the transplantation of teeth from one individual to another.

allotriploid. See **allopolyploid**.

allotropic, 1. pertaining to a substance that is changed by digestion to retain some of its nutritive value. 2. pertaining to an element that may exist in two or more forms at the atomic level, such as carbon in the diamond, graphite, and buckminsterfullerene forms.

allowable charge /əlou'əbel/, the maximum dollar amount that a third party, usually an insurance company, will reimburse a provider for a specific service.

allowable costs, charges for health care services and/or supplies for which insurance benefits are available. In general, costs of services not considered to be reasonable or necessary to the proper provision of health services are excluded from allowable costs. Allowable costs vary across insurance companies.

allowable dose. See **accumulated dose equivalent**.

allowable error, the amount of error that can be tolerated without invalidating the medical usefulness of the analytic result. Allowable error has a 95% limit of analytic error; only 1 sample in 20 can have an error greater than this limit.

alloxan /əlok'san/, an oxidation product of uric acid that is found in the human intestine in diarrhea. Alloxan has been used to produce diabetes in experimental animals by destroying the insulin-secreting islet cells of the pancreas.

alloy /al'oi/ [Fr, *aloyer*, to combine metals], a mixture of two or more metals or of substances with metallic properties. Most alloys are formed by mixing molten metals that dissolve in each other. A number of alloys have medical applications, such as those used for prostheses and in dental amalgams.

almond oil, an oil expressed from the kernels of the fruit of the sweet almond tree, *Prunus amygdalus*, which is native to the Mediterranean region. The fixed oil is a demulcent and a mild laxative. Bitter almond oil is a volatile oil that contains lethal prussic acid.

almotriptan /al'mo-trip'tan/, a selective serotonin receptor agonist used as the malate salt in the acute treatment of a migraine; almotriptan is administered orally.

aloe, a succulent found throughout the world.

■ **USES:** Aloe vera gel is used externally for minor burns, skin irritations, minor wounds, frostbite, and radiation-induced injuries. Internally, it is used to heal intestinal inflammation and ulcers and to stimulate bile secretion as a digestive aid.

■ **CONTRAINDICATIONS:** Hypersensitivity to this plant, garlic, onions, or tulips prohibits the topical use of aloe. Aloe also should not be used on deep wounds. *Internal* use of the dried juice is contraindicated during pregnancy and lactation, in children younger than 12 years of age, and in those with kidney or cardiac disease or bowel obstruction. This product should not be used long term.

alopecia /al'ōpē'shə/ [Gk, *alopex*, fox mange], a partial or complete lack of hair resulting from normal aging, an endocrine disorder, a drug reaction, an anticancer medication, or a skin disease. Kinds of alopecia include **alopecia areata**, **alopecia totalis**, **alopecia universalis**, **androgenic alopecia**, **cicatricial alopecia**, **male pattern alopecia**, and **premature alopecia**.

alopecia areata /erē-ā'tə/, a disease of unknown cause in which sudden well-defined bald patches occur. The bald areas are usually round or oval and located on the head and other hairy parts of the body. Hairs that look like exclamation points can sometimes occur at a bald patch's edges. The condition is usually self-limited and often clears completely within 6 to 12 months without treatment. Recurrences are common. Anxiety and stress are common precipitating factors. Compare **alopecia totalis**, **alopecia universalis**.



Alopecia areata (Marks and Miller, 2006)

alopecia congenitalis, congenital baldness in which there may be partial or complete absence of hair at birth.

alopecia neurotica, a loss of hair, usually occurring at one site, after a disease or an injury involving the nervous system.

alopecia prematura, baldness that occurs early in life, beginning as early as late adolescence.

alopecia senilis, natural hair loss that affects older persons.

alopecia totalis, an uncommon condition characterized by the loss of all hair on the scalp. The cause is unknown, and the baldness is usually permanent. No treatment is known. Compare **alopecia areata**, **alopecia universalis**.



Alopecia totalis (Hordinsky, Sawaya, and Scher, 2000)

alopecia toxica, a form of hair loss attributed to a febrile illness.

alopecia universalis, a total loss of hair on all parts of the body. The condition is occasionally an extension of alopecia areata. Compare **alopecia areata**, **alopecia totalis**.

Aloxi, a trademark for **palonosetron**.

alpha /al'fə/, A, α, the first letter of the Greek alphabet. It is commonly used as a scientific notation, denoting the position of an atom in a molecule, identifying a nuclear particle, or designating a particular physiological rhythm. For example, it is used in chemical nomenclature to distinguish one variation in a chemical compound from others.

alpha-adrenergic. See **adrenergic receptor**.

alpha-adrenergic blocking agent. See **antiadrenergic**.

alpha-adrenergic receptor. See **alpha receptor**.

alpha alcoholism, a mild form of alcoholism in which the dependence is psychological rather than physical. The person may consume alcohol in excessive amounts to relieve physical pain or psychological distress but is usually able to retain control when the distress subsides and can cease use of alcohol voluntarily.

alpha-aminovaleric acid. See **valine**.

alpha₁-antitrypsin [Gk, *anti*, against, trypsin], a plasma protein produced in the liver that inhibits the action of proteolytic enzymes such as trypsin. Deficiencies are associated with liver disease in children and panacinar emphysema in adults. In the latter, the basic lesion is believed to result from effects of proteolytic enzymes on the walls of the alveoli. Also called **antitrypsin**, **alpha₁-proteinase inhibitor**.

alpha₁-antitrypsin test, a blood test useful for individuals with a family history of emphysema, since a familial tendency to have a deficiency of alpha₁-antitrypsin antienzyme exists.

A similar deficiency also exists in children with liver disease.

alpha biofeedback, a procedure in which a person is presented with continuous information, usually auditory, on the state of his or her brain-wave pattern, with the intent of increasing the percentage of alpha activity; this is done with the expectation that it will be associated with a state of relaxation and peaceful wakefulness.

alpha cell [Gk, *alpha*, first letter of the Greek alphabet; L, *cella*, storeroom], one of a class of cells located in the adenohypophysis or in the pancreatic islets. Alpha cells in the pancreas produce glucagon, which raises the level of glucose in the blood.

alpha chain disease. See **immunoproliferative small intestine disease**.

alpha error. See **type I error**.

alpha-fetoprotein (AFP), a protein that is normally synthesized by the liver, yolk sac, and GI tract of a human fetus, but may also be found at an elevated level in the sera of adults having certain malignancies. AFP measurements in amniotic fluid are used for the early diagnosis of fetal neural tube defects, such as spina bifida and anencephaly. Elevated serum levels may be present in ataxia-telangiectasia syndrome, hereditary tyrosinemia, cirrhosis, alcoholic hepatitis, hepatocellular carcinoma, and viral hepatitis. Although not a specific genetic marker for malignancies, AFP may be used to monitor the effectiveness of surgical and chemotherapeutic management of hepatomas and germ cell neoplasms.

alpha-fetoprotein (AFP) test, a blood test used to assist in diagnosing certain neoplastic conditions, such as hepatoma, some tumors and teratomas, Hodgkin's disease, lymphoma, and renal cell carcinoma. Increased AFP concentrations also may indicate cirrhosis, active chronic hepatitis, and neural tube defects in the fetus.

alpha-galactosidase, an enzyme that catalyzes the conversion of alpha-D-galactoside to D-galactose.

alpha-globulins, one of a group of serum proteins classified as alpha, beta, or gamma on the basis of their electrophoretic mobility. Alpha-globulins have the greatest negative charge.

alpha-glucosidase inhibitor, any of a group of oral anti-hyperglycemic agents that act by competitive inhibition of alpha-glucosidase, delaying intestinal carbohydrate absorption and lessening postprandial increases in glucose levels.

alpha hemolysis, the development of a greenish zone around a bacterial colony growing on blood agar, characteristic of pneumococci and certain streptococci and caused by the partial decomposition of hemoglobin. Compare **beta hemolysis**.

alpha-hydroxypropionic acid. See **lactic acid**.

alpha₂-interferon /in'tərfir'ən/, a protein molecule effective in controlling the spread of common colds caused by rhinoviruses. It is administered as a nasal spray.

alpha-L-fucosidase, a lysosomal enzyme that catalyzes the hydrolysis of fucosides. A deficiency of this enzyme is a cause of fucosidosis.

alpha-methyldopa. See **methyldopa**.

alphabetic, data in the form of letters A to Z and numerals 0 to 9. The characters, which also may include punctuation marks, are used commonly in computer programming to code applications.

alpha particle, a particle emitted from an atom during one kind of radioactive decay. It consists of two protons and two neutrons, the equivalent of a helium nucleus. Ordinarily, alpha particles are a weak form of radiation with a short range and are not considered hazardous unless inhaled or ingested.

alpha₁-proteinase inhibitor. See **alpha₁-antitrypsin**.

alpha receptor, any of the postulated adrenergic components of receptor tissues that respond to norepinephrine and to various blocking agents. The activation of alpha receptors causes physiological responses such as increased peripheral vascular resistance, pupil dilation, and contraction of arrector muscles. Also called **alpha-adrenergic receptor**. Compare **beta receptor**.

alpha redistribution phase, a period after IV administration of a drug when the blood level of the drug begins to fall from its peak. It is caused primarily by redistribution of the drug throughout the body.

alpha rhythm. See **alpha wave**.

alpha state, a condition of relaxed, peaceful wakefulness devoid of concentration and sensory stimulation. It is characterized by alpha waves at a frequency of 8 to 13 Hz as recorded by an electroencephalograph and is accompanied by feelings of tranquility and a lack of tension and anxiety. Biofeedback training and meditation techniques are used to achieve this state.

Alpha Tau Delta /al'fə tōu' dēl'tə/, a national fraternity of professional nurses founded in 1921.

alpha-thalassemia [Gk, *thalassa*, sea + *haema*, blood], an anemia caused by a decreased rate of synthesis of the alpha chains of hemoglobin. The homozygous form is incompatible with life, the stillborn infant displaying severe hydrops fetalis; the heterozygous form may be asymptomatic or marked by mild anemia.

alpha-tocopherol. See **vitamin E**.

alphavirus /al'fāvīr'əs/, any of a group of very small Toga viruses consisting of a single molecule of single-stranded ribonucleic acid within a lipoprotein capsule. Many alphaviruses multiply in the cytoplasm of cells of arthropods and are transmitted to humans from mosquitoes, such as those causing equine encephalitis and Semliki Forest virus. See also **encephalitis, toga virus**.

alpha wave, one of several types of brain waves, characterized by a relatively high voltage or amplitude and a frequency of 8 to 13 Hz. Alpha waves are the “relaxed waves” of the brain and constitute the majority of waves recorded by electroencephalograms registering the activity of the parietal and the occipital lobes and the posterior parts of the temporal lobes when the individual is awake but nonattentive and relaxed, with the eyes closed. Opening and closing the eyes affect the patterns of the alpha waves and the beta waves. Also called **alpha rhythm, Berger wave**. Compare **beta wave, delta wave, theta wave**.

Alport's syndrome [A.C. Alport, South African physician, 1880–1959], a form of hereditary nephritis (autosomal-dominant, autosomal-recessive, and X-linked) with symptoms of glomerulonephritis, hematuria, progressive sensorineural hearing loss, and occasionally, ocular disorders such as cataracts, drusen, and lenticconus. The trait is transmitted most often through females, who are often asymptomatic. In males, kidney impairment tends to develop in the third decade; death from renal complications occurs in middle age. Treatment is directed toward the relief of uremia or other kidney disorders. Kidney transplantation and dialysis are sometimes successful treatments.

alprazolam /alprāz'ələm/, a benzodiazepine antianxiety agent.

■ **INDICATIONS:** It is prescribed in the treatment of anxiety disorders or the short-term relief of the symptoms of anxiety.

■ **CONTRAINDICATIONS:** Acute narrow-angle glaucoma or known sensitivity to this drug or other benzodiazepines prohibits its use. It is contraindicated with ketoconazole and itraconazole. Pregnancy is also a contraindication.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are drowsiness, lightheadedness, and tolerance or physical dependence.

alprostadil, a proprietary form of prostaglandin E₁ used to treat impotence and (temporarily) to maintain the patency of the ductus arteriosus in certain neonates.

■ **INDICATION:** It is recommended as palliative therapy for neonates awaiting surgery to correct congenital cardiac anomalies, such as tetralogy of Fallot and tricuspid atresia.

■ **CONTRAINDICATIONS:** It is contraindicated in respiratory distress syndrome and in cases of known hypersensitivity. This drug is contraindicated in pregnant patients.

■ **ADVERSE EFFECTS:** The most common adverse effects are apnea, fever, seizures, cerebral bleeding, flushing, bradycardia, and hypertension.

ALS. 1. abbreviation for **advanced life support**. 2. abbreviation for **amyotrophic lateral sclerosis**.

Alström's syndrome [Carl Henry Alström, Swedish geneticist, 1907–1993], an inherited disease characterized by multiple system resistance to hormones. Clinical features include retinal degeneration leading to childhood blindness, type 2 diabetes mellitus, infantile obesity, nerve deafness, baldness, hyperuricemia, and hypertriglyceridemia. Males may also have high plasma gonadotropin levels and hypogonadism. The condition is transmitted through an autosomal-recessive gene.

ALT, abbreviation for **alanine aminotransferase**.

alteplase, a tissue plasminogen activator.

■ **INDICATIONS:** This drug is used for lysis of obstructing thrombi associated with acute MI and for other ischemic conditions requiring thrombolysis.

■ **CONTRAINDICATIONS:** Known hypersensitivity to this drug, active internal bleeding, recent cerebrovascular accident, severe uncontrolled hypertension, intracranial trauma or surgery, intraspinal trauma or surgery, aneurysm, and brain tumor prohibit the use of this drug.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include urticaria and rash. Surface bleeding is a common side effect. Life-threatening side effects include sinus bradycardia, ventricular tachycardia, accelerated idioventricular rhythm, bradycardia, GI bleeding, genitourinary bleeding, intracranial bleeding, retroperitoneal bleeding, and anaphylaxis.

alteration, change.

altered state of consciousness (ASC) [L, *alter*, other], any state of awareness that differs from the normal awareness of a conscious person. Altered states of consciousness have been achieved, especially in Eastern cultures, by many individuals using various techniques, such as prolonged fasting, deep breathing, whirling, and chanting. Researchers now recognize that such practices can affect body chemistry and help induce the desired state. Experiments suggest that telepathy, mystical experiences, clairvoyance, and other altered states of consciousness may be subconscious capabilities in most individuals and can be used to improve health and help fight disease.

altegoism /əl'tōrē'gō-iz'm/, an altruistic feeling for an individual who is similar to or in a similar situation as oneself.

alternans /əl'tərnənz/ [L, *alternare*, to alternate]. See **pulsus alternans**.

alternate binaural loudness balance (ABLb) test, a comparison of the intensity levels at which a given pure tone sounds equally loud to the normal ear and to the ear with hearing loss. The ABLb test is performed to determine recruitment with unilateral sensorineural hearing loss.

alternate generation /əl'tōrnit/ [L, *alter*, other of two], a type of reproduction in which a sexual generation alternates with one or more asexual generations, as in many plants and simple animals. Also called **alternation of generations**.

alternating current (AC) /əl'tōrñā'ting/, an electric current that reverses direction, according to a consistent sinusoidal pattern. Compare **direct current**. See also **current**.

alternating mydriasis, a visual disorder in which there is abnormal dilation of the pupils that affects the left and right eyes alternately. See also **mydriasis**.

alternating pulse. See **pulsus alternans**.

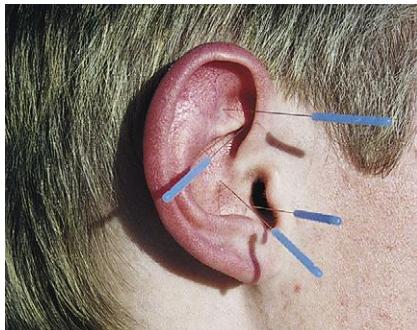
alternation, the recurrent, successive occurrence of two functions or phases, such as when a nerve fiber responds to every other stimulus or when a heart produces an irregular beat with every other cardiac cycle.

alternation of generations. See **alternate generation**.

alternation rules, (in psychology) the sociolinguistic rules that establish options available to a person when he or she is speaking to someone else. The rules are influenced by social categories, such as kinship, gender, status, age, and type of interpersonal relationship.

alternative inheritance /ôltur'nativ/, the acquisition of all genetic traits and conditions from one parent, as in self-pollinating plants and self-fertilizing animals.

alternative medicine, any of the systems of medical diagnosis and treatment differing in technique from that of the allopathic practitioner's use of medical therapies such as drugs and surgery to treat disease and injury. Examples include **acupuncture**, **aroma therapy**, **ayurveda**, **faith healing**, **homeopathy**, and **therapeutic touch**. Compare **allopathy**. See also **complementary and alternative medicine**.



Alternative medicine: acupuncture for acute pain relief (Auerbach, 2007/Courtesy Dr. Bryan L. Frank)

alternative pathway of complement activation, a process of antigen-antibody interaction in which activation of the C3 step occurs without prior activation of C1, C4, and C2. The initiating substance may be endotoxin, yeast cell wall, bacterial capsule, or immunoglobulin A. See also **properdin system**.

alternator, a device for generating an electric current that changes polarity a specified number of times per second.

alternobaric vertigo, a condition of dysequilibrium caused by unequalized pressure differences in the middle ear, as may be experienced by divers during ascent. The pressure difference exerts its effect on the oval window of the inner ear.

alt hor. (in prescriptions) abbreviation for the Latin phrase *alternis horis*, meaning 'every other hour.'

altitude /al'titoo'd/ [L, *altitudo*, height], the level of elevation of any location on earth with reference to a fixed surface point, which is usually sea level. Several types of health effects are associated with altitude extremes, including a greater intensity of ultraviolet radiation that results from a thinner atmosphere. Barometric pressure decreases as altitude increases, so there are fewer molecules of oxygen. Thus breathing becomes faster & deeper, although demands of physical effort and cellular respiration are the same as at a lower altitude. High-altitude cardiac intolerance is usually worse in people with blood or pulmonary disorders. See also **altitude sickness**.

altitude anoxia [L, *altus*, high; Gk, *a*, without, *oxys*, sharp, *genein*, to produce], oxygen deprivation in a high-altitude atmosphere.

altitude sickness, a syndrome associated with the relatively lower amount of oxygen in the atmosphere at altitudes encountered during mountain climbing or travel in unpresurized aircraft. Symptoms of mild altitude illness include headache, difficulty sleeping, loss of appetite, nausea and vomiting, fatigue, dizziness, rapid heart rate, and shortness of breath, especially on exertion. In severe cases, high-altitude pulmonary or cerebral edema may result, requiring emergency treatment and removal to lower altitudes. Also called **acute mountain sickness**, *the bends*, **Monge's disease**.

altretamine, an antineoplastic agent.

■ **INDICATIONS:** It is used for the palliative treatment of recurrent, persistent ovarian cancer after induction therapy agent.

■ **CONTRAINdications:** Known hypersensitivity to this drug, severe bone marrow depression, severe neurological toxicity, and pregnancy prohibit its use.

■ **ADVERSE EFFECTS:** Among the more serious adverse reactions are hepatic toxicity, leukopenia, thrombocytopenia, and anemia.

altruism /al'trōō'iz̄m/, a sense of unconditional concern for the welfare of others. It may be expressed at the level of the individual, the group, or the larger social system. It is one of the curative factors of participating in group therapy.

—**altruistic**, *adj.*

alum /al'əm/ [L, *alumen*], a topical astringent, used primarily in lotions and douches.

alumina /ah-loō'mi-nah/, 1. See **aluminum oxide**. 2. (in pharmaceuticals) aluminum hydroxide.

aluminum (Al) /əlōō'minəm/ [L, *alumen*, alum], a widely used metallic element and the third most abundant of all the elements. Its atomic number is 13; its atomic mass is 26.97. It occurs in the ores feldspar, mica, and kaolin but most abundantly in bauxite. Aluminum is commonly obtained by purifying bauxite to produce alumina, which is reduced to aluminum. It is light and durable and used extensively in the manufacture of aircraft components, prostheses, and dental appliances. Its compounds are components of many antacids, antiseptics, and astringents. Aluminum salts, such as aluminum hydroxychloride, can cause allergic reactions in susceptible individuals. Aluminum hydroxychloride is the most commonly used agent in antiperspirants and is also effective as a deodorant.

aluminum acetate solution. See **Burow's solution**.

aluminum attenuator, an aluminum filter used to control the hardness of an x-ray beam. The attenuator removes low-energy x-ray photons before they can reach the patient and be absorbed.

aluminum hydroxide [L, *alumen*, alum; Gk, *hydr*, water, *oxys*, sharp; L, *gelare*, to congeal], an antacid that works by chemical neutralization and also by adsorption of hydrochloric acid, gases, and toxins.

aluminum oxide (Al₂O₃), a compound occurring naturally as various minerals. It is used in the production of abrasives, refractories, ceramics, and catalysts and in chromatography. It is also used to strengthen dental ceramics.

Alupent, a trademark for a beta-adrenergic bronchodilator (**metaproterenol sulfate**).

Alu sequences, a family of repeated DNA sequences found in large numbers in the human genome.

alve-, alveolo-, a prefix meaning 'trough, channel, cavity': *alvelectomy*, *alveolus*.

alveobronchitis [L, *alveolus*, little hollow; Gk, *brongchos*, windpipe, *itis*, inflammation], an inflammation of the alveoli and bronchioles. Also called **alveobronchiolitis**. See also **bronchopneumonia**.

alveolar /al'veələr/ [L, *alveolus*, little hollow], pertaining to an alveolus. See also **bronchioloalveolar carcinoma**.

alveolar adenocarcinoma. See **bronchioloalveolar carcinoma.**

alveolar air, the respiratory gases in an alveolus of the lung. Alveolar air can be analyzed for its content of oxygen, carbon dioxide, or other gases by collecting the last portion of air expelled by maximum exhalation. Also called **alveolar gas.**

alveolar air equation, a mathematical expression relating the approximate alveolar oxygen tension to the arterial partial pressure of carbon dioxide (PaCO_2), the fraction of inspired oxygen, and the ratio of carbon dioxide production to oxygen consumption.

alveolar arch, the arch of the upper or lower jaw from which the teeth project, formed by the alveolar processes.

alveolar-arterial end-capillary gas pressure difference, the gas pressure difference between the partial pressure of a gas, such as CO_2 , in alveolar air and that in pulmonary capillary blood as the blood leaves the alveoli. It is measured in torr or millimeters of mercury (mm Hg).

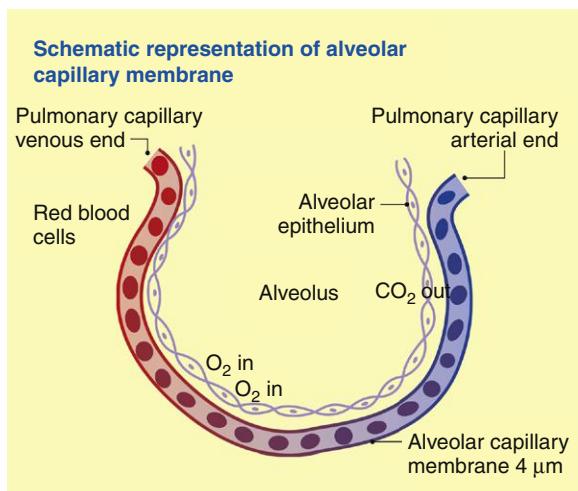
alveolar-arterial gas pressure difference, the difference between the partial pressure of a gas, such as CO_2 , in the alveoli and that in systemic arterial blood. The difference may indicate ventilation-perfusion mismatching. A negative difference indicates that the partial pressure of the gas is higher in systemic arterial blood than it is in alveolar air. It is measured in torr or millimeters of mercury (mm Hg).

alveolar artery, one of two arteries, the posterior and the anterior, that supply the upper teeth.

alveolar bone. See **alveolar process.**

alveolar canal, any of the canals of the maxilla through which the posterosuperior alveolar blood vessels and the nerves to the upper teeth pass. Also called **dental canal.**

alveolar-capillary membrane, a lung tissue structure, varying in thickness from 0.4 to 2 μm , through which diffusion of oxygen and carbon dioxide molecules occurs during respiration. It consists of an alveolar cell separated from a capillary cell by an interstitium and is essentially a fluid barrier.



Alveolar-capillary membrane (Qureshi, 2008)

alveolar carcinoma. See **bronchioloalveolar carcinoma.**

alveolar cell carcinoma. See **bronchioloalveolar carcinoma.**

alveolar cleft, a break in the continuity of the alveolar process, usually congenital. It typically occurs with a cleft lip and/or a cleft palate.

alveolar crestal fiber, any of the many white, collagenous fibers of the periodontal ligament that extend from the alveolar process to the intermediate plexus, where their terminations mix with those of the cemental fibers which are just apical to the cementoenamel junction. Alveolar fibers surround the tooth and assist in resisting horizontal tooth movements.

alveolar cyst, an air-filled cavity in a lung or visceral tissues caused by rupture of an alveolus.

alveolar dead space. See **dead space.**

alveolar distending pressure, the pressure difference between the alveoli and the intrapleural space.

alveolar duct, any of the air passages in the lung that branch out from the bronchioles. The alveolar sacs arise from the alveolar ducts.

alveolar edema, an accumulation of fluid within the alveoli. The cause is usually the movement of blood components through the pulmonary capillary walls as a result of a change in osmotic pressure, an increased permeability of the walls, or related factors.

alveolar fistula. See **dental fistula.**

alveolar gas. See **alveolar air.**

alveolar gas volume (V_A), the aggregate volume of gas in the alveoli of the lungs.

alveolar gingiva. See **attached gingiva.**

alveolar macrophage, a cell of the reticuloendothelial system in the lungs that engulfs and digests foreign substances inhaled into the alveoli.

alveolar microlithiasis, a disease characterized by the presence of calcium phosphate deposits in the alveoli and other parts of the bronchopulmonary system. The fine, sand-like deposits may cause the entire lung to appear radiopaque. The disease is familial in about half of cases.

alveolar period, the period or phase in lung development beginning in utero after the terminal saccular period (about 32 to 36 weeks) and lasting until about 8 years of age. The terminal alveolar saccules subdivide several more times and mature alveoli form. Also called **alveolar phase.**

alveolar periosteum [L, *alveolus*, little hollow; Gk, *peri*, near, *osteon*, bone], a dense layer of connective tissue that lines the alveolar cavities of the upper and lower jaws, joining the bones to the horizontal fibers on the cementum of the teeth. See also **periosteum.**

alveolar pressure (P_A), the pressure in the alveoli of the lungs.

alveolar process, the portion of the maxilla or the mandible that forms the dental arch and serves as a bony investment for the teeth. Its cortical covering is continuous with the compact bone of the body of the maxilla or the mandible and with the cancellous bone of the body of the jaws. Also called **alveolar bone.** See also **alveolar ridge.**

alveolar proteinosis, a very rare disease marked by the accumulation of plasma proteins, lipoproteins, and other blood components in the alveoli of the lungs, impairing the ability of the lungs to exchange oxygen and carbon dioxide. The disease tends to affect previously healthy young adults, with a higher incidence among males than females. The cause is unknown, and clinical signs vary, although only the lungs are affected. Some patients are asymptomatic, whereas others experience dyspnea and an unproductive cough. The condition may be treated with bronchopulmonary lavage. There is a risk of secondary infections.

alveolar ridge, the bony ridge of the maxilla or the mandible that contains the alveolar sockets (tooth sockets) of the teeth. See also **alveolar process.**

alveolar sac [L, *alveolus*, little hollow; Gk, *sakkos*], an air sac at one of the terminal cavities of lung tissue.

alveolar septum. See **interalveolar septum.**

alveolar sinus. See **dental fistula**.

alveolar socket [L, *alveolus*, little hollow; OFr, *soket*], the space in the alveolar process of the maxilla and mandible that accommodates a tooth.

alveolar soft part sarcoma, a tumor in subcutaneous or fibromuscular tissue, consisting of numerous large round or polygonal cells in a netlike matrix of connective tissue.

alveolar ventilation, the volume of air that ventilates all the perfused alveoli, equal to total ventilation minus dead space ventilation. The normal average is between 4 and 5 L/min.

alveolectomy /al've-əlek'tomē/ [L, *alveolus*, little hollow; Gk, *ektomē*, excision], the excision of a portion of the alveolar process performed to aid in the extraction of a tooth or teeth, modify the alveolar contour after tooth extraction, or prepare the mouth for dentures.

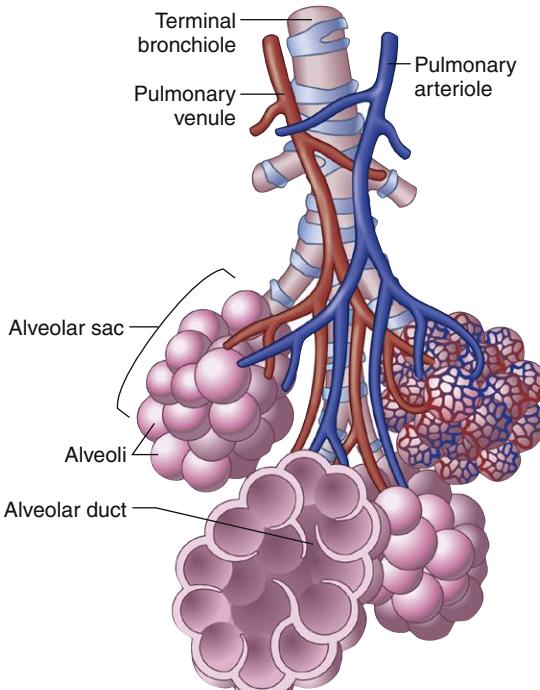
alveoli /al've-ō'lī/. See **alveolus**.

alveolitis /al've-əlī'tis/, an inflammation of the alveoli of the lungs caused by the inhalation of an allergen. It is characterized by acute episodes of dyspnea, cough, diaphoresis, fever, weakness, and pain in the joints and muscles lasting from 12 to 18 hours. Recurrent episodes may lead to chronic obstructive pulmonary disease with weight loss, increasing exertional dyspnea, and interstitial fibrosis. X-ray films of the lungs may show cellular thickening of alveolar septa and ill-defined generalized infiltrates. Kinds of alveolitis include **bagassosis**, **farmer's lung**, and **pigeon breeder's lung**.

alveoplasty /al've-əplas'tē/, surgical reconstruction and smoothing of the alveolar process or dental ridge.

alveototomy /al've-ətōt'omē/, an incision of a dental alveolus performed to drain pus from a dental infection.

alveolus /al've-ələs/ pl. **alveoli** [L, *alveolus*, little hollow], 1. a small outpouching along the walls of the alveolar sacs through which gas exchange between alveolar air and pulmonary capillary blood takes place. Also called **aci-nus**, **pulmonary alveolus**. 2. a tooth socket. See also **dental alveolus**. —**alveolar**, adj.



Alveoli (Patton and Thibodeau, 2010)

alvine constipation. See **obstructive constipation**.

alymphocytosis /alim'fōsītō'sis/ [Gk, *a*, not; L, *lympha*, water; Gk, *kytos*, cell, *osis*, condition], absence of lymphocytes from the blood. Compare **aplastic anemia**, **lymphocytopenia**.

Alzheimer's disease (AD) /äl'zīmərz/ [Alois Alzheimer, German neurologist, 1864–1915], a condition characterized by progressive mental deterioration, often with confusion, memory failure, disorientation, restlessness, agnosia, speech disturbances, inability to carry out purposeful movement, and hallucinosis. There are three phases of disease progression over time: (1) preclinical Alzheimer's characterized by changes that indicate the very earliest signs of disease; (2) mild cognitive impairment (MCI) or mild changes in memory and thinking abilities, enough to be noticed and measured, but not impairment that compromises everyday activities; (3) dementia due to Alzheimer's. The patient may become hypomanic, refuse food, and lose sphincter control without focal impairment. The disease sometimes begins in middle life with slight defects in behavior and memory, usually an inability to incorporate new knowledge with old knowledge, but the symptoms can worsen dramatically with age. When the symptoms are severe, patients are unable to perform activities of daily living or orient to surroundings and do not recognize loved ones. Typical pathological features are miliary amyloid plaques in the cortex and fibrillary degeneration (tangles) in layers containing pyramidal ganglion cells. The cerebral cortex atrophies with widening of the cerebral sulci, especially in the frontal and temporal regions. Diagnostic criteria consist of a failure in at least three cognitive functions, including memory, use of language, visuospatial skills, personality, and calculating skills. Measurement of biomarkers in blood and cerebrospinal fluid, as well as neuroimaging tests to characterize brain changes, are assessments recommended by the Alzheimer's Association. Treatment may involve medications that are thought to decrease the rate of decline. Also called **senile dementia-Alzheimer type (SDAT)**.

■ **CLINICAL CONSIDERATIONS:** Care is initially concerned primarily with promoting activity and sleep and preventing agitation, violence, and injury. Death usually occurs 8 to 12 years after the first symptoms appear. Late-stage care is focused on palliative measures.



Alzheimer's disease (Finkbeiner, Ursell, and Davis, 2009)

Alzheimer's sclerosis [Alois Alzheimer; Gk, *sklerosis*, hardening], the degeneration of small cerebral blood vessels, resulting in mental changes.

Am, the symbol for the element **americium**.

AMA, 1. abbreviation for **American Medical Association**. 2. abbreviation for **antimitochondrial antibody**. 3. abbreviation for **active matrix array**. 4. abbreviation for **antimyocardial antibody**. See **antimyocardial antibody test**.

ama, abbreviation for **against medical advice**.

amalgam /ə'mal'gəm/ [Gk, *malagma*, soft mass], 1. a mixture or combination. 2. an alloy of mercury, silver, and other metals commonly used in dentistry. 3. See **dental amalgam**.

amalgam carrier, a dental instrument used to pick up a quantity of amalgam and transfer it into a prepared tooth cavity or a mold.

amalgam carver, a dental instrument for anatomically shaping silver dental amalgam while in a plastic state to restore natural contours, used in certain tooth cavity fillings or restorations.

amalgam condenser, a dental instrument used for compacting silver amalgam while in a plastic state, used for restoring teeth to a natural contour.

amalgam core, a rigid base for retaining a cast crown restoration, used in the replacement of a damaged tooth crown. The core may be held in place by undercuts, slots, pins, or the pulp chamber of an endodontically treated tooth. Compare **cast core, composite core**. See also **core**.

amalgam tattoo, a discoloration of the gingiva or buccal membrane caused by particles of silver amalgam that migrate from an amalgam filling and become embedded under the tissue surface. The condition causes no symptoms and is left untreated.



Amalgam tattoo (Regezi, Sciubba, and Jordan, 2008)

Amanita [Gk, *amanitai*, fungus], a genus of mushrooms. Some species, such as *Amanita phalloides*, are poisonous, causing hallucinations, GI upset, and pain that may be followed by liver, kidney, and central nervous system damage.

amantadine hydrochloride /ə'man'tādēn/, an antiviral and antiparkinsonian agent.

■ **INDICATIONS:** It is prescribed in the prophylaxis and early treatment of influenza virus A and in the treatment of parkinsonian symptoms and drug-induced extrapyramidal reactions.

■ **CONTRAINdications:** It is used with caution in patients with congestive heart failure and in women who are pregnant and lactating. Known hypersensitivity to this drug prohibits its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are central nervous system effects and livedo reticularis. Nausea, dizziness, insomnia, nervousness, blurred vision, and slurred speech also may occur.

amastia /ə'mas'tē-ə/ [Gk, *a*, *mastos*, not breast], the absence of the breasts in women caused by a congenital defect, an endocrine disorder resulting in faulty development, a lack of development of secondary sex characteristics, or a bilateral mastectomy. Also called **amazia**.

amaurosis/am'ōrō'sis/ [Gk, *amauroein*, to darken], blindness, especially lack of vision resulting from a systemic cause such as disease of the optic nerve or brain, diabetes, renal disease, acute gastritis, or systemic poisoning produced by excessive use of alcohol or tobacco, rather than from damage to the eye itself. Unilateral or, more rarely, bilateral amaurosis may follow an emotional shock and may continue for days or months. One kind of congenital amaurosis is transmitted as an autosomal-recessive trait. —**amaurotic**, adj.

amaurosis fugax /foo'gaks/, a transient episodic blindness caused by decreased blood flow to the retina. Compare **amaurosis**.

amaurosis partialis fugax, a transitory partial blindness, usually caused by vascular insufficiency of the retina or the optic nerve as a result of carotid artery disease. Other related symptoms include dizziness, nausea, and vomiting.

amaurotic. See **amaurosis**.

amaurotic familial idiocy. See **Tay-Sachs disease**.

amazia. See **amastia**.

amb-. See **ambi-**.

amber [Ar, *anbar*], a hard fossilized resin derived from pine trees. An oil of amber, *Oleum succini*, has been used in some pharmaceutical preparations.

amber mutation [Ar, *anbar*, ambergris], a genetic alteration that causes the synthesis of a polypeptide chain to terminate prematurely because the triplet of nucleotides that normally codes for the next amino acid in the chain becomes uracil-adanine-guanine, the sequence that signals the end of the chain. This is one of three possible **nonsense mutations**. See also **ochre mutation, opal mutation**.

ambi-, ambo-, amb-, prefixes meaning 'on both sides' or 'both': *ambidexterus, ambomalleal*.

ambidextrous /am'bēdék'strəs/ [L, *ambo*, both, *dexter*, right], able to use either the left or right hand to perform a task and write.

ambient /am'bē-ənt/ [L, *ambire*, on both sides], pertaining to the surrounding area or atmosphere, usually a defined area such as a room or another large enclosed space.

ambient air standard, the maximum tolerable concentration of any outdoor air pollutant as set by the Environmental Protection Agency (EPA) to protect public health and the environment. The EPA considers lead, the nitrogen oxides, particulate matter, sulfur dioxide, carbon monoxide, and ozone "criteria" pollutants. Research and medical evidence show a strong correlation between many diseases and toxic chemicals, but little is known about the precise effects and movement of airborne pollutants.

ambient noise [L, *ambiens*, around; ME, *clamor*], the total noise in a given environment.

ambient pressure, the atmospheric pressure, or pressure in the environment or surrounding area. It is given a reference value of zero (0) cm H₂O.

ambient temperature [L, *ambi*, around, *temperatura*], the temperature of the environment.

ambiguous /ambig'yōō-əs/ [L, *ambiguus*, to wander], having more than one direction, development, or interpretation or meaning.

ambiguous genitalia [L, *ambigere*, to go around], genitals that are not normal and morphologically typical of either sex, as occurs in pseudohermaphroditism.



Ambiguous genitalia (Zitelli and Davis, 2007)

ambilateral, pertaining to or affecting both the right and the left side.

ambiopia. See **diplopia**.

ambivalence /ambiv'ələns/ [L, *ambo*, both, *valentia*, strength], 1. a state in which a person concomitantly experiences conflicting feelings, attitudes, drives, desires, or emotions, such as love and hate, tenderness and cruelty, pleasure and pain toward the same person, place, object, or situation. To some degree, ambivalence is normal. Treatment in severe, debilitating cases consists of psychotherapy appropriate to the underlying cause. 2. uncertainty and fluctuation caused by an inability to make a choice between opposites. 3. continuous oscillation or fluctuation. —*ambivalent*, adj.

ambivert /am'bivurt/ [L, *ambo*, both, *vertere*, to turn], a person who possesses characteristics of both introversion and extroversion.

amblyopia /am'blē-ō'pē-ə/ [Gk, *amblys*, dull, *ops*, eye], reduced vision in an eye not correctable by a manifest refraction and with no obvious pathological or structural cause. The vision in an amblyopic eye is worse than in the fellow eye. See also **toxic amblyopia**. —*amblyopic*, adj.

amblyopia cruciata. See **crossed amblyopia**.

ambo-. See **ambi-**.

ambrisentan, an antihypertensive.

- **INDICATIONS:** This drug is used to treat pulmonary arterial hypertension, alone or in combination with other antihypertensives.

- **CONTRAINDICATIONS:** Pregnancy, breastfeeding and known hypersensitivity to this drug prohibits its use.

- **ADVERSE EFFECTS:** Adverse effects of this drug include headache, fever, flushing, orthostatic hypotension, hypotension, peripheral edema, sinusitis, rhinitis, abdominal pain, constipation, anemia, rash, pharyngitis, and dyspnea.

Ambu bag, a trademark for a resuscitator bag used to assist ventilation. See also **bag-valve-mask resuscitator**.

ambulance /am'byołəns/, a vehicle designed to transport ill or injured patients. It may be used under emergency or nonemergency conditions and is equipped with supplies and personnel to provide patient care en route.

ambulation, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as ability to walk from

place to place independently with or without assistive device. See also **Nursing Outcomes Classification**.

ambulation: wheelchair, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as ability to move from place to place in a wheelchair. See also **Nursing Outcomes Classification**.

ambulatory /am'byołətōrē/ [L, *ambulare*, to walk about], 1. able to walk. 2. pertaining to a patient who is not confined to bed. 3. pertaining to a health service for people who are not hospitalized.

ambulatory anesthesia, the administration of anesthesia when the intent is to admit and discharge the patient on the day of the surgical procedure. Also called **outpatient anesthesia**.

ambulatory automatism, aimless wandering or moving about or performance of mechanical acts without conscious awareness of the behavior. See also **fugue**, **poromania**.

ambulatory blood pressure monitoring (ABPM), the recording of a patient's blood pressure at regular intervals under normal living and working conditions.

ambulatory care, health services provided on an outpatient basis to those who visit a hospital or another health care facility and depart after treatment on the same day.

ambulatory electrocardiograph. See **Holter monitor**.

ambulatory schizophrenia, a mild form of psychosis, characterized mainly by a tendency to respond to questions with vague and irrelevant answers. The person also may seem somewhat eccentric and wander aimlessly.

ambulatory splint. See **functional splint**.

ambulatory surgery center, a medical facility designed and equipped to handle surgery, pain management, and certain diagnostic procedures that do not require overnight hospitalization. Most patients who are in relatively good health may receive treatment at ambulatory surgery centers. The centers may be part of a community general hospital, a specialty hospital, or an independent medical facility with prearranged hospital support. The centers are staffed with health professionals as in conventional surgery departments.

Ambu simulator, a trademark for a manikin used to teach cardiopulmonary resuscitation.

am care /ā·mē/ , routine hygienic care that is given before breakfast or early in the morning.

amcinonide /amsin'ōnīd/, a topical corticosteroid.

- **INDICATION:** It is used to treat inflammatory skin conditions.

- **CONTRAINDICATIONS:** Impaired circulation and known hypersensitivity to steroids prohibits its use.

- **ADVERSE EFFECTS:** Among the most common adverse reactions are itching, stinging, burning, and less frequently, various skin eruptions. Systemic side effects may result from prolonged or excessive application.

amdinocillin pivoxil, an ester of amdinocillin, administered orally in the treatment of urinary tract infections; the form used can be the ester or the hydrochloride salt of the ester.

ameba /əmē'bə/ pl. *amebae*, *amebas* [Gk, *amoibe*, change], a microscopic, single-celled, parasitic organism. Several species may be parasitic in humans, including *Entamoeba histolytica* and *E. coli*, a nonpathogenic species of *Entamoeba* often confused with *E. histolytica*. Also spelled *amoeba*. —*amebic*, adj.

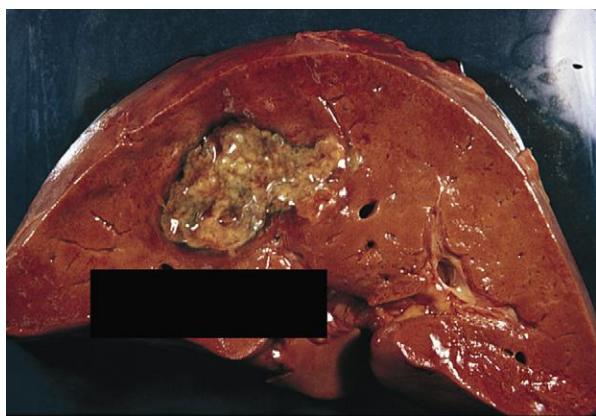
-ameba, **-amoeba**, suffixes meaning a '(specified) protozoan': *caudameba*, *Entamoeba*.

amebiasis /am'ēbī'sis/, an infection of the intestine or liver by pathogenic amebae, particularly *Entamoeba histolytica*, acquired by ingesting fecally contaminated food or water. Infected carriers can be asymptomatic (luminal amebiasis); they may develop invasive intestinal disease with dysentery,

colitis, or appendicitis or invasive extraintestinal disease with peritonitis and liver or lung abscess. Infection is most serious in infants, the elderly, and debilitated people. Amebiasis may require treatment with luminal amebicides (iodoquinol, paromomycin) to eradicate cysts and/or systemic treatment with metronidazole. Also spelled amoebiasis. See also **amebic abscess**, **amebic dysentery**, **hepatic amebiasis**.

amebic. See **ameba**.

amebic abscess /əmē'bik/, a collection of pus formed by disintegrated tissue in a cavity, usually in the liver, caused by *Entamoeba histolytica*. Cysts of the organism, ingested in fecally contaminated food or water, pass into the intestine, where active trophozoites are released. The trophozoites enter the intestinal mucosa, causing ulceration, nausea, vomiting, abdominal pain, and severe diarrhea, and they may invade the liver and produce an abscess. Oral metronidazole and oral or intramuscular chloroquine hydrochloride are used to treat hepatic amebic abscesses. See also **amebiasis**.



Amebic abscess (Damjanov, 2006)

amebic carrier state, a condition in which a patient may be a carrier of amebae without showing signs or symptoms of an amebic infection. A **precocious carrier** may appear healthy but may subsequently develop the amebic infection. **amebic dysentery**, an inflammation of the intestine caused by infestation with *Entamoeba histolytica*. It is characterized by frequent, loose stools flecked with blood and mucus. Intestinal amebiasis may be accompanied by symptoms of liver involvement. Also called **intestinal amebiasis**. See also **amebiasis**, **hepatic amebiasis**.

amebic hepatitis, an inflammation of the liver caused by an infection with any of the various amebae, usually after an attack of amebic dysentery.

amebicide /əmē'bōsīd/, a drug or another agent that is destructive to amebae.

amebic liver abscess, the abscess formed in hepatic amebiasis, resulting from liquefaction necrosis caused by entrance of *Entamoeba histolytica* into the portal circulation.

ameboid movement /əmē'boid/ [Gk, *amoibe*, ameba, *eidos*, form; L, *moveare*, to move], the ameba-like movement of certain types of body cells that can migrate through tissues, such as leukocytes. The movement generally consists of extension of a portion of the plasma membrane, probably caused by internal rearrangement or movement of the cytoskeleton. See also **diapedesis**.

amelanotic /am'ēlōt'ik/ [Gk, *a*, *melas*, not black], pertaining to tissue that is unpigmented because it lacks melanin.

amelanotic melanoma, a melanoma that lacks melanin. See also **melanoma**.



Amelanotic malignant melanoma (du Vivier, 1993)

amelia /əmē'lēyə/ [Gk, *a*, *melos*, not limb], 1. a congenital anomaly marked by the absence of one or more limbs. The term may be modified to indicate the number of legs or arms missing at birth, such as tetramelia for the absence of all four limbs. 2. a psychological trait of apathy or indifference associated with certain forms of psychosis.

amelification /əmēl'ifikā'shōn/ [OFr, *amel*, enamel; L, *facere*, to make], the differentiation of ameloblasts into the enamel of the teeth.

amelioration [L, *ad*, to, *meliōr*, better], an improvement in conditions.

ameloblast /amē'lōblast/ [OFr, *amel* + Gk, *blastos*, germ], an epithelial cell from which tooth enamel is formed. Also called **enamel cell**. —*ameloblastic*, adj.

ameloblastic fibroma, an odontogenic neoplasm in which simultaneous proliferation of mesenchymal and epithelial tissues occurs without the formation of dentin or enamel.

ameloblastic fibro-odontoma, a tumor of the jaw that forms dentin and enamel. See also **composite odontoma**.

ameloblastic hemangioma, a highly vascular tumor of cells covering the dental papillae. See also **hemangioma**.

ameloblastic sarcoma, a malignant odontogenic tumor characterized by the proliferation of epithelial and mesenchymal tissue without the formation of dentin or enamel.

ameloblastoma /amē'lōblastō'ma/ [OFr, *amel* + Gk, *blastos*, germ, *oma*], a rare, highly destructive, benign, rapidly growing tumor of the jaw. Also called **adamantinoma**, **adamantoblastoma**, **epithelioma adamantinum**.



Ameloblastoma (Regezi, Scuibba, and Jordan, 2008)

amelodental /amē'lōden'tīnl/ [OFr, *amel* + L, *dens*, tooth], pertaining to both the enamel and the dentin of the teeth.

amelogenesis /amē'lōjēn'ēsēs/ [OFr, *amel* + Gk, *genein*, to produce], the formation of the enamel of the teeth. —*amelogenetic*, adj.

amelogenesis imperfecta, a condition characterized by brown or white chalky discoloration of the teeth and resulting from either severe enamel hypocalcification or enamel

hypoplasia. The condition, which is inherited as an autosomal-dominant trait, is classified according to severity: in agenesis, there is a complete lack of enamel; in **enamel hypoplasia**, defective matrix formation causes the enamel to be normal in hardness but deficient in quantity; and in **enamel hypocalcification**, defective maturation of ameloblasts results in enamel that is normal in quantity but soft and undercalcified. Also called **hereditary brown enamel, hereditary enamel hypoplasia**. Compare **dentinogenesis imperfecta**.

amenorrhea /ā'menərē'ə/ [Gk, *a, men*, not month, *rhoia*, to flow], the absence of menstruation. Amenorrhea is normal before sexual maturity, during pregnancy, after menopause, and during the intermenstrual phase of the monthly hormonal cycle; it is otherwise caused by dysfunction of the hypothalamus, pituitary gland, ovary, or uterus; by the congenital absence or surgical removal of both ovaries or the uterus; or by medication. It may also occur in women who are underweight or who exercise extensively. **Primary amenorrhea** is the failure of menstrual cycles to begin. **Secondary amenorrhea** is the cessation of menstrual cycles once established. Also spelled *amenorrhoea*. See also **dietary amenorrhea, hypothalamic amenorrhea, postpill amenorrhea**. —*amenorrheic, adj.*

ementia /ā'men'shə/ [Gk, *a*, not; L, *mens*, mind], 1. See **mental retardation**. 2. dementia.

American Academy of Allergy and Immunology (AAAI), a national organization of physicians specializing in the diagnosis and treatment of allergies and immune system disorders.

American Academy of Audiology, a professional association for audiologists.

American Academy of Nursing (AAN), the honorary organization of the American Nurses Association, created to recognize superior achievement in nursing in order to promote advances and excellence in nursing practice, education, and research. A person elected to membership is given the title of Fellow of the American Academy of Nursing and may use the abbreviation FAAN as an honorific.

American Academy of Physical Medicine and Rehabilitation (AAPMR), a national association of professional health care workers concerned with the diagnosis of physical impairment and the development of therapies and devices to improve physical function.

American Academy of Physician Assistants (AAPA), a national organization of physician assistants or associates.

American Association for Respiratory Therapy (AART), a national organization of respiratory therapists and other health care workers involved in improving the ventilatory function of the respiratory tract.

American Association of Colleges of Nursing (AACN), a national organization of baccalaureate and higher degree programs in nursing that was established to address issues in nursing education.

American Association of Critical Care Nurses (AACN), a national organization of nurses working in critical care units.

American Association of Industrial Nurses (AAIN), a national professional association of nurses working in industry and concerned with issues in occupational health.

American Association of Medical Colleges (AAMC), a national organization of faculty members and deans of medical schools and colleges that was established to address issues in medical education.

American Association of Neurological Nurses (AANN), a national organization of nurses working in the field of neurology.

American Association of Neuroscience Nurses (AANN), a national organization of nurses working with neurologically impaired patients. The organization is affiliated with the American Association of Neurological Surgeons.

American Association of Nurse Anesthetists (AANA), a professional association of certified registered nurse anesthetists.

American Association of Retired Persons. See **AARP**.
American Association of University Professors (AAUP), a national organization of faculty members of institutions of higher learning. The AAUP represents faculty in matters of academic freedom, appointment policies, and procedures, and serves as the bargaining agent for the faculties of some universities.

American College of Emergency Physicians (ACEP), a national professional organization of physicians specializing in emergency medicine.

American College of Obstetricians and Gynecologists (ACOG), a national organization of obstetricians and gynecologists.

American College of Occupational and Environmental Medicine (ACOEM), a professional organization whose members are concerned with the identification, prevention, diagnosis, and treatment of disorders associated with technology and industry.

American College of Physicians (ACP), a national professional organization of physicians.

American College of Prosthodontists (ACP), an organization of dentists who specialize in the restoration of dental prostheses and in the diagnosis and treatment of temporomandibular joint and maxillofacial disorders.

American College of Radiology (ACR), a national professional organization of physicians, medical oncologists, and clinical medical physicists who specialize in radiology.

American College of Surgeons (ACS), a national professional organization of physicians who specialize in surgery. See also **Accreditation Review Committee on Education in Surgical Technology**.

American Dental Hygienists' Association (ADHA), the largest organization of dental hygienists in the United States.

American Hospital Association (AHA), a national organization that represents and serves individuals, institutions, and organizations that work to improve health services for all people. The AHA publishes several journals and newsletters.

American Joint Committee on Cancer (AJCC), a non-profit organization that creates and publishes systems of classification for cancer staging, such as the TNM staging system and Collaborative Stage Data collection systems.

American Journal of Nursing, a professional journal containing articles of general and specialized clinical interest to nurses. It is an important resource regarding the profession in the United States.

American leishmaniasis, a group of infections caused by various species of the parasitic protozoa *Leishmania* of Central and South America, characterized by cutaneous lesions at the site of the sandfly bite and transmitting infection and causing disfiguring ulcerative lesions of the nose, mouth, and throat or visceral disease. Illness may be prolonged, rendering patients susceptible to serious secondary infections. Kinds of American leishmaniasis are **chiclero ulcer, espundia, forest yaws, and uta**. Also called **mucocutaneous leishmaniasis, New World leishmaniasis**. See also **leishmaniasis**.

American Medical Association (AMA), a professional association whose membership is made up of the largest group of physicians and medical students in the United

States, including practitioners in all recognized medical specialties, as well as general primary care physicians. The AMA is governed by a board of trustees and house of delegates who represent various state and local medical associations and U.S. government agencies such as the Public Health Service and medical departments of the army, navy, and air force. The AMA maintains directories of all U.S. licensed physicians (including nonmembers) in the United States, including graduates of foreign medical colleges; researches prescription and nonprescription drugs; advises congressional and state legislators regarding proposed health care laws; and publishes a variety of journals that report on scientific and socioeconomic developments in the field of medicine. See also **British Medical Association, Canadian Medical Association.**

American mountain fever. See **Colorado tick fever.**

American National Standards Institute (ANSI), a private nonprofit organization that coordinates developments of standards for medical and other devices, services, and personnel in the United States and represents the United States in matters related to international standardization.

American Nephrology Nurses' Association (ANNA), an organization of nurses, technicians, and associates working in the fields of dialysis and renal diseases.

American Nurses Association (ANA), the national professional association of registered nurses in the United States. It was founded in 1896 to improve standards of health and the availability of health care. ANA advances the nursing profession by fostering high standards of nursing practice, promoting the rights of nurses in the workplace, projecting a positive and realistic view of nursing, and lobbying the Congress and regulatory agencies on health care issues affecting nurses and the public. The ANA is made up of 54 constituent associations, from the 50 states, the District of Columbia, Guam, and the Virgin Islands, and the Federal Nurses Association (FedNA), representing more than 900 district associations. National conventions are held biennially in even-numbered years. Members may join one or more of the five divisions of nursing practice: These divisions are coordinated by the Congress for Nursing Practice. The Congress evaluates changes in the scope of practice, monitors scientific and educational developments, encourages research, and develops statements that describe ANA policies regarding legislation affecting nursing practice. In addition, the ANA is politically active on the federal level in all issues relevant to nursing and the public. Statistical services enable the association to fulfill its role as the most authoritative source of data on nursing in the United States. ANA publications include *American Nurse, Publications List, American Nurse Today, and Online Journal of Nursing.*

American Nurses Association—Political Action Committee (ANA-PAC), an organization that raises funds for political contributions to candidates for public office at the state and national levels. Formerly called **Nurses' Coalition for Action in Politics (N-CAP).**

American Occupational Therapy Association (AOTA), a national professional association of occupational therapists, occupational therapy assistants, and students of occupational therapy.

American Psychiatric Association (APA), a national professional association for physicians who specialize in psychiatry. It is concerned with the development of standards for psychiatric facilities, the formulation of mental health programs, the dissemination of data, and the promotion of psychiatric education and research. It publishes the *Diagnostic and Statistical Manual of Mental Disorders (DSM).*

American Red Cross, one of more than 120 national organizations that seek to reduce human suffering through various health, safety, and disaster relief programs in affiliation with the International Red Cross and Red Crescent Societies. The American Red Cross is not a government agency. It relies on donations of time, money, and blood to do its work. The American Red Cross has more than 1.2 million members throughout the United States. Some 97% of Red Cross staff is volunteer. Chapters maintain small paid staffs and employ some professionals but depend largely on the volunteers. The American Red Cross blood program collects and distributes more blood than any other single U.S. agency and coordinates distribution of blood and blood products to the U.S. Defense Department on request or during national emergencies. American Red Cross nursing and health programs include courses in the home on parenthood, prenatal and postnatal care, hygiene, and venereal disease. Nursing students may enroll for service in American Red Cross community programs and during disasters. The President of the United States is honorary chairman of the organization, for which a 50-member board of governors, all volunteers, develops policy. The symbol of the American Red Cross, like that of most other Red Cross societies throughout the world, is a red cross on a field of white; in Switzerland it is a white cross on a red field, in Muslim countries a red crescent, and in Israel a red star of David.

American Registry of Radiologic Technologists (ARRT), a national certifying body for radiological technologists in the disciplines of radiation therapy, nuclear medicine, radiotherapy, mammography, computed tomography, magnetic resonance imaging, quality management, sonography, bone densitometry, vascular sonography, breast sonography, vascular-interventional radiography, cardiovascular-interventional radiography, and radiologist assistant. Certification is awarded following passage of an examination in each of these areas.

American Sign Language (Ameslan, ASL), a method of manual communication used by some deaf persons. Messages are conveyed by manipulation of the hands and fingers. ASL is a distinct language, with its own grammar and syntax. See also **sign language.**

American Society for Investigative Pathology (ASIP), a national professional organization of specialists in pathology and bacteriology.

American Society of Parenteral and Enteral Nutrition (ASPEN), an organization that provides education, support, and accreditation to persons who specialize in nutrition that is provided through IV, enteral, or related types of feeding.

American Society of Radiologic Technologists (ASRT), a national professional organization of technologists who specialize in radiology.

American Speech, Language, and Hearing Association (ASHA), a professional association that certifies audiologists and speech-language pathologists. The ASHA is the only association that certifies speech-language pathologists.

American Standard Safety System, a system of specifications for threaded high-pressure connections between compressed gas cylinders and their attachments.

Americans With Disabilities Act, legislation approved by the U.S. Congress in July 1990 that would bar discrimination against persons with physical or mental disabilities in the areas of employment, state and local government services, public accommodations, transportation, and telecommunication. The Act defines disability as a condition that "substantially limits" such activities as walking, seeing, caring for oneself, hearing, speaking, breathing, learning, and

working. It applies to persons with acquired immunodeficiency syndrome (AIDS), diabetes, and cancer, as well as to alcoholics and substance abusers undergoing treatment. The law requires employers to make "reasonable accommodations" for workers who are otherwise qualified to carry out their job duties. Other entities affected include educational institutions, which are required to make "reasonable accommodations" for students with disabilities.

American trypanosomiasis. See **Chagas' disease**.

American Type Culture Collection (ATCC), a global nonprofit, nongovernmental organization that provides biological products and technical and educational services to research centers and laboratories in the academic, scientific, and medical communities.

americium (Am) /am'ərīsh'ē-əm/, a synthetic radioactive element of the actinide group. Its atomic number is 95; its atomic mass is 243.

Ameslan /am'islan/, abbreviation for **American Sign Language**.

Ames test /āmz/ [Bruce Nathan Ames, American molecular geneticist, b. 1928], a method of testing substances for possible carcinogenicity by exposing a strain of *Salmonella* to a sample of the substance. The rate of mutations observed is interpreted as an indication of the carcinogenic potential of the substance tested. Also called *mutagenicity test*.

amethopterin. See **methotrexate**.

metropia /am'itrō'pē-ə/ [Gk, *ametros*, irregular, *opsis*, sight], a condition characterized by an optic defect involving an error of refraction, such as astigmatism, hyperopia, or myopia. —*metropic*, adj.

Amevive, a trademark for **alefacept**.

AMI, abbreviation for **acute myocardial infarction**.

Amicar, a trademark for a hemostatic (**aminocaproic acid**).

amicrobic /am'ikrob'ik/, not caused by or related to microbes.

amidase /am'i-dās/, 1. an enzyme that catalyzes the formation of a monocarboxylic acid and ammonia by hydrolytic cleavage of the C—N bond of a monocarboxylic acid amide. 2. a term used in the recommended and trivial names of some hydrolases acting on amides, particularly those acting on linear amides.

amide, 1. a chemical compound formed from an organic acid by the substitution of an amino (NH_2 , NHR , or NR_2) group for the hydroxyl of a carboxyl (COOH) group. 2. a chemical compound formed by the deprotonation of ammonia (NH_3) or a primary (RNH_2) or secondary (R_2NH) amine.

amide local anesthetic, any of the numerous compounds containing an amide chemical group that block nerve transmission. Amides are metabolized by microsomal P-450 enzymes in the liver. Examples of commonly administered amide local anesthetics are **bupivacaine**, **lidocaine**, and **prilocaine**.

amido-, a prefix meaning 'the presence of the radical NH_2 along with the radical CO '. *amidoacetal*, *amidobenzene*.

amifostine, a cytoprotective agent for cisplatin.

■ **INDICATIONS:** This drug is used to reduce renal toxicity when cisplatin is given to treat ovarian carcinoma. It also reduces xerostomia in radiotherapy for head and neck cancer.

■ **CONTRAINdications:** Known hypersensitivity to mannitol or aminothiol, hypotension, dehydration, and lactation prohibit the use of this drug.

■ **ADVERSE EFFECTS:** Dizziness, somnolence, sneezing, flushing, hiccups, hypocalcemia, rash, and chills are among this drug's side effects. Common side effects include hypertension, nausea, and vomiting.

Amigo, a trademark for a battery-operated, scooterlike vehicle that gives mobility to some patients who cannot walk.

amikacin sulfate /am'ikā'sin/, an aminoglycoside antibiotic.

■ **INDICATION:** It is prescribed in the treatment of various severe infections caused by susceptible strains of gram-negative bacteria.

■ **CONTRAINDICATIONS:** Concurrent use of certain diuretics or known hypersensitivity to this or other aminoglycosides prohibits its use. The drug is used with caution in patients who have impaired renal function or myasthenia gravis and those under the influence of neuromuscular blocking agents or other nephrotoxins.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are nephrotoxicity, auditory and vestibular ototoxicity, and neuromuscular blockade. GI disturbances, pain at the site of injection, and hypersensitivity reactions may occur.

Amikin, a trademark for an aminoglycoside antibiotic (amikacin sulfate).

amiloride hydrochloride /am'ilōrīd/, a potassium-sparing diuretic with antihypertensive activity. Its prototype is spironolactone.

■ **INDICATION:** It is prescribed as an adjunct in the treatment of congestive heart failure or hypertension. It is often given with a thiazide medication.

■ **CONTRAINDICATIONS:** Concurrent use of potassium-conserving agents, hyperkalemia, impaired renal function, or known hypersensitivity to this drug prohibit its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are headache, diarrhea, nausea and vomiting, anorexia, hyperkalemia, dizziness, encephalopathy, impotence, muscle cramps, photosensitivity, irregular heart rhythm, confusion, and paresthesia.

amiloxate /am'il-ōk'sāt/, an absorber of ultraviolet B radiation, used topically as a sunscreen.

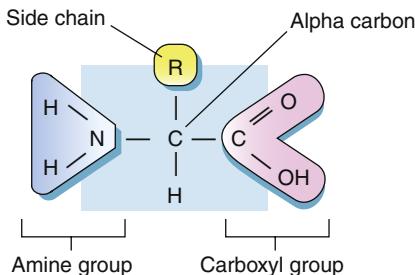
amine /am'in, āmēn/ [L, *ammonia*], (in chemistry) an organic derivative of ammonia in which one or more hydrogen atoms are replaced by alkyl or aryl groups.

amine pump, (informal) an active transport system in the presynaptic nerve endings that takes up released amine neurotransmitters. Adverse reactions to some drugs, notably tricyclic antidepressants, block this function, resulting in a high concentration of norepinephrine in cardiac tissue and resultant tachycardia and arrhythmia. See also **monoamine oxidase inhibitor**.

amino-, a prefix for a chemical name indicated by the monovalent radical NH_2 : *aminoacidopathy*, *aminotransferase*.

aminoacetic acid. See **glycine**.

amino acid (AA) /āmē'nō/, an organic chemical compound composed of one or more basic amino groups and one or more acidic carboxyl groups. A total of 20 of the more than 100 amino acids that occur in nature are the building blocks of proteins. The eight essential amino acids are isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine. Arginine and histidine are essential in infants. Cysteine and tyrosine are semiesential because they may be synthesized from methionine and phenylalanine, respectively. The main nonessential amino acids are alanine, asparagine, aspartic acid, glutamine, glutamic acid, glycine, proline, and serine. From their structures, the amino acids can be classified as basic (arginine, histidine, lysine), acidic (aspartic acid, glutamic acid), or neutral (the remainder); each group is transported across cell membranes by different carrier methods. Individual amino acids represent the monomeric units that can be connected via peptide linkages (amide bonds) to produce polymeric structures called proteins according to the scheme below.



Basic chemical structure of an amino acid

amino acid group, a category of organic chemicals containing an amino group (NH_2), a carboxylic acid group (COOH), and a variable R group on the carbon separating the amino and carboxyl groups (often referred to as the alpha carbon). The R group may be comprised of nonpolar, polar, acidic, or basic side chains. The presence of the R group creates defined three-dimensionality which is conserved in all naturally occurring amino acids.

aminoacidopathy /ə-mē'nō-as'īd-ōp'ə-thē/, any of various disorders caused by a defect in an enzymatic step in the metabolic pathway of one or more amino acids or in a protein mediator necessary for transport of an amino acid into or out of a cell.

amino acid profiles, a blood or urine test to diagnose defects in amino acid metabolism, most of which are genetic.

amino acid residue, an amino acid molecule that has lost a water molecule by becoming joined to a molecule of another amino acid.

aminoaciduria /amē'nō-as'īdōr'ē-ə/, the abnormal presence of amino acids in the urine that usually indicates an inborn error of metabolism, as in cystinuria. Formerly called **acidaminuria**.

aminobenzene. See **aniline**.

p-aminobenzoate /amē'no-ben'zō-āt/, any salt or ester of paraaminobenzoic acid. The potassium salt is administered orally as an antifibrotic in some dermatological disorders; various substituted esters, such as padimate O, are used as topical sunscreens.

aminobenzoic acid /-benzō'ik/, a metabolic product of the catabolism of the amino acid tryptophan. Also called **anthranilic acid**. See also **paraaminobenzoic acid (PABA)**.

aminocaproic acid /amē'nōkāprō'ik, amē'nō-/ , a hemostatic agent.

■ **INDICATION:** It is prescribed to stop excessive bleeding that results from hyperfibrinolysis.

■ **CONTRAINDICATION:** Active intravascular coagulation prohibits its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are thrombosis and hypotension. Inhibition of ejaculation, nasal congestion, diarrhea, and allergic reactions also may occur.

aminoglycoside antibiotic. See **antibiotic**.

aminohydrolase. See **deaminase**.

aminolevulinic acid (ALA) /am'inōlev'oolin'ik/, the aliphatic precursor of heme. It is formed in the body from the condensation of glycine and succinyl coenzyme A and undergoes further condensation to form porphobilinogen. Aminolevulinic acid may be detected in the urine of some patients with porphyria, liver disease, and lead poisoning.

aminolevulinic acid, a photochemotherapeutic agent.

■ **INDICATION:** It is used to treat nonhyperkeratotic actinic keratosis of the face and scalp.

■ **CONTRAINDICATION:** Known hypersensitivity to porphyrins contraindicates this drug's use.

■ **ADVERSE EFFECTS:** Side effects include crusts, hypopigmentation or hyperpigmentation, ulceration, pain, itching, bleeding, and pustules at the site of application.

aminolevulinic acid hydrochloride, the hydrochloride salt of aminolevulinic acid, applied topically in the treatment of nonhyperkeratotic actinic keratosis of the face and scalp. It is metabolized to protoporphyrin IX, a photosensitizer, which accumulates in the skin at the sites of application. On exposure of the sites to light of appropriate energy and wavelength together with oxygen, a photodynamic reaction occurs with cytotoxic effects.

aminophylline /amē'nōfīl'in, āmē'nō-/ , a bronchodilator.

■ **INDICATION:** It is prescribed in the treatment of bronchospasm associated with asthma, emphysema, and bronchitis.

■ **CONTRAINDICATIONS:** Known hypersensitivity to this drug or other xanthine medication prohibits its use. It is used with caution in patients who have peptic ulcers and those in whom cardiac stimulation would be harmful.

■ **ADVERSE EFFECTS:** Among the more serious adverse reactions are GI disturbances, central nervous system stimulation, palpitations, tachycardia, nervousness, and seizures.

aminophylline poisoning, an adverse reaction to an excessive intake of a methylxanthine drug such as caffeine or theophylline. The patient appears alternately restless, excited, and lethargic. Symptoms may include nausea, diarrhea, vomiting, abdominal pain, GI bleeding, headache, tinnitus, thirst, delirium, seizures, tachycardia, cardiac arrhythmias, and blood pressure changes.

aminopyrine /-pī'rīn/ , a white chemical compound with analgesic and antipyretic effects. Its continued or excessive use may lead to agranulocytosis.

aminosalicylic acid. See **paraaminosalicylic acid**.

5-aminosalicylic acid/ah-mē'nō-sal'ōsil'ik/. See **mesalamine**.

aminosuccinic acid. See **aspartic acid**.

aminotransferase /-trans'fērās/, enzymes that catalyze the transfer of an amino group from an amino acid to an alpha-keto acid, with pyridoxal phosphate and pyridoxamine phosphate acting as coenzymes. Aspartate aminotransferase (AST), normally present in serum and various tissues, especially in the heart and liver, is released by damaged cells, and as a result, a high serum level may be diagnostic of myocardial infarction or hepatic disease. Alanine aminotransferase, a normal constituent of serum, especially in the liver, is released by injured tissue and may be present in high concentrations in the sera of patients with acute liver disease. Previously called **transaminase**.

amiodarone hydrochloride, an oral antiarrhythmic drug.

■ **INDICATIONS:** It is prescribed for the treatment of life-threatening recurrent ventricular fibrillation and recurrent, hemodynamically unstable ventricular tachycardia refractory to other drugs; it is not considered induction therapy because of toxicities.

■ **CONTRAINDICATIONS:** This drug should not be given when patients have severe sinus-node dysfunction or second- or third-degree atrioventricular block or when episodes of bradycardia have resulted in syncope, except when used with a pacemaker. It also should not be used during pregnancy or in combination with certain other drugs such as ritonavir or certain quinolone antibiotics (e.g., sparfloxacin, moxifloxacin, gatifloxacin).

■ **ADVERSE EFFECTS:** Among the most serious adverse effects are pulmonary toxicity, liver dysfunction, nausea, vomiting, constipation, anorexia, malaise, fatigue, tremor, involuntary movements, visual disorders, bradycardia, cyanosis, and congestive heart failure.

Amipaque, a trademark for an intrathecal and intravascular diagnostic drug (metrizamide).

Amitiza, a trademark for **lubiprostone**.

amitosis /am'ētō'sis/ [Gr, *a, mitos*, not thread], cell division in which there is binary fission of the nucleus and cytoplasm (as in bacteria) without the complex stages of chromosome separation that occur in mitosis. —*amitotic, adj.*

amitriptyline /am'i-trip'tilin/, a tricyclic antidepressant.

■ **INDICATION:** It is prescribed in the treatment of depression and has unlabeled uses for treating neuropathic pain and headaches.

■ **CONTRAINdications:** Concomitant administration of monoamine oxidase inhibitors, recent myocardial infarction, or known hypersensitivity to this drug or to other tricyclic medications prohibits its use. It is used with caution in patients who have a seizure disorder or cardiovascular disease or who are at risk for suicide.

■ **ADVERSE EFFECTS:** Among the more common adverse reactions are sedation and anticholinergic effects. A variety of cardiovascular and central nervous system effects may occur. This agent interacts with many other drugs.

AML, abbreviation for **acute myeloid leukemia**.

amlexanox /am-lek'sah-noks/, a topical antiulcerative agent used in the treatment of recurrent aphthous stomatitis.

amlodipine /am'lō-dipēn/, a calcium channel blocker administered orally in the form of the besylate salt in the treatment of hypertension and chronic stable and vasospastic angina.

ammoni-, ammono-, a prefix meaning ‘ammonium’: *ammoniaemia, ammonolysis*.

ammonia (NH_3) /amō'nē-a/ [Gk, *ammoniakos*, salt of Ammon, Egyptian god], a colorless pungent gas produced by the decomposition of nitrogenous organic matter. Some of its many uses are as a fertilizer, an aromatic stimulant, a detergent, and an emulsifier.

ammoniacal fermentation /am'ənī'əkāl/, the production of ammonia and carbon dioxide from urea by the enzyme urease.

ammonia exposure, an adverse reaction to ammonia, which is formed as a product of amino acid and nucleic acid catabolism. Ammonia is converted to urea in the liver and excreted by the kidneys. In liver diseases such as cirrhosis, ammonia may accumulate in the blood, resulting in neurological damage. Preventive measures include administering antibiotics that restrict the growth of ammonia-producing bacteria and limiting the amount of protein in the diet.

ammonia level test, a blood test used to help diagnose severe liver diseases such as fulminant hepatitis, cirrhosis, and hepatic encephalopathy.

ammonium (NH_4^+), an ion formed by the reaction of ammonia (NH_3) with a hydrogen ion (H^+). The ammonium ion is highly soluble in water but does not pass easily through cell membranes, as does the ammonia molecule, and its rate of excretion is influenced in part by the acidity of urine. The lower the pH, the greater the proportion of ammonium ions present, assuming a constant level of ammonia production from amino acid metabolism.

Ammon's horn. See **hippocampus**.

ammonuria /am'ōnōrōōrē-ə/, urine that contains an excessive amount of ammonia.

amnesia /amnē'zhə/ [Gk, *a, mnasthai*, to forget], a loss of memory caused by brain damage or by severe emotional trauma. Kinds of amnesia include **anterograde amnesia**, **posttraumatic amnesia**, and **retrograde amnesia**. —*amnesic, amnestic, adj.*

amnesiac /amnē'sē-ək/, a person with a loss of memory caused by brain damage or severe emotional trauma.

amnesic aphasia [Gk, *a, mnasthai + a, phasis*, without speech], an inability to remember spoken words or to use words for names of objects, circumstances, or characteristics.

amnestic apraxia /amnēst'ik/, the inability to carry out a movement in response to a request because of a lack of ability to remember the request. See also **apraxia**.

amnio-, a prefix meaning ‘amnion’: *amniocentesis, amnioscopy*.

amniocentesis /am'nē-ōsentē'sis/ [Gk, *amnos*, lamb’s caul, *kentesis*, pricking], an obstetric procedure in which a small amount of amniotic fluid is removed for laboratory analysis. It is usually performed between the sixteenth and twentieth weeks of gestation to aid in the diagnosis of fetal abnormalities, especially genetic disorders.

■ **METHOD:** With the use of ultrasound imaging techniques the position of the fetus and the location of the placenta are determined. The skin on the mother’s abdomen is aseptically prepared, and a local anesthetic is usually injected. A needle attached to a syringe is introduced into a part of the uterus where there is the least chance of perforating the placenta or scratching the fetus. Between 20 and 25 mL of amniotic fluid is aspirated. Amniocentesis is performed to diagnose various inherited disorders, including chromosomal aberrations, neural tube defects, and Tay-Sachs disease. It is also performed to discover the sex of the fetus if certain sex-linked disorders are suspected. Later in pregnancy, amniocentesis may be performed to assess fetal lung maturity by testing the lecithin/sphingomyelin ratio and the presence of phosphatidyl-glycerol in the laboratory before elective delivery. The fluid may be tested for the concentration of creatinine, another indicator of fetal maturity. When postmaturity is suspected, amniocentesis is performed to examine the amniotic fluid for meconium.

■ **NURSING CONSIDERATIONS:** A woman must sign an informed consent form before amniocentesis. Specifically stated in the consent form are the reasons for performing the procedure and the facts that fluid is to be removed after needle puncture of the uterus, that ultrasound imaging techniques are usual adjuncts, that the procedure may fail to give the results intended, and that spontaneous abortion, nausea, abdominal pain, or fetal injury may occur. The woman is reassured that complications and failure are rare; she is given emotional support before, during, and after the procedure. In testing for inherited disorders, 10 days to 2



Amniocentesis: placement of needle (Courtesy of Marjorie Pyle, RNC, LifeCircle, Costa Mesa, California.)

weeks is usually necessary for tissue culture before a diagnosis may be made; this waiting period may be extremely stressful for the mother. The woman is warned to report any signs of infection or of the onset of labor. Rh_o(D) immunoglobulin should be given to pregnant women who are Rh negative.

■ OUTCOME CRITERIA: Spontaneous abortion occurs in approximately 1% of women undergoing amniocentesis. Perforation of the placenta or a blood vessel in the umbilical cord or placenta may cause hemorrhage or isoimmunization and hemolytic disease of the fetus, possibly leading to fetal death. Maternal and fetal infection with attendant morbidity or mortality may occur but it is rare. Premature rupture of membranes, preterm labor, or trauma to the fetus or umbilical cord may occur. Compare **chorionic villus sampling**.

amniography /am'ne-og'rəfē/, a procedure used to detect placement of the placenta by x-ray examination with injection of a radiopaque contrast medium into the amniotic fluid. It is seldom used, having been largely supplanted by ultrasonography.

amnioinfusion, a nursing intervention from the Nursing Interventions Classification (NIC) defined as infusion of fluid into the uterus during labor to relieve umbilical cord compression or to dilute meconium-stained fluid. See also **Nursing Interventions Classification**.

amnion /am'nē-on/ [Gk, *amnos*, lamb's caul], a membrane, continuous with and covering the fetal side of the placenta, that forms the outer surface of the umbilical cord. Compare **chorion**. —**amniotic**, adj.

amnionitis /am'nē-ōnī'tis/, an inflammation of the amnion. The condition may develop as a result of infection after early rupture of the fetal membranes.

amnioscopy /am'nē-os'kōpē/, a direct visual examination of the fetus and amniotic fluid with an endoscope that is inserted into the amniotic cavity through the uterine cervix or an incision in the abdominal wall.

amniotic. See **amnion**.

amniotic band disruption sequence syndrome, an abnormal condition of fetal development characterized by the development of fibrous bands within the uterus that entangle the fetus, leading to deformities in structure and function. The syndrome is associated with a variety of congenital anomalies, including clubfoot, missing limbs, simian creases, and skull and visceral defects. It can be detected in the uterus. Interventions are specific to the varied symptoms, and genetic counseling is suggested.



Amniotic bands (Graham and Smith, 2007)

amniotic cavity [Gk, *amnion*, fetal membrane; L, *cavum*], the fluid-filled cavity of the amniotic sac surrounding the fetus.

amniotic fluid, a liquid produced by the fetal membranes and the fetus. It surrounds the fetus throughout pregnancy, protecting it from trauma and temperature variations, providing freedom of fetal movements, and helping maintain the fetal oxygen supply. The volume totals about 1000 mL at term. In addition to providing the fetus with physical protection, the amniotic fluid is a medium of active chemical exchange. It is secreted and resorbed by cells lining the amniotic sac at a rate of 500 mL/hr at term and is swallowed, metabolized, and excreted as fetal urine at a rate of 50 mL/hr. Its chemical constituents are those of maternal and fetal plasma in different concentrations. Its pH is close to neutral. Amniotic fluid itself is clear, although desquamated fetal cells and lipids give it a cloudy appearance. Also called **aqua amni**.

amniotic fluid embolism [Gk, *amnion*; L, *fluere*, to flow; Gk, *embolos*, plug], a quantity of amniotic fluid that enters the maternal blood system during labor and/or delivery and becomes lodged in a vessel. It is usually fatal to the mother if it is a pulmonary embolism.

amniotic fold, an embryonic growth feature observed in many vertebrates, particularly birds and reptiles. It consists of flaps of ectoderm and mesoderm that grow over the back of an embryo, fuse, and subsequently separate to form the amnion.

amniotic sac, a thin-walled bag that contains the fetus and amniotic fluid during pregnancy. It has a capacity of 4 to 5 L at term. The wall of the sac extends from the margin of the placenta. The amnion, chorion, and decidua that make up the wall are each a few cell layers thick. They are closely applied—though not fused—to one another and to the wall of the uterus. The intact sac and its fluid provide for the equilibration of hydrostatic pressure within the uterus. During labor, the sac effects the uniform transmission of the force of uterine contractions to the cervix for dilation.

amniotomy /am'nē-ōt'ōmē/, an artificial rupture of the fetal membranes, usually performed to stimulate or accelerate the onset of labor.

amobarbital /am'ōbär'bōtäl/, a barbiturate sedative-hypnotic. Also called **amylobarbitone**.

■ **INDICATIONS:** It is prescribed as an anticonvulsant and a preanesthetic and for short-term treatment of insomnia.

■ **CONTRAINDICATIONS:** Porphyria or known hypersensitivity to barbiturates prohibits its use. It is also contraindicated in patients with marked liver impairment or respiratory disease.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are respiratory and circulatory depression, drug hang-over, and various allergic reactions. It also interacts with many other drugs.

A-mode, amplitude modulation in diagnostic ultrasonography. It represents the time required for the ultrasound beam to strike a tissue interface and return its signal to the transducer. The greater the reflection at the tissue interface, the larger the signal amplitude on the A-mode screen. See also **B-mode**, **M-mode**.

A-mode ultrasound [L, *ultra*, beyond, *sonus*, sound], a display of ultrasonic echoes in which the horizontal axis of the visual display represents the time required for the return of the echo and the vertical axis represents the strength of the echo. The mode is used in echoencephalography. See also **A-mode**.

amoeba. See **ameba**.

amoebiasis. See **amebiasis**.

amok [Malay, *amoq*, furious], a psychotic frenzy with a desire to kill anybody encountered. The murderous episodes may follow periods of severe depression.

amoric /ah-môr'ik/, without particles.

amorph /ə'môrf, əmôrf'/ [Gk, *a*, *morphef*, not shape], 1. a mutant allele that has little or no effect on the expression of a trait. Compare **antimorph**, **hypermorph**, **hypomorph**. —*amorphic*, adj. 2. abbreviation for **amorphous**.

amorphous /əmôr'fôs/ [Gk, *a*, not, *morphe*, form], 1. describing an object that lacks definite visible shape or form. 2. (in chemistry) a substance that is not crystalline.

amorphous crystal, a shapeless, ill-defined crystal, usually a phosphate.

amoxapine /əmôk'sepin/, a tricyclic antidepressant (secondary amine subclass).

■ INDICATION: It is prescribed in the treatment of mental depression.

■ CONTRAINDICATIONS: It is used with caution in conditions in which anticholinergics are contraindicated, in seizure disorders, and in cardiovascular disorders. Concomitant administration of monoamine oxidase inhibitors, recent myocardial infarction, or known hypersensitivity to this drug prohibits its use.

■ ADVERSE EFFECTS: Among the most serious adverse reactions are sedation and anticholinergic side effects. A variety of GI, cardiovascular, and neurological reactions may also occur. It is involved in many drug interactions.

amoxicillin /əmôk'säsl'în/, a beta-lactam semisynthetic oral penicillin antibiotic.

■ INDICATION: It is prescribed in the treatment of infections caused by a susceptible gram-negative or gram-positive bacteria.

■ CONTRAINDICATION: Known hypersensitivity to any penicillin prohibits its use.

■ ADVERSE EFFECTS: Among the most serious adverse reactions are anaphylaxis, nausea, and diarrhea. Allergic reactions and rashes are common.

Amoxil, a trademark for a beta-lactam antibiotic (amoxicillin).

AMP, abbreviation for **adenosine monophosphate**.

ampere (A) /am'pîr/ [André-Marie Ampère, French physicist, 1775–1836], a unit of measurement of the amount of electric current. An ampere, according to the meter-kilogram-second (MKS) system, is the amount of current passed through a resistance of 1 ohm by an electric potential of 1 volt; in the International System (SI) of Units, an ampere is a unit of electric current that carries a charge of 1 coulomb through a conductor in 1 second. The standard international ampere is the amount of current that deposits 0.001118 g of silver per second when passed, according to certain specifications, through a silver nitrate solution. See also **ohm**, **volt**, **watt**.

amperometry /am'parom'ëtrē/, the measurement of current at a single applied potential.

amph-. See **amphi-**.

amphetamine poisoning, the toxic effects of overdosage of amphetamines. Symptoms usually include excitement, tremors, tachycardia, hallucinations, delirium, seizures, and circulatory collapse.

amphetamines /amfet'əmĕnz/, a group of nervous system stimulants, including amphetamine and its chemical congeners dextroamphetamine and methamphetamine, that are subject to abuse because of their ability to produce wakefulness, euphoria, and weight loss. Abuse leads to compulsive behavior, paranoia, hallucinations, and suicidal tendencies.

Amphetamines have many street names, such as **black beauties**, **lid poppers**, **pep pills**, **speed** (an injectable form), and **ice** (a crystalline form of methamphetamine that is smoked). See also **crack**, **dextroamphetamine sulfate**, **methamphetamine hydrochloride**.

amphetamine sulfate, a colorless water-soluble salt of amphetamine that stimulates the central nervous system. It has been used to treat certain respiratory complaints, fatigue, and narcolepsy and to effect weight loss. It formerly was used to treat obesity.

amphi-, amph-, ampho-, prefixes meaning ‘on both sides, around, double’: *amphiarthrosis*, *amphotерism*.

amphiarthrosis. See **cartilaginous joint**.

amphidiarthrodial joint /am'fîd'ärthro'dé-äl/ [Gk, *amphi*, both kinds], a type of joint that combines amphiarthrosis with diarthrosis, permitting movement in more than one direction, such as that of the lower jaw.

amphigenesis. See **amphigony**.

amphigenetic /am'fijënet'ik/ [Gk, *genein*, to produce], 1. produced by the union of gametes from both sexes. 2. bisexual; having both testicular and ovarian tissue.

amphigenous inheritance /amfij'ənəs/, the acquisition of genetic traits and conditions from both parents. Also called **biparental inheritance**, **duplex inheritance**.

amphigonadism /am'figō'nadiz'əm/, true hermaphroditism; the presence of both testicular and ovarian tissue. —*amphigonadic*, adj.

amphigony /amfig'ənē/ [Gk, *amphi* + *gonos*, generation], sexual reproduction. Also called **amphigenesis**. —*amphigonic*, adj.

amphikaryon /am'fiker'ē-on/ [Gk, *amphi* + *karyon*, nucleus], a nucleus containing the diploid number of chromosomes. —*amphikaryotic*, adj.

amphimixis /am'fimik'sis/ [Gk, *amphi* + *mixis*, mingling], 1. the union of germ cells in sexual reproduction. 2. the union and integration of oral, anal, and genital libidinal impulses in the development of heterosexuality.

amphipathic /-path'ik/ [Gk, *amphi* both + *pathos* suffering], pertaining to a molecule having two sides with characteristically different properties, such as a detergent, which has both a polar (hydrophilic) end and a nonpolar (hydrophobic) end but is long enough so that each end demonstrates its own solubility characteristics.

ampho-. See **amphi-**.

Amphojel, a trademark for aluminum hydroxide gel.

amphoric breath sound /amfôr'ik/ [Gk, *amphoreus*, jug], an abnormal, resonant, hollow, blowing sound heard with a stethoscope over the thorax. It indicates a cavity opening into a bronchus or a pneumothorax.

amphoteric. See **amphotерism**.

amphotericin B /am'făter'ësin/, an antifungal medication.

■ INDICATION: It is prescribed for topical or systemic use in the treatment of fungal infections.

■ CONTRAINDICATION: Known hypersensitivity prohibits its use.

■ ADVERSE EFFECTS: When it is used systemically, among the most serious adverse reactions are anaphylaxis, thrombophlebitis, blood dyscrasia, nephrotoxicity, nausea, and fever; chills and shaking may occur on administration. With topical use, local hypersensitivity reactions are the most common adverse reactions.

amphotericin B cholestryl complex, amphotericin B complexed with cholestryl sulfate in a 1:1 ratio; it is administered by IV infusion in the treatment of disseminated aspergillosis in patients refractory to or intolerant of conventional amphotericin B therapy.

amphotericin B lipid complex, amphotericin B complexed with two phospholipids in a 1:1 drug-to-lipid ratio; it is administered by IV infusion in the treatment of invasive fungal infections in patients who are refractory to or intolerant of conventional amphotericin B therapy.

amphotericin B liposomal complex, amphotericin B intercalated into a single bilayer liposome; it is administered by IV infusion in the treatment of severe systemic fungal infections and kala-azars in patients refractory to or intolerant of conventional amphotericin B therapy.

amphotericism /-ter'izəm/ [Gk, *amphoteros*, pertaining to both], a quality of a chemical compound that permits it to act as an acid or a base. —**amphoteric**, *adj., n.*

ampicillin /am'pəsīl'in/, a semisynthetic aminopenicillin.

■ **INDICATION:** It is prescribed in the treatment of infections caused by a broad spectrum of sensitive gram-negative and gram-positive organisms.

■ **CONTRAINDITION:** Known hypersensitivity to any penicillin prohibits its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are anaphylaxis, nausea, and diarrhea. Fever, rashes, allergic reactions, and suprainfection also may occur.

ampicillin sodium, the sodium salt of ampicillin, prescribed as an antibiotic to treat gram-positive organisms and some gram-negative organisms.

amplification /am'plifikā'shən/ [L, *amplificare*, to make wider], 1. (genetic) a process whereby certain targeted sequences of DNA are replicated by the polymerase chain reaction (PCR) in order to produce multiple copies of a single or limited number of genes. Often this refers to increasing the proportion of plasmid DNA relative to the amount of bacterial DNA. 2. the replication in bulk of an entire DNA library. See also **polymerase chain reaction**. —*amplify*, *v.*

amplifier, a device that controls power from a mechanical, electrical, hydraulic, or other source so that the output is greater than the input.

amplifier T cells, a T cell of the CD8 cell type that modifies a developing immune response by releasing nonspecific signals to which other T cells (either effector or suppressor cells) respond.

amplitude /am'plitüōd/ [L, *amplus*, wide], the width or breadth of range or extent, such as amplitude of accommodation or amplitude of convergence.

amplitude of accommodation (AA), the total accommodative power of the eye, determined by the difference between the refractive power for farthest vision and that for nearest vision.

amplitude of convergence, the difference in the power needed to turn the eyes from their far point to their near point of convergence. Also called **fusional amplitude**, **vergence ability**.

amprenavir, an antiviral (protease inhibitor).

■ **INDICATION:** It is used to treat HIV in combination with other antiretroviral agents.

■ **CONTRAINDITION:** Known hypersensitivity prohibits its use.

■ **ADVERSE EFFECTS:** Life-threatening side effects include Stevens-Johnson syndrome and acute hemolytic anemia. Other serious adverse effects include new-onset diabetes, hyperglycemia, and exacerbation of preexisting diabetes mellitus. Common side effects include diarrhea, abdominal pain, nausea, paresthesia, and rash.

ampule /am'pyoōl/ [Fr, *ampoule*, phial], a small, sterile glass or plastic container that usually contains a single dose of a solution. Also spelled *ampoule*.



Ampules (Potter et al, 2011)

ampulla /ampoōl'ə/ *pl. ampullae*, [L, flasklike bottle], a rounded, saclike dilation of a duct, canal, or any tubular structure, such as the lacrimal duct, semicircular canal, fallopian tube, rectum, or vas deferens.

ampulla of the bile duct. See **hepatopancreatic ampulla**. **ampulla of the rectum**, a flask-shaped dilation near the end of the rectum.

ampulla of Vater. See **hepatopancreatic ampulla**.

ampullar crest, the most prominent part of a localized thickening of the membrane that lines the ampullae of the semicircular ducts, covered with neuroepithelium containing endings of the vestibular nerve.

ampullary aneurysm. See **saccular aneurysm**.

ampullary tubal pregnancy /am'poōl'lərē, am'pələr'ē/, a tubal pregnancy in which implantation occurs in the ampulla of one of the fallopian tubes.

ampullula /ampoōl'yələ/, a minute ampulla, such as a small lymph or blood vessel.

amputation /am'pyoōtā'shən/ [L, *amputare*, to excise], the surgical removal of a part of the body, a limb, or part of a limb to treat recurrent infection or gangrene in peripheral vascular disease; to remove malignant tumors; and to treat severe trauma. The part is removed, and a shaped amputation flap is cut from muscular and cutaneous tissue to cover the end of the bone. A section may be left open for drainage if infection is present. After surgery, a lower leg amputation is elevated on a pillow for no more than 24 to 48 hours and, if necessary, protected with plastic from urinary and fecal contamination. Vital signs are monitored carefully. If a dressing is used, it is watched for excessive bleeding. The residual limb is moved frequently to prevent circulatory complications, contractures, and tissue necrosis. If a cast is used, it must remain in place for 8 to 14 days. If the cast comes off accidentally, the residual limb must be wrapped tightly at once with an amputation-stump bandage, and plans must be made to replace the cast. The patient is fit for a prosthesis, either delayed or immediately. Medication may relieve incisional pain and phantom limb syndrome. Kinds of amputation include **closed amputation**, **congenital amputation**, **open amputation**, **primary amputation**, and **secondary amputation**.

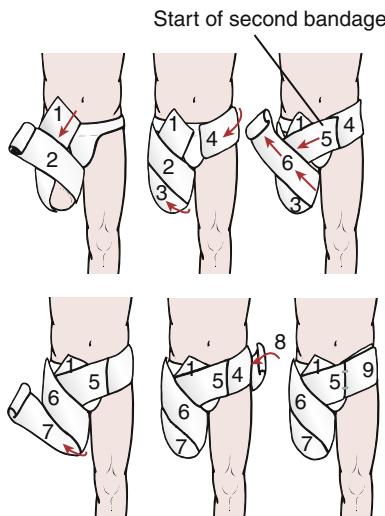
amputation care, a nursing intervention from the Nursing Interventions Classification (NIC) defined as promotion of

physical and psychological healing before and after amputation of a body part. See also **Nursing Interventions Classification**.

amputation flap, a flap of skin used to cover the end of an amputation stump.

amputation neuroma, a form of **traumatic neuroma** that may develop at the proximal end of a severed or injured nerve.

amputation-stump bandage, an elastic figure-eight bandage applied to cover the residual limb after an amputation. It helps control edema and shape the remaining portion of the limb.



Amputation-stump bandaging for above-the-knee residual limb (Lewis et al, 2011)

amputee /am'pyoo-tē/, a person who has had one or more extremities traumatically or surgically removed.

AMRA, abbreviation for *American Medical Records Association*.

amrinone lactate /am'rīnōn/. See **inamrinone lactate**.

Amsler grid [Marc Amsler, Swiss ophthalmologist, 1891–1968], a checkerboard grid of intersecting dark horizontal and vertical lines with one dark spot in the middle. To discover a visual field defect, the person simply covers or closes one eye and looks at the spot with the other. A visual field defect is perceived as a defect, distortion, blank, or other fault in the grid. The person may record the defects directly on a paper copy of the grid that may be kept as a permanent record. The Amsler grid is used in testing for macular degeneration.

AMT, abbreviation for *American Medical Technologists*.

amu, abbreviation for **atomic mass unit**.

amusia /ə-myoō'zē-ə/ [Gk, *amousia*, want of harmony], an inability to recognize the significance of sounds, manifested as loss of the ability to recognize or produce music.

amyelia /am'ē-ēl'yə/ [Gk, *myelos*, marrow], the absence of a spinal cord.

amyelinic neuroma /am'ē-lēn'ik/ [Gk, *a*, *myelos*, without marrow, *neuron*, nerve, *oma*], a tumor that contains only nonmyelinated nerve fibers.

amygdala /amig'dələ/ [Gk, *amygdale*, almond]. See **amygdaloid nucleus**.

amygdalin. See **Laetrile**.

amygdaloid /-dəloid/, resembling a tonsil.

amygdaloid fossa [Gk, *amylon*, *eidos*, starchlike; L, *fossa*, ditch], a space in the wall of the oropharynx, between the pillars of the fauces, that is occupied by the palatine tonsil. Also called **tonsillar fossa**.

amygdaloid nucleus [Gk, *amygdale*, almond, *eidos*, form; L, *nucleus*, nut], one of the basal nuclei, found near the inferior horn of the lateral ventricle in the medial temporal lobe. It is considered part of the limbic system and is involved in memory and emotion. Also called **amygdala**.

amyl-. See **amylo-**.

amyl alcohol /am'il/ [Gk, *amylon*, starch], a colorless, oily liquid with the formula $C_5H_{11}OH$ that is only slightly soluble in water but can be mixed with ethyl alcohol, chloroform, or ether.

amyl alcohol, tertiary. See **amylenic hydrate**.

amylase /am'ilās/ [Gk, *amylon*, starch], an enzyme that catalyzes the hydrolysis of starch into smaller carbohydrate molecules. Alpha-amylase, found in saliva, pancreatic juice, malt, certain bacteria, and molds, catalyzes the hydrolysis of starches to dextrins, maltose, and maltotriose. Beta-amylase, found in grains, vegetables, malt, and bacteria, is involved in the hydrolysis of starch to maltose. Normal blood findings are 56 to 190 IU/L.

amylase test, a rapidly performed blood or urine test that is most specific for pancreatitis and other pancreatic disorders. Increased amylase activity may also indicate nonpancreatic disorders such as bowel perforation, penetrating peptic ulcer, duodenal obstruction, and other conditions.

amylenic hydrate /am'əlēn/, a clear, colorless liquid, $(CH_3)_2C(OH)CH_2CH_3$ with a camphorlike odor, miscible with alcohol, chloroform, ether, or glycerin and used as a solvent and a hypnotic.

amylc fermentation /əm'il'ik/, the formation of amyl alcohol from sugar.

amyl nitrite, a vasodilator.

■ **INDICATION:** It is prescribed to relieve the angospasm of angina pectoris and as an adjunct in the treatment of cyanide poisoning.

■ **CONTRAINDICTION:** Known hypersensitivity to this drug or to other nitrates prohibits its use, as does head injury and narrow-angle glaucoma.

■ **ADVERSE EFFECTS:** Among the serious adverse reactions are hypotension, allergic reactions, nausea, headache, and dizziness.

amyo-, amyl-, combining forms meaning ‘starch’: *amylophagia*, *amylase*.

amylobarbitone. See **amobarbital**.

amyloid /am'loid/ [Gk, *amylon*, starch, *eidos*, form],

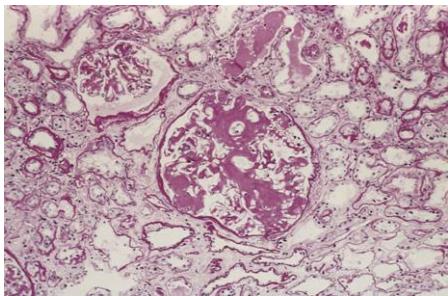
1. pertaining to or resembling starch. 2. a starchlike protein-carbohydrate complex deposited abnormally in some tissues during certain chronic disease states, such as amyloidosis, rheumatoid arthritis, tuberculosis, and Alzheimer’s disease.

amyloid degeneration, degeneration of tissue resulting from deposition of amyloid complexes.

amyloid liver [Gk, *amylon*, starch, *eidos*, form; AS, *lifer*], a liver in which the cells have been infiltrated with amyloid (glycoprotein) deposits. Also called **albuminous liver**.

amyloidosis /am'iloidō'sis/ [Gk, *amylon* + *eidos*, form, *osis*, condition], a disease in which a waxy, starchlike glycoprotein (amyloid) accumulates in tissues and organs, impairing their function. The condition may be hereditary or acquired and may be systemic or organ specific. Primary amyloidosis refers to light chain amyloidosis seen in multiple myeloma. Patients with secondary amyloidosis usually suffer from another chronic infectious or

inflammatory disease, such as tuberculosis, osteomyelitis, rheumatoid arthritis, or Crohn's disease. Almost all organs can be affected, most often the heart, lungs, tongue, and intestines in primary amyloidosis, and the kidneys, liver, and spleen in the secondary type. Elderly patients tend to experience cardiac effects of the disease. Diagnosis is made through biopsy of the suspected organ or abdominal fat aspiration. There is no known cure for amyloidosis, and treatment in the secondary type is aimed at alleviating the underlying chronic disease. Patients with renal amyloidosis are frequently candidates for kidney dialysis and transplantation.



Amyloidosis of the kidney (Kumar et al, 2007)

amyloid osteopathy, local osteoarticular lytic lesions often found in patients with hemodialysis-associated amyloidosis.

amyloid precursor protein (APP), a large transmembrane glycoprotein expressed on the cell surface and of uncertain function; it may be cleaved on the cell surface to a soluble form. Alternatively, cleavage may follow endocytosis and in some cases then yields 40 to 43 abnormal amino acid peptides, which aggregate to form Ab amyloid, associated with Alzheimer's disease.

amylolysis /am'ēlō'sis/ [Gk, *amylon*, starch, *lysis*, loosening], the digestive process whereby starch is converted into sugars and dextrans by hydrolysis or by enzymatic activity.

amylopectinosis. See **Andersen's disease**.

amylophagia /am'ēlo-f'jah/, the habit of eating starch, such as laundry starch, a form of pica.

amylopsin, pancreatic amylase.

amylose, a minor constituent of starch (20-30%), consisting of a linear chain of glucose molecules connected by linkages; it stains blue with iodine.

amyoplasia congenita. See **arthrogryposis multiplex congenita**.

amyotonia /ā'mī-ōtō'nē-ə/ [Gk, *a*, *mys*, not muscle, *tonos*, tone], an abnormal condition of skeletal muscle, characterized by a lack of tonus, weakness, and wasting, usually the result of motor neuron disease. Compare **myotonia**. —*amyotonic*, adj.

amyotrophic lateral sclerosis (ALS) /ā'mī-ōtrot'ik/ [Gk, *a*, *mys* + *trophe*, nourishment], a degenerative disease characterized by loss of the motor neurons, with progressive weakness and atrophy of the muscles of the hands, forearms, and legs, spreading to involve most of the body and face. It results from degeneration of the motor neurons of the anterior horns and corticospinal tracts, beginning in middle age and progressing rapidly, causing death within 2 to 5 years. Treatment is supportive and may involve a feeding tube or ventilator. There is no cure, but research

is ongoing. Also called **Lou Gehrig's disease, wasting palsy**. See also **Aran-Duchenne muscular atrophy**.

Amytal Sodium, a trademark for a barbiturate (sodium amobarbital).

an-, **ana-**, prefixes meaning 'not, without': *anoxia*, *analgesia*.

-an, **-ian**, suffixes meaning 'belonging to, characteristic of, similar to': *protozoan*, *salpingian*.

ANA, 1. abbreviation for **American Nurses Association**.

2. abbreviation for **antinuclear antibody**.

ana (āa, āā, AA). See **āa**, **āā**, **AA**.

anabolic steroid /an'ābōl'ik/ [Gk, *anaballein*, to build up], any of several compounds derived from testosterone or prepared synthetically to promote general body growth, to oppose the effects of endogenous estrogen, or to promote masculinizing effects. All such compounds cause a mixed androgenic-anabolic effect.

■ **INDICATIONS:** It is prescribed in the treatment of aplastic anemia, red-cell aplasia, and hemolytic anemia and in anemias associated with renal failure, myeloid metaplasia, and leukemia.

■ **CONTRAINDICATIONS:** It is contraindicated for the palliation of carcinoma of the breast; in pregnancy and serious cardiac, renal, and hepatic diseases; and with known hypersensitivity.

■ **ADVERSE EFFECTS:** Among the most serious adverse effects are acne, growth of facial hair, and hoarsening or deepening of the voice; other masculinizing features are common. Continued use of these compounds in women may also produce prominent musculature, hirsutism, and hypertrophy of the clitoris.

anabolism /ənab'əliz'əm/ [Gk, *anaballein*, to build up], the constructive phase of metabolism characterized by the conversion of simple substances into the more complex compounds of living matter. Compare **catabolism**. —*anabolic*, adj.

anabolite /ənab'əlit/ [Gk, *anaballein*, to build up], a product of the process of anabolism.

anacardidymus /ən'əkat'ədīd'īməs/ [Gk, *ana*, up, *kata*, down, *didymos*, twin], conjoined twins that are fused in the middle but separated above and below.

anaclysis /ən'əklī'sis/ [Gk, *ana* + *klisis*, leaning]. 1. a condition, normal in childhood but pathological in adulthood, in which a person is emotionally dependent on other people. 2. a condition in which a person consciously or unconsciously chooses a love object because of a resemblance to the mother, father, or another person who was an important source of comfort and protection in infancy. —*anaclitic*, adj.

anaclitic depression /an'əklit'ik/, a syndrome occurring in infants, usually after sudden separation from the mothering person. Symptoms include apprehension, withdrawal, detachment, incessant crying, refusal to eat, sleep disturbances, and, eventually, stupor leading to severe impairment of the infant's physical, social, and intellectual development. If the mothering figure or a substitute is made available within 1 to 3 months, the infant recovers quickly with no long-term effects. See also **hospitalism**.

anacrotic pulse [Gk, *ana* + *krotos*, stroke], a pulse characterized by a transient drop in amplitude of the primary elevation on a sphygmographic tracing. It is seen in valvular aortic stenosis.

anacrotism /ənak'rətiz'əm/ [Gk, *ana*, *krotos*, stroke], a condition characterized by two arterial expansions per heartbeat and observed as a notch on the ascending limb of an arterial pulse pressure tracing. —*anacrotic*, adj.

anacusis /an'əkoo'sis/ [Gk, *a*, *akouein*, not to hear], a total loss of hearing.

anadicrotic pulse /an'ədikrot'ik/ [Gk, *ana* + *dis*, twice, *krotos*, stroke], (on a sphygmographic tracing) a pulse characterized by two transient drops in amplitude on the curve of primary elevation.

anadidymus /an'ədīdīməs/ [Gk, *ana* + *didymos*, twin], conjoined twins that are united at the pelvis and lower extremities but are separated in the upper half. Also called **duplicatus anterior**.

anadipsia /an'ədip'sē-ə/ [Gk, *ana* + *dipsa*, thirst], extreme thirst, often occurring in the manic phase of bipolar disorder. The condition is the result of dehydration caused by the excessive perspiration, electrolyte imbalance, continuous urination, and relentless physical activity produced by the intense excitement characteristic of the manic phase. See also **polydipsia**.

Anadrol-50, a trademark for an anabolic steroid (oxymetholone).

anaemia. See **anemia**.

anaerobe /an'erōb/ [Gk, *a* + *aer*, not air, *bios*, life], a microorganism that grows and lives in the complete or almost complete absence of oxygen. An example is *Clostridium botulinum*. Anaerobes are widely distributed in nature and in the body. Types include the **facultative anaerobe** and the **obligate anaerobe**. Compare **aerobe**, **micro-aerophile**. See also **anaerobic infection**. —**anaerobic**, adj.

anaerobic /an'ərō'bik/, pertaining to the absence of air or oxygen.

anaerobic catabolism, the breakdown of complex chemical substances into simpler compounds, with the release of energy, in the absence of oxygen.

anaerobic exercise, any short-duration exercise that is powered primarily by metabolic pathways that do not use oxygen. Such pathways produce lactic acid, resulting in metabolic acidosis. Examples of anaerobic exercise include sprinting and heavy weight lifting. Compare **aerobic exercise**. See also **active exercise**, **passive exercise**.

anaerobic glycolysis. See **glycolysis**.

anaerobic infection, an infection caused by an anaerobic organism such as *Clostridium*, usually occurring in deep puncture wounds that exclude air or in tissue that has diminished oxygen-reduction potential as a result of trauma, necrosis, or overgrowth of bacteria. Examples of anaerobic infection are **gangrene** and **tetanus**.

anaerobic myositis. See **gas gangrene**.

anaesthesia. See **anesthesia**.

anaesthetic. See **anesthetic**.

anaesthetist. See **anesthetist**.

anagen, the first phase of the hair cycle, during which synthesis of the hair takes place.

anagrelide, an antiplatelet agent.

■ **INDICATION:** This drug is prescribed for essential thrombocythemia.

■ **CONTRAINDICATIONS:** Known hypersensitivity and hypertension prohibit its use.

■ **ADVERSE EFFECTS:** Life-threatening effects include congestive heart failure, myocardial infarction, myocardiopathy, cardiomegaly, complete heart block, atrial fibrillation, anemia, thrombocytopenia, ecchymosis, and lymphadenoma. Other serious effects include tachycardia, palpitations, arrhythmia, and seizures. Common side effects include orthostatic hypotension and rash.

anakhré /ah-nah-krah/ [Fr, from native West African name]. See **goundou**.

anakinra, an antirheumatic agent and immunomodulator used to reduce the signs and symptoms of moderate to severe active rheumatoid arthritis in adults.

Ana-Kit, a trademark for an emergency kit for insect sting treatment. It contains chlorpheniramine epINEPHrine in a sterile 1-mL syringe.

anal. See **anus**.

anal agenesis. See **imperforate anus**.

anal canal, the final portion of the digestive tract, about 4 cm long, between the rectum and the anus.

anal character, (in psychoanalysis) a type of personality exhibiting patterns of behavior originating in the anal stage of childhood. It is characterized by extreme orderliness, obstinacy, perfectionism, cleanliness, punctuality, and miserliness, or their extreme opposites. Also called **anal personality**. See also **anal stage**, **psychosexual development**.

anal column, the highly vascular longitudinal folds of the anal canal, in which are found the hemorrhoidal blood vessels.

anal crypt, the depression between rectal columns that encloses networks of veins that, when inflamed, are called hemorrhoids.

anal cryptitis, an inflammation of the mucous membrane of the anal crypts.

analeptic. See **central nervous system stimulant**.

anal eroticism, (in psychoanalysis) a libidinal fixation at or a regression to the anal stage of psychosexual development, often reflected as an anal character. Also called **anal erotism**. Compare **oral eroticism**.

anal fissure, a painful linear ulceration or laceration of the skin at the margin of the anus. Also called **fissure-in-ano**.

anal fistula, an abnormal opening on the cutaneous surface near the anus, usually resulting from a local abscess of the crypt and common in Crohn's disease. A perianal fistula may or may not communicate with the rectum. Also called **fistula-in-ano**.

anal fold, a slight elevation flanking the cloacal membrane and derived from a cloacal fold; anal folds form the border of the anus.

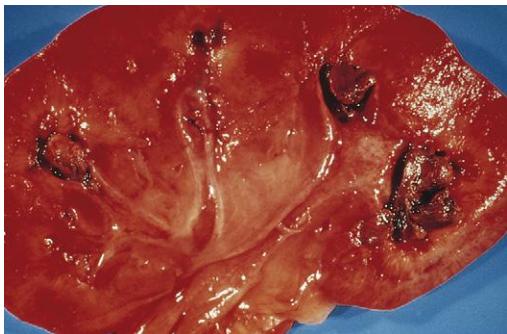
analgesia /an'əlje'zē-ə/ [Gk, *a*, *algos*, without pain], a decreased or absent sensation of pain.

analgesic /an'əlje'zik/, 1. relieving pain. 2. a drug that relieves pain. The opioid analgesics act on the central nervous system and alter the patient's perception; they are more often used for severe pain. The nonopioid analgesics act primarily at the periphery, do not produce tolerance or dependence, and do not alter the patient's perception; they are used for mild to moderate pain. Compare **anodyne**. See also **pain intervention**.

analgesic administration, a nursing intervention from the Nursing Interventions Classification (NIC) defined as use of pharmacological agents to reduce or eliminate pain. See also **Nursing Interventions Classification**.

analgesic administration: intraspinal, a nursing intervention from the Nursing Interventions Classification (NIC) defined as administration of pharmacological agents into the epidural or intrathecal space to reduce or eliminate pain. See also **Nursing Interventions Classification**.

analgesic nephropathy [Gk, *a*, *algos*, without pain, *nephros*, kidney, *pathos*, disease], toxic damage to one or both kidneys resulting from the consumption of excessive amounts of nonsteroidal antiinflammatory drugs (NSAIDs) or similar analgesic medications.



Analgesic nephropathy (Kumar, et al, 2010/Courtesy of Dr.F.J.Gloor, Institut für Pathologie, Kantonsspital, St. Gallen, Switzerland)

analgia [Gk, *ana*, without, *algos*, pain], an absence of pain.
anal incontinence [L, *anus*, *incontinentia*, an inability to retain], the lack of voluntary control over fecal discharge.

anal membrane. See **cloacal membrane.**

anal membrane atresia. See **imperforate anus.**

analog /ən'ələg/ [Gk, *analogos*, proportionate], 1. a substance, tissue, or organ that is similar in appearance or function to another but differs in origin or development, such as the eye of a fly and the eye of a human. 2. a drug or other chemical compound that resembles another in structure or constituents but has different effects. Also spelled **analogue**. Compare **homolog**. —**analogous**, adj.

analog computer, a computer that processes information as a physical quantity, such as voltage, amperage, weight, or length, and presents results of calculations that can be continuously varied and measured. Compare **digital computer**, **hybrid computer**.

analogous /ənəl'əgəs/ [Gk, *analogos*], something that is similar to a degree in function or form but different in structure or origin.

analog signal, a continuous electric signal representing a specific condition, such as temperature, electrocardiogram waveforms, telephones, or computer modems.

analog-to-digital (A/D) converter, a device for converting analog information, such as temperature or electrocardiographic waveforms, into digital form for processing by a digital computer.

analogue. See **analog**.

anal orifice [L, *orificium*, an opening], 1. the external opening at the end of the anal canal. 2. the anus, surrounded by the anal sphincter muscle.

anal pecten, the corrugated epithelium within the anal transitional zone between the pectinate line and the anocutaneous line.

anal personality. See **anal character**.

anal phase. See **anal stage**.

anal plug, a mass of epithelial cells that temporarily occludes the anal canal in the embryo.

anal reflex, a superficial neurological reflex obtained by stroking the skin or mucosa of the region around the anus, which normally results in a contraction of the external anal sphincter. This reflex may be lost in disease of the pyramidal tract above the upper lumbar spine level (S3-S4). See also **superficial reflex**.

anal region, the part of the perineal region that surrounds the anus.

anal sadism, (in psychoanalysis) a sadistic form of anal eroticism, manifested by such behavior as aggressiveness and selfishness. Compare **oral sadism**.

anal sphincter, either of two sphincters (the internal and external anal sphincters) that open and close to control the evacuation of feces from the anus.

anal stage, (in psychoanalysis) the period in psychosexual development, occurring between 1 and 3 years of age, when preoccupation with the function of the bowel and the sensations associated with the anus are the predominant source of pleasurable stimulation. Adult patterns of behavior associated with fixation on this stage include extreme neatness, orderliness, cleanliness, perfectionism, and punctuality or their extreme opposites. Also called **anal phase**. See also **anal character**, **psychosexual development**.

anal stenosis. See **imperforate anus**.

anal verge [L, *anus* + *vergere*, to bend], the area between the anal canal and the perianal skin.

analysand /ənəl'īzənd/, a person undergoing psychoanalysis.

analysis /ənəl'īzəs/ [Gk, *ana* + *lyein*, to loosen], 1. the separation into component parts. 2. the separation of substances into their constituent parts and the determination of the nature, properties, and composition of compounds. See also **qualitative analysis**, **quantitative analysis**. 3. an informal term for **psychoanalysis**. —**analytic**, adj, **analyze**, v.

analysis of variance (ANOVA), a series of statistical procedures for comparing differences among three or more groups, rather than testing each pair of means separately, to determine if differences are due to chance. It is accomplished by examining the differences within the groups as well.

analyst /ən'əlist/, 1. a psychoanalyst. 2. a person who analyzes the chemical, physical, or other properties of a substance or product.

analyte /ən'əlit/, any substance that is measured. The term is usually applied to a component of blood or another body fluid.

analytic chemistry, a branch of chemistry that deals with identifying (qualitative chemistry) and measuring (quantitative chemistry) the components of chemical compounds or mixtures of compounds.

analytic psychology /ən'əlīt'ik/, 1. the system in which phenomena such as sensations and feelings are analyzed and classified by introspective rather than by experimental methods. Compare **experimental psychology**. 2. also called

Jungian psychology, a system of analyzing the psyche according to the concepts developed by Carl Gustav Jung. It differs from the psychoanalysis of Sigmund Freud in stressing a collective unconscious and a mystic, religious factor in the development of the personal unconscious while minimizing the role of sexual influence on early emotional and psychological development.

analyze. See **analysis**.

analyzing /ən'əlīzɪng/, (in five-step nursing process) a category of nursing behavior in which the health care needs of the client are identified and the goals of care are defined. The nurse interprets data; identifies problems (nursing diagnoses) involving the patient, the patient's family, and significant others; defines goals and establishes priorities; integrates the information; and projects the expected outcomes of nursing interventions. Although analyzing follows assessing and precedes planning in the five steps of the nursing process, in practice, it is integral to effective nursing practice at all steps of the process. See also

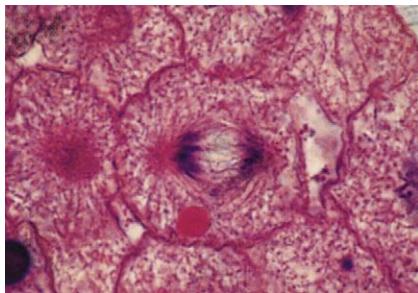
assessing, evaluating, implementing, nursing process, planning.

anamnesis /an'amnē'sis/ [Gk, *anamimneskein*, to recall], 1. remembrance of the past. 2. the accumulated data concerning a medical or psychiatric patient and the patient's background, including family, previous environment, experiences, and particularly, recollections, for use in analyzing his or her condition. Compare **catamnesis**.

anamnestic /an'amnēst'ik/, 1. pertaining to amnesia or memory. 2. pertaining to the immunological memory and the immune response to an antigen to which immunocompetent cells have been exposed. 3. pertaining to the current or previous medical history of a patient.

ANA-PAC, abbreviation for **American Nurses Association-Political Action Committee**.

anaphase /an'əfāz/ [Gk, *ana* + *phainein*, to appear], the third of four stages of division of the nucleus in mitosis and in each of the two divisions of meiosis. In anaphase of mitosis and of the second meiotic division, the centromeres divide, and the two chromatids, which are arranged along the equatorial plane of the spindle, separate and move to the opposite poles of the cell, forming daughter chromosomes. In anaphase of the first meiotic division, the pairs of homologous chromosomes separate from each other and move intact to the opposite poles of the cell. See also **cytokinesis, interphase, meiosis, metaphase, mitosis, prophase, telophase**.



Anaphase (© Ed Reschke; used with permission)

anesthesia /ənäfē·ə/, an inability to perceive tactile stimuli.

anaphoresis, (in electrophoresis) the movement of anions in a solution or suspension toward the anode.

anaphylactic. See **anaphylaxis**.

anaphylactic hypersensitivity /an'əfilak'tik/ [Gk, *ana*, up, *phylaxis*, protection], an immediate, systemic hypersensitivity reaction to an exogenous antigen mediated by immunoglobulin E or G. It can be triggered by many substances, including drugs, especially penicillin and other antibiotics; foreign proteins used as therapeutic agents such as insulin, vaccines, allergen extracts, and muscle relaxants; insect venom, especially from bees, wasps, hornets, and fire ants; and certain foods such as shellfish, berries, chocolate, eggs, and nuts. Also called **type I hypersensitivity**. Compare **cell-mediated immune response, cytotoxic anaphylaxis, immunocomplex hypersensitivity**. See also **anaphylactic shock**.

anaphylactic reaction [Gk, *ana*, *phylaxis*, protection; L, *re, agere*, to act], an acute allergic response involving IgE-mediated, antigen-stimulated mast cell activation resulting in histamine release. Exposure to the antigen may result in dyspnea, airway obstruction, shock, urticaria, and in some

cases, death. Anaphylactic reactions may be caused by bee stings, foods, allergen extract, medications, or exercise. Rapid administration of subcutaneous epINEPHrine is the treatment of choice for severe reactions.

anaphylactic shock, a severe and sometimes fatal systemic allergic reaction to an allergen, such as a drug, vaccine, specific food, serum, allergen extract, insect venom, or chemical. This condition may occur within seconds to minutes from the time of exposure to the allergen and is commonly marked by respiratory distress and vascular collapse. The quicker the systemic atopic reaction in the individual after exposure, the more severe the associated shock is likely to be.

■ **OBSERVATIONS:** The first symptoms are intense anxiety, weakness, and a feeling of impending doom. Sweating and dyspnea may occur. These are followed, often quickly, by pruritus and urticaria. Other symptoms include hypotension, shock, arrhythmia, respiratory congestion, edema of the glottis, nausea, and diarrhea.

■ **INTERVENTIONS:** Treatment requires the immediate intramuscular or subcutaneous injection of epINEPHrine, with vigorous massage of the injection site to ensure faster distribution of the drug. The airway is maintained, and the patient is carefully monitored for signs of edema of the glottis, which may require the insertion of an endotracheal tube or a cricothyrotomy and oxygen therapy. The signs of edema of the glottis include stridor, hoarseness, and dyspnea. Cardio-pulmonary resuscitation is indicated in cardiac arrest.

■ **NURSING CONSIDERATIONS:** Nursing care requires appropriate emergency treatment and close monitoring for respiratory distress, hypotension, and decreased circulatory volume. Patients with a history of severe allergic reactions are instructed to avoid offending allergens; some patients must carry emergency anaphylaxis kits, such as an EpiPen Auto-Injector containing injectable epINEPHrine.

anaphylactoid purpura. See **Henoch-Schönlein purpura**.
anaphylatoxin /an'əfilä'tok'sin/, a fragment (C3a, C4a, or C5a) that is produced during the pathways of the complement system. Along with other mechanisms, it mediates changes in mast cells leading to the release of histamine and other immunoreactive or inflammatory reactive substances. If the degranulation of mast cells is too strong, it can cause allergic reactions.

anaphylaxis /an'əfilak'sis/ [Gk, *ana* + *phylaxis*, protection], an exaggerated, life-threatening hypersensitivity reaction to a previously encountered antigen. It is mediated by antibodies of the E or G class of immunoglobulins and results in the release of chemical mediators from mast cells. The reaction may consist of a localized wheal-and-flare reaction of generalized itching, hyperemia, angioedema, and in severe cases vascular collapse, bronchospasm, and shock. The severity of symptoms depends on the original sensitizing dose of the antigen, the number and distribution of antibodies, and the route of entry and dose of subsequently encountered antigen. Penicillin injection is the most common cause of anaphylactic shock. Insect stings, radiopaque contrast media containing iodide, aspirin, anti-toxins prepared with animal sera, and allergens used in testing and desensitizing patients who are hypersensitive also produce anaphylaxis in some individuals. Kinds of anaphylaxis are **aggregate anaphylaxis, antiserum anaphylaxis, cutaneous anaphylaxis, cytotoxic anaphylaxis, indirect anaphylaxis, and inverse anaphylaxis**. —**anaphylactic, adj.**

■ **OBSERVATIONS:** Manifestations can range from mild to severe. Mild symptoms include queasiness, anxiety, urticaria,

itching, flushing, sneezing, nasal congestion, runny nose, cough, conjunctivitis, abdominal cramps, and tachycardia. Moderate reactions include a range of symptoms, including malaise; urticaria; pulmonary congestion; dyspnea, wheezing, and bronchospasm; hoarseness; edema of the periorbital tissue and/or tongue, larynx, and pharynx; dysphagia; nausea; vomiting; diarrhea; hypotension; syncope; and confusion. Severe anaphylaxis presents with pallor and cyanosis, stridor, airway obstruction, and hypoxia. If not treated immediately, respiratory arrest, cardiac arrhythmia, circulatory collapse, seizures, coma, and death rapidly ensue.

■ **INTERVENTIONS:** Treatment centers on immediate and aggressive management of emerging symptoms. Maintaining the airway and blood pressure is critical. EpINEPHrine and other drugs are used to counteract effects of mediator release and to block further mediator release. Vasoconstrictors are used to maintain blood pressure. Intubation or tracheostomy may be necessary to maintain an airway.

■ **NURSING CONSIDERATIONS:** The patient suffering an allergic reaction needs careful monitoring for signs of respiratory distress, hypotension, and decreased circulatory volume. Nursing interventions for anaphylactic shock center on the promotion of adequate ventilation and tissue perfusion. Airway needs are maintained, vital signs are monitored for hypotension, blood gases are monitored for acidosis, ECG is monitored for dysrhythmias, and fluid volume is replaced with IV solutions. Education about prevention of future attacks should include instruction in prophylaxis, such as avoiding known allergens, wearing a Medic Alert bracelet or necklace that identifies allergies, and ensuring that all medical records have allergies highlighted in a prominent place. Those with severe allergic reactions should consider carrying an anaphylaxis kit with preloaded epINEPHrine syringes.



EpiPen used for anaphylaxis (Bonewit-West, 2012)

anaphylaxis management, a nursing intervention from the Nursing Interventions Classification (NIC) defined as promotion of adequate ventilation and tissue perfusion for an individual with a severe allergic (antigen-antibody) reaction. See also **Nursing Interventions Classification**.

anaplasia /an'aplā'zha/ [Gk, *ana* + *plassein*, to shape], a change in the structure and orientation of cells, characterized by a loss of differentiation and reversion to a more primitive form. Anaplasia is characteristic of malignancy. Compare **aplasia**. —*anaplastic*, adj.

anaplastic astrocytoma. See **glioblastoma multiforme**.

anapnea /anap'nē-ə/ [Gk, *ana*, *pnoia*, breath], restoration of breathing after a period of halted respiration.

anapophysis /an'ə-pof'i-sis/ [Gk, *an*, not, without + *apophysis*, a growing away], an accessory vertebral process, especially one on a thoracic or lumbar vertebra.

Anaprox, a trademark for a nonsteroidal antiinflammatory drug (naproxen sodium).

anarthria /anär'thrē-ə/ [Gk, *a*, *arthron*, not joint], a loss of control of the muscles of speech, resulting in the inability to articulate words. The condition is usually caused by damage to a central or peripheral motor nerve.

anasarca /an'asär'ka/ [Gk, *ana* + *sark*, flesh], severe generalized, massive edema. Anasarca often occurs in congestive heart failure, liver failure, or renal disease. See also **edema**. —*anasarcous*, adj.

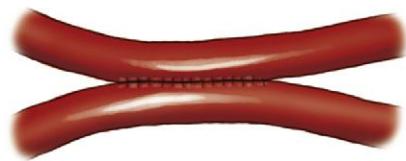
anastomosis /ənas'tōmō'sis/ pl. **anastomoses** [Gk, *anastomoiēn*, to provide a mouth]. 1. a connection between two vessels. 2. a surgical joining of two ducts, blood vessels, or bowel segments to allow flow from one to the other. A vascular anastomosis may be performed to bypass an aneurysm or a vascular or arterial occlusion. With the patient under anesthesia, a section of the greater saphenous vein or a synthetic prosthesis is grafted to the prepared vessels. Postoperative nursing care includes preventing tissue injury and wound infection. Lack of blood flow may allow the graft to close. Pulses distal to the anastomosis are evaluated frequently. Capillary refilling time and the color and temperature of the skin are checked. Prophylactic antibiotic therapy may be started within hours. Urinary output is monitored. Kinds of anastomoses are **end-to-end anastomosis**, **end-to-side anastomosis**, **side-to-side anastomosis**. See also **bypass**. —*anastomose*, v., *anastomotic*, adj.



End-to-end



End-to-side



Side-to-side

Anastomosis (LaFleur Brooks and LaFleur Brooks, 2012)

anastomosis at elbow joint, a convergence of blood vessels at the elbow joint, consisting of various veins and portions of the brachial and deep brachial arteries and their branches.

anastomotic. See **anastomosis**.

anastrozole, a nonsteroidal aromatase inhibitor.

■ **INDICATION:** It is prescribed in the treatment of advanced breast cancer for postmenopausal women whose disease has not responded to treatment with tamoxifen.

■ **CONTRAINICATION:** The drug is usually effective only in patients with estrogen-dependent tumors.

■ **ADVERSE EFFECTS:** The side effects most often reported include diarrhea, fatigue, nausea, headache, hot flashes, and back pain.

anatomical. See **anatomy.**

anatomical age, the estimated age of an individual based on the stage of development or deterioration of the body as compared with that of other persons of the same chronological age.

anatomical crown, the portion of the dentin of a tooth that is covered by enamel. Compare **clinical crown.**

anatomical curve, the curvature of the different segments of the vertebral column. In the lateral contour of the back, the cervical and lumbar curves appear concave, and the thoracic and sacral curves appear convex.

anatomical dead space. See **dead space.**

anatomical height of contour, an imaginary line that encircles a tooth at the level of greatest circumference. Also called **surveyed height of contour.** See also **height of contour.**

anatomical impotence. See **impotence.**

anatomical incontinence, urinary incontinence associated with instability or excessive mobility of the bladder neck and adjacent urethra.

anatomical neck of the humerus [Gk, *ana*, up, *temnein*, to cut; AS, *hnecca*; L, *humerus*, shoulder], the portion of the humerus where there is a slight constriction adjoining the head.

anatomical pathology [Gk, *ana*, up, *temnein*, to cut, *pathos*, disease, *logos*, science], the study of the effects of disease on the structure of the body.

anatomical position, a standard position of the body: standing erect, facing directly forward, feet pointed forward and slightly apart, and arms hanging down at the sides with palms facing forward. This position is used as a reference to describe sites or motions of various parts of the body.

anatomical snuffbox, a small, cuplike depression on the back of the hand near the wrist formed by the three tendons reaching toward the thumb and index finger as the thumb is abducted and extended.

anatomical topography [Gk, *ana* + *temnein*, to cut, *topos*, place, *graphein*, to write], a system of identification of a body part in terms of the region in which it is located and its nearby structures.

anatomical zero joint position, the beginning point of a joint range of motion.

anatomy /ənət'əmē/ [Gk, *ana* + *temnein*, to cut], 1. the study, classification, and description of structures and organs of the body. 2. the structure of an organism. See also **applied anatomy, comparative anatomy, gross anatomy, microscopic anatomy, surface anatomy.** Compare **physiology.** —**anatomical, adj.**

anatrisis /ən'ətrɪsɪs/, a therapy that involves rubbing or friction with or without a simultaneous application of a medicine.

ANC, 1. abbreviation for **absolute neutrophil count.** 2. abbreviation for **Army Nurse Corps.**

ANCA, abbreviation for **antineutrophil cytoplasmic antibody.**

-ance. See **-ency.**

Ancef, a trademark for a semisynthetic cephalosporin antibiotic (**cefazolin sodium**).

ancestor [L, *antecessorem*], one from whom a person is descended, through the mother or the father. The term

assumes a direct line of descent, excluding collateral family members of previous generations.

anchorage [Gk, *agkyra*, anchor], surgical fixation of a movable body part.

ancillary /ən'sələrē/ [L, *ancillaris*, handmaid], pertaining to something that is subordinate, auxiliary, or supplementary.

Ancobon, a trademark for an antifungal (**flucytosine**).

anconeus /əngkō'nē-əs/ [Gk, *agkon*, elbow], one of seven superficial muscles of the posterior forearm. A small triangular muscle, it originates on the dorsal surface of the lateral condyle of the humerus and inserts in the olecranon. It functions to extend the forearm and abduct the ulna in pronation.

ancrod /ang'krod/, the venom of the Malayan pit viper, used to remove fibrinogen from the circulation, to prevent blood clotting. Also called **Malayan pit viper venom.**

-ancy. See **-ency.**

ancylo-, aencyl-, anchyl-, anchylo-, ankylo-, ankyl-, combining forms meaning 'bent or crooked, curved, stiff, fixed': *ancylostomiasis, ankylosis.*

Ancylostoma /ang'kilos'təmə/ [Gk, *angkylos*, crooked, *stoma*, mouth], a genus of nematode that is an intestinal parasite and causes hookworm disease. See also **Necator americanus.**

ancylostomiasis /ən'sələs'təmī'əsɪs/, hookworm disease, more specifically that caused by **Ancylostoma duodenale**, **A. braziliense**, or **A. caninum**. Infection by *A. duodenale* is generally more harmful and less responsive to treatment than that by *Necator americanus*, which is the hookworm most often found in the southern United States. Larvae enter the host via the skin; the adult worm lives in the intestine. The adult worms abrade the intestinal wall, eventually causing severe anemia and debilitation. Heavy infection can cause serious health complications for pregnant women, neonates, children, and the malnourished. Clinical manifestations and treatment are similar for all types of hookworms. Infection may be prevented by eliminating fecal pollution of soil and by wearing shoes. See also **hookworm.**

Andersen's disease [Dorothy Hansine Andersen, American pediatrician and pathologist, 1901–1963], a rare glycogen storage disease characterized by a genetic deficiency of branching enzyme (alpha-1:4, alpha 1:6 transglucosidase), causing the deposition in tissues of abnormal glycogen with long inner and outer chains. Infants with the disease are normal at birth but fail to thrive and soon show hepatomegaly, splenomegaly, and hypotonia of muscle associated with the progressive development of cirrhosis or heart failure of unknown mechanisms. Diagnosis is by enzyme assays of leukocytes and fibroblasts. There is no specific therapy for the disease, which is usually fatal in the first few years of life. Also called **amylopectinosis, brancher glycogen storage disease, glycogen storage disease type IV.**

Andersen's syndrome, Andersen's triad, bronchiectasis, cystic fibrosis, and vitamin A deficiency.

Anderson-Hynes pyeloplasty. See **dismembered pyeloplasty.**

-andr-, a combining form designating an androgen (steroid hormone).

andrioma, androblastoma. See **arrenoblastoma.**

andro, andr-, prefixes meaning 'man or male': *androgen, androsterone.*

androgamone /ən'drōgām'ōn/ [Gk, *andros*, man, *gamos*, marriage], a chemical secreted by male gametes that is believed to attract female gametes.

androgen /an'drōjēn/ [Gk, *andros* + *genein*, to produce], any steroid hormone that increases male characteristics. Natural hormones, such as testosterone and its esters and analogs, are primarily used as substitution therapy. —*androgenic, adj.*

androgenetic alopecia, a progressive, diffuse, symmetric loss of scalp hair. In men it begins in the 20s or early 30s with hair loss from the crown and the frontal and temple regions, ultimately leaving only a sparse peripheral rim of scalp hair (**male pattern alopecia**). In females it begins later, with less severe hair loss in the frontal area of the scalp. In affected areas, the follicles produce finer and lighter terminal hairs until terminal hair production ceases, with lengthening of anagen and shortening of telogen of the hair cycle. The cause is unknown but is believed to be a combination of genetic factors and increased response of hair follicles to androgens.

androgynous /androjī'nəs/, 1. (of a man or woman) having some characteristics of both sexes. Social role, behavior, personality, and appearance are reflections of individuality and are not determined by gender. 2. hermaphroditic. Compare **gynandrous**. —*androgyny, n.*

android [Gk, *andros* + *eidos*, form], pertaining to something that is typically masculine, or manlike, such as an android pelvis.

android obesity, obesity in which fat is localized around the waist and in the upper body, most frequently seen in men and having a poorer prognosis for morbidity and mortality than the gynecoid type. Compare **gynecoid obesity**.

android pelvis, a type of pelvis with a structure characteristic of the male. It is also common in women. The bones are thick and heavy, and the pelvic inlet is heart-shaped. The sacrum inclines anteriorly, the side walls are convergent, and the pubic arch is small. The diameters of the midplane and the pelvic outlet are smaller than in the normal gynecoid pelvis. Vaginal delivery is likely to be difficult unless the overall pelvis is large and the fetus small. See also **pelvis**. Compare **gynecoid pelvis**.

andrology /androl'ōjē/ [Gk, *andros*, man, *logos*, science], the study of the health of males.

androma. See **arrhenoblastoma**.

andropause /an'drōpōs/, a change of life for males that may be expressed in terms of a career change, divorce, or reordering of life. It is associated with a decline in androgen levels that occurs in men during their late 40s or early 50s. Compare **menopause**.

androstenedione test, a blood test used to identify the presence of androstenedione, a precursor of testosterone, which may be used orally by some athletes to enhance performance or increase body bulk.

androsterone /andros'terōn/ [Gk, *andros* + *stereos*, solid], a male sex hormone, originally believed to be the principal male sex hormone. It is used less frequently in therapy since the discovery of testosterone.

-ane, a suffix designating a saturated hydrocarbon of the methane series: *butane*, *propane*.

anecdotal /an'ekdot'əl/ [Gk, *anekdotos*, unpublished], pertaining to knowledge based on isolated observations and not yet verified by controlled scientific studies.

anecdotal record, a medical finding usually based on one or a few observed episodes of patient care, as distinguished from results compiled in a large-scale scientific or systematic study.

anechoic /an'ekō'ik/, (in ultrasonography) free of echoes.

Anectine, a trademark for a depolarizing neuromuscular blocking agent (**succinylcholine chloride**).

anejaculation, a failure of ejaculation of semen from the urinary meatus during coitus.

anemia /ənē'mē-ə/ [Gk, *a* + *haima*, without blood], inadequate tissue oxygenation. Usually caused by inadequate blood oxygen-carrying capacity. Anemia may be secondary to a decreased erythrocyte count, a decrease in quality hemoglobin to below the reference interval of 12 to 16 g/dL for women and 13.5 to 18 g/dL for men. Anemia may be caused by a decrease in erythrocyte production, an increase in erythrocyte destruction, or a loss of blood. A morphological classification system describes anemia by the hemoglobin content of the erythrocytes (normochromic or hypochromic) and by differences in erythrocyte size (macrocytic, normocytic, or microcytic). Any one of three tests (hemoglobin, hematocrit, or red blood cell count) can be used to diagnose anemia. Also spelled **anaemia**. See also **hemolytic anemia**, **hypoplastic anemia**, **iron deficiency anemia**, **iron metabolism**.

—*anemic, adj.*

■ **OBSERVATIONS:** Signs and symptoms include fatigue, exertional dyspnea, dizziness, headache, insomnia, pallor, confusion, or disorientation. Anorexia, dyspepsia, palpitations, tachycardia, cardiac dilation, and systolic murmurs also may occur. Iron deficiency is the most common cause. Additional laboratory studies may be required to establish the less common forms of anemia.

■ **INTERVENTIONS:** The therapeutic response to anemia is variable and depends on the causative factors. Moderate to severe anemia, with hemoglobin levels that are below 7 to 8 g/dL, may require transfusion of one or more units of packed red blood cells, especially if the condition is acute and specific clinical signs are present. Depending on the kind of anemia, treatment includes providing supplements of the deficient component, eliminating the cause of the blood loss, or alleviating the hemolytic component. The latter may involve administration of adrenal corticosteroids or splenectomy. Appropriate laboratory tests are repeated at intervals to monitor the response and need for continued therapy. Erythropoietin injections may be used to stimulate erythrocyte production when anemia is secondary to chronic renal failure, the anemia of chronic disease, or chemotherapy.

-anemia, -anaemia, -nemia, suffixes meaning '(condition of) erythrocyte deficiency': *achlyanemia*, *melanemia*.

anemia of chronic disease, a decrease in the erythrocyte count as a result of a chronic inflammatory state.

anemia of pregnancy, a condition of pregnancy characterized by a reduction in the concentration of hemoglobin in the blood. It may be physiological or pathological. In physiological anemia of pregnancy, the reduction in concentration results from dilution because the plasma volume expands more than the erythrocyte volume. The hematocrit in pregnancy normally drops several points below its pregnancy level. In pathological anemia of pregnancy, the oxygen-carrying capacity of the blood is deficient because of disordered erythrocyte production or excessive loss of erythrocytes through destruction or bleeding. Pathological anemia is a common complication of pregnancy, occurring in approximately half of all pregnancies. Disordered production of erythrocytes may result from nutritional deficiency of iron, folic acid, or vitamin B₁₂ or from sickle cell or another chronic disease, malignancy, chronic malnutrition, or exposure to toxins. Destruction of erythrocytes may result from inflammation, chronic infection, sepsis, autoimmune diseases, microangiopathy, or a hematologic disease in which the erythrocytes are abnormal. Excessive loss of erythrocytes through bleeding may

result from abortion, bleeding hemorrhoids, intestinal parasites such as hookworm, placental abnormalities such as placenta previa and abruptio placentae, or postpartum uterine atony.

anemic. See **anemia**.

anemic anoxia, a condition characterized by an oxygen deficiency in body tissues, resulting from a decrease in the number of erythrocytes or in the amount of hemoglobin in the blood.

anemic infarct. See **pale infarct**.

anemo-, a prefix meaning ‘wind’: *anemophobia*.

anencephalus /an'ĕn-sēf'ə-ləs/, an infant with anencephaly.

anencephaly /an'ĕn'sef'ālē/ [Gk, *a* + *en*cephalos, without brain], a neural tube defect in which absence of major portions of the brain and malformation of the brainstem occur. The cranium does not close and the vertebral canal remains a groove. It is thought to be caused by a combination of genetic and environmental factors. Anencephaly is not compatible with life. It can be detected early in gestation by amniocentesis and analysis or by ultrasonography. Recent research has shown that a diet rich in folic acid may reduce the incidence of neural tube defects. See also **neural tube defect**.

—*anencephalous*, adj.



Anencephaly (Kumar, Cotran, and Robbins, 2003)

anephric /ă-nĕfrĭk/ [Gk, *a*, *nephros* without kidney], without kidneys.

anephrogenesis /ă-nĕf'rōjĕn'ĕsĭs/ [Gk, *a*, without, *nephros*, kidney, *genein*, to produce], the condition of being born without kidneys.

anergia /ă-nĕr'jēə/, 1. a condition of lethargy or lack of physical activity. 2. a diminished or absent sensitivity to commonly used test antigens.

aneroid /ă-nĕr'oid/, not containing a liquid. The term is used especially to describe a device that does not contain liquid, but that performs the same function as a similar device containing liquid. An example is **aneroid barometer**.

aneroid barometer, a device consisting of a flexible spring in a sealed, evacuated metal box that is used to measure atmospheric pressure. It is less accurate than a mercury barometer and is generally used for nonscientific work.

Anestacon, a trademark for a local anesthetic jelly (2% **lidocaine hydrochloride**) used for endourethral and endotracheal procedures.

anesthesia (A) /ă-nĕsthē'zēə/ [Gk, *anaesthesia*, lack of feeling], the absence of all sensation, especially sensitivity to pain, as induced by an anesthetic substance, by hypnosis, or as occurs with traumatic or pathological damage to nerve tissue. Anesthesia induced for medical or surgical purposes may be topical, local, regional, or general

and is named for the anesthetic technique or method. Also spelled **anaesthesia**. See also specific anesthetic agents.

—*anesthetize*, v.

anesthesia administration, a nursing intervention from the Nursing Interventions Classification (NIC) defined as preparation for and administration of anesthetic agents and monitoring of patient responsiveness during administration. See also **Nursing Interventions Classification**.

anesthesia machine, an apparatus for administering inhalation anesthetic gases and vapors and for controlling ventilation. Although there are many different models, all have the following features: a delivery system for medical gases, a flowmeter to measure fresh gas flow (such as medical air, oxygen, nitrous oxide), vaporizers for volatilizing and combining the anesthetic agents with oxygen and other carrier gases, a circuit for delivering the gas to and from the patient, monitoring equipment or gauges, a ventilator, and a scavenging system to collect and discharge excess waste gas. It has multiple systems for detecting and alerting clinicians to potentially dangerous conditions.

anesthesia patients, classification of, a system developed by the American Society of Anesthesiologists used to classify patients within six categories defined by physical health status, regardless of whether the health problems are related to the condition requiring anesthesia. Class I includes patients who are healthy and who are without organic, physiological, biochemical, or psychiatric problems. Class II includes patients who have mild to moderate systemic disease that does not limit activity, such as anemia, mild diabetes, moderate hypertension, obesity, or chronic bronchitis. Class III includes patients who have significant systemic disturbances or disease that limits their activity. Class IV includes patients who have severe systemic disease that is a constant threat to life. Class V includes the moribund patient who is not expected to survive more than 24 hours with or without surgical intervention, such as a person in shock with a ruptured abdominal aneurysm or a massive pulmonary embolus. Class VI includes brain-dead patients who are undergoing organ harvest for donation. The letter E is added to the Roman numeral to indicate an emergency procedure that may preclude typical anesthesia preparation, such as nothing-by-mouth status.

anesthesia screen, a metal frame on upright poles that is used to suspend a sterile barrier separating the surgical field from the anesthetist’s access to the patient. Also called **ether screen**.

anesthesia technician, an operating area employee who is skilled and knowledgeable in the supply and maintenance of anesthesiology-related materials and equipment.

anesthesiologist /ă-nĕsthē'zē-ol'ĕ-jist/, a physician who completes an accredited residency program in anesthesiology. Anesthesiologists may administer anesthesia directly or as part of an anesthesia team consisting of nurse anesthetists or anesthesiologist’s assistants. Compare **nurse anesthetist**.

anesthesiologist assistant (AA), an allied health professional who, under the supervision of a licensed anesthesiologist, assists in developing and implementing the anesthesia care plan. Duties may include collecting preoperative data, such as taking an accurate health history and performing an appropriate physical assessment; performing various preoperative tasks, such as the insertion of IV and arterial lines, central venous pressure monitors, and special catheters and performing other functions and tasks relating to care under the guidance of a registered nurse with

Types of anesthesia

Type	Expected result	Method of administration	Risks
Local	Blocked sensation from peripheral nerves Blocked conduction of pain impulses in peripheral nerves	Administration of anesthetic agent to specific area of body by topical application or local infiltration	Allergic reaction Toxicity Cardiac or respiratory arrest Anxiety resulting from patient's "awake" state Infection
Regional Spinal	Analgesia Anesthesia Muscle relaxation	Anesthetic agent injected into cerebrospinal fluid (CSF) in subarachnoid space	Hypotension Total spinal anesthesia (inadvertent high level of spinal anesthesia, causing respiratory arrest and complete paralysis) Neurological complications (tinnitus, arachnoiditis, meningitis, hematoma, paresthesias, bowel/bladder dysfunction, paralysis) Headache Infection
Epidural	Analgesia Anesthesia Muscle relaxation	Anesthetic agent injected into epidural space	Dural puncture Intravascular injection with possible convulsions, hypotension, cardiac arrest Hypotension Total spinal anesthesia Neurological complications Hematoma Infection
Nerve block	Anesthesia of selected nerve	Local anesthetic injected around peripheral nerve	Inadvertent intravascular injection Nerve damage
Bier block	Anesthesia of extremity (usually used on upper extremity)	Anesthetic agent injected into veins of arm or leg while using pneumatic tourniquet	Infection Pain from tourniquet Overdose or toxicity of anesthetic agent
Minimal sedation	Sedation Anxiolysis Respiratory and cardiac function unaffected	Intravenous	Potential for impaired cognitive function and coordination
Moderate sedation and analgesia	Ability to maintain independent cardiorespiratory function Decreased level of consciousness Ability for purposeful responses to verbal and tactile stimuli Sedation Analgesia Amnesia Anxiolysis Rapid, safe return to activities of daily living	Intravenous May or may not have anesthesia provider in attendance Registered nurse often responsible for patient monitoring	Oversedation Respiratory depression, apnea Airway obstruction Hypotension Aspiration
Deep sedation and analgesia	Depressed consciousness Ability to respond purposefully after repeated or painful stimulation	Intravenous	Airway obstruction Inability to maintain spontaneous ventilation May require ventilatory support
General	Reversible unconsciousness Analgesia Anesthesia Amnesia Muscle relaxation (immobility) Depression of reflexes	Inhalation Intravenous	Oral or dental injury Cardiac or respiratory arrest Residual muscle paralysis Hypertension Hypotension Hypothermia Hyperthermia Renal dysfunction Neurological dysfunction

Adapted from Monahan FD et al: *Phipps' medical-surgical nursing: health and illness perspectives*, ed 8, St Louis, 2007, Mosby.

expertise in preanesthesia care; managing the airway and administering drugs for induction and maintenance of anesthesia; administering supportive therapy, such as IV fluids and vasodilators; providing postanesthesia care; providing anesthesia monitoring services; and performing administrative and educational functions and tasks. Anesthesiologist assistants are licensed in only a few states and territories in the United States and some countries in the European Union.

anesthesiology /əl'ējē/, the branch of medicine that is concerned with the study and practice of anesthesia. It is a specialty requiring competency in general medicine, a broad understanding of surgical procedures, and a comprehensive knowledge of clinical obstetrics, chest medicine, neurology, pediatrics, pharmacology, biochemistry, cardiology, and cardiac and respiratory physiology. See also **anesthesiologist**, **nurse anesthetist**.

anesthetic, a drug or agent used to abolish the sensation of pain, to achieve adequate muscle relaxation during surgery, to calm fear and allay anxiety, and to produce amnesia for the event.

anesthetist /ən'es'thēst/, a general term used to describe a health care professional trained to administer anesthesia. Also spelled **anaesthetist**. See also **certified registered nurse anesthetist**.

anesthetize, to induce a lack of feeling or sensation. See **anesthesia**.

anetoderma /an'ētōdūr'mə/ [Gk, *anētos*, relaxed, *derma*, skin], an idiopathic clinical change produced by focal damage to elastin fibers that results in looseness of the skin. There is no known effective treatment.



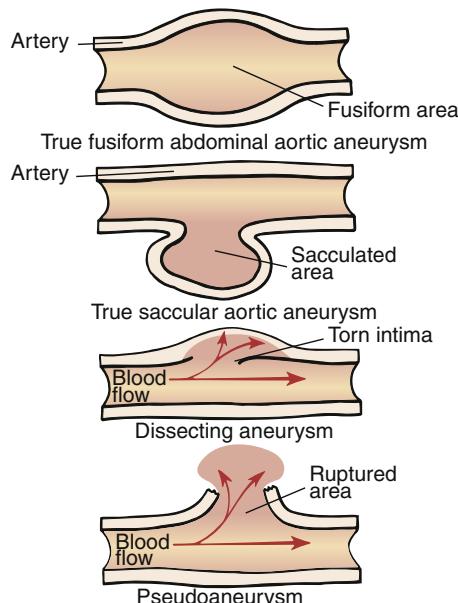
Anetoderma (White and Cox, 2006)

aneuploid /ān'yōōploid/ [Gk, *a*, *eu*, not good, *ploos*, fold, *eidos*, form], 1. an individual, organism, strain, or cell that has a chromosome number that is not an exact multiple of the haploid number characteristic of the species. 2. also **aneuploidic**, pertaining to such an individual, organism, strain, or cell. Compare **euploid**. See also **monosomy**, **trisomy**.

aneuploidy /ān'yōōploidē/, any variation in chromosome number that involves individual chromosomes rather than entire sets of chromosomes. There may be fewer chromosomes, as in Turner's syndrome (one X chromosome in females), or more chromosomes, as in Down syndrome (three copies of chromosome 21). Such individuals have various abnormal physiological and morphological traits. Compare **euploidy**. See also **chromosomal aberration**, **monosomy**, **trisomy**.

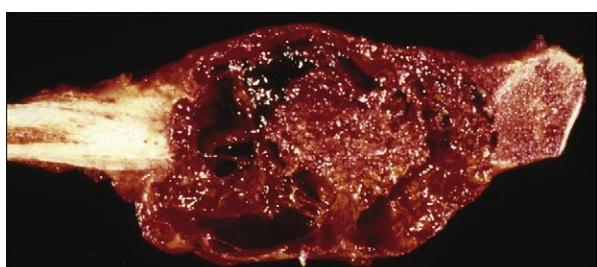
aneurysm /ān'yōōriz'əm/ [Gk, *aneurysma*, widening], a localized dilation of the wall of a blood vessel. It may be caused by atherosclerosis and hypertension, or less frequently, by trauma, infection, or a congenital weakness in

the vessel wall. Aneurysms are common in the aorta but also occur in peripheral vessels, especially in the popliteal arteries of older people. A sign of a large arterial aneurysm is a pulsating swelling that produces a blowing murmur on auscultation. Small aneurysms may produce no sound at all. An aneurysm may rupture, causing hemorrhage, or thrombi may form in the dilation and give rise to emboli that may obstruct smaller vessels. Aneurysms are usually named by the area in which they occur. Kinds of aneurysms include **aortic**, **bacterial**, **berry**, **cerebral**, **compound**, **dissecting**, **fusiform**, **mycotic**, **racemose**, **Rasmussen's**, **saccular**, **varicose**, and **ventricular aneurysm**. Also called **vascular tumor**. See also **pseudoaneurysm**. —*aneurysmal*, adj.



Aneurysms (Lewis et al, 2011)

aneurysmal bone cyst, a cystic lesion that tends to develop in the metaphyseal region of long bones but may occur in any bone, including a vertebra. It may produce pain and swelling and generally increases in size gradually. Skin temperature around the bone may increase. It is usually removed surgically, but radiation may be used in cases when the tumor is not readily accessible.



Aneurysmal bone cyst involving the proximal fibula (Silverberg et al, 2006)

aneurysmal thrill, a vibration that can be felt over an aneurysm. In arterial aneurysms, the vibration is felt only in systole, but in arteriovenous aneurysms, it is felt during both systole and diastole.

aneurysmal varix [Gk, *aneurysma*, a widening; L, *varix*, a dilated vein], a varicose vein in which the enlargement is

due to an acquired communication with an adjacent artery. Also called **aneurysmoid varix**.

aneurysmectomy, the surgical removal of an aneurysm. **aneurysm needle**, a needle equipped with a handle, used to ligate aneurysms.

ANF, 1. abbreviation for *American Nurses Foundation*.
2. abbreviation for *Australian Nursing Federation*.

angel dust. See **phencyclidine hydrochloride**.

angelica, an herb that belongs to the parsley family and is grown in Iceland and several other northern areas.

■ **USES:** Angelica is possibly safe and effective when prepared as a tea for the treatment of heartburn, colic, poor blood flow to the extremities, bronchitis, poor appetite, psoriasis, and vitiligo. It is also used as an antiseptic.

■ **CONTRAINDICATIONS:** It contains furocoumarin derivatives, which make it unsafe for oral use or in extracts. Angelica should not be used during pregnancy and lactation or in children; it should be used only with caution in people with diabetes or bleeding disorders.

Angelman's syndrome /ān'jol-mənz/, [Harry Angelman, English physician, 1915–1996], an autosomal-recessive syndrome characterized by jerky puppetlike movements, frequent laughter, mental and motor retardation, a peculiar open-mouthed facial expression, and seizures. It can be caused by a deletion on chromosome 15 inherited from the mother; the same deletion inherited from the father causes **Prader-Willi syndrome**.

anger [L, *angere*, to hurt], an emotional reaction characterized by extreme displeasure, rage, indignation, or hostility. It is considered to be of pathological origin when such a response does not realistically reflect a person's actual circumstances. However, expressions of anger vary widely in different individuals and cultures and may be considered functional under certain controlled circumstances.

anger control assistance, a nursing intervention from the Nursing Interventions Classification (NIC) defined as facilitation of the expression of anger in an adaptive, nonviolent manner. See also **Nursing Interventions Classification**.

angi-. See **angio-**.

angiitis /anjē-tī'sis/ [Gk, *angeion*, vessel, *itis*], an inflammation of a vessel, chiefly a blood or lymph vessel. See also **vasculitis**.

angina /anjī'nə, an'jī'nə/ [L, *angor*, quinsy (strangling)], 1. a spasmotic, cramplike choking feeling resulting from insufficient oxygen supply to the myocardium, commonly caused by coronary artery disease. 2. See **angina pectoris**. 3. characterized by a feeling of choking, suffocation, or crushing pressure and pain. Kinds of angina are **decubitus**, **intestinal**, **Ludwig's**, **preinfarction**, **Prinzmetal's**, **stable**, **streptococcal** and **unstable**. —*anginal*, adj.

-angina, a suffix meaning 'severe ulceration, usually of the mouth or throat.'

angina pectoris, a paroxysmal thoracic pain caused most often by myocardial anoxia as a result of atherosclerosis or spasm of the coronary arteries. The pain usually radiates along the neck, jaw, and shoulder and down the inner aspect of the left arm. It is frequently accompanied by a feeling of suffocation and impending death. Attacks of angina pectoris are often related to exertion, emotional stress, eating, and exposure to intense cold, but unstable angina can occur in the absence of a stimulus or exertion. The pain may be relieved by rest and vasodilation of the coronary arteries by medication, such as nitroglycerin. Also called **cardiac pain**.

■ **OBSERVATIONS:** The chief symptom of stable angina is a highly variable, transient, substernal pain that typically starts with physical or emotional exertion and subsides with rest. It may range from a vague ache to an intense crushing sensation. Radiation to the left shoulder, arm, or jaw or to the back is common but does not occur in all cases. Attacks are

exacerbated by cold. The most severe class of angina is a constant pain even at rest. Symptom patterns tend to be consistent and stable for a given individual. Any change in symptom patterns, such as an increase in attack frequency or intensity, should be viewed as serious. Such changes are known as unstable angina and are associated with the deterioration of atherosclerotic plaque. The pain in unstable angina is frequently not fully relieved by rest. Unstable angina is often a precursor to myocardial infarction. Tests include a stress test to deliberately induce an angina attack and check for electrocardiographic (ECG) changes. A test dose of nitroglycerin is administered to evaluate the degree of pain relief. Serum lipid and cardiac enzyme levels are evaluated to screen for cardiac risk factors. Nuclear scanning, angiography, and PET may be indicated to check myocardial perfusion and determine the presence of underlying coronary artery disease (CAD).

■ **INTERVENTIONS:** The first line of treatment is aggressive modification of risk factors, such as smoking, obesity, physical inactivity, elevated lipid levels, and elevated blood pressure. Drug therapy focuses on the prevention of myocardial insufficiency and pain relief and includes nitrates, beta-blockers, and calcium channel blockers. Prophylactic aspirin and statins are given for individuals with known CAD, and aspirin and heparin are used to treat intracoronary blood clotting in unstable angina and to prevent progression to myocardial infarction. Coronary artery bypass is used for selected individuals with severe angina, localized CAD, no history of MI, and good ventricular function. Percutaneous coronary intervention may be emergently performed to compress plaque, and a stent may be placed to keep the coronary artery open. Angioplasty may be used to remove obstructive atherosclerotic lesions. Unstable angina necessitates immediate hospitalization, bed rest, and ECG monitoring for possible MI.

■ **NURSING CONSIDERATIONS:** Nursing plays a large role in reducing risk behaviors through smoking-cessation protocols, dietary modification (low-fat, low-sodium diet with complex carbohydrates and fruits), consistent aerobic exercise routines (three to four times weekly for at least 30 minutes), and stress-reduction activities. Patient education is tailored to the individual's symptom set and includes identification of precipitating factors and education to prevent or control those factors. Education about medication effects and side effects is essential. The individual should be able to recognize and report symptoms of unstable angina. Nursing intervention during an acute attack is aimed at maintaining adequate tissue perfusion and relieving pain, including assessment and monitoring of vital signs and ECG patterns, auscultation of heart and lung sounds, administration of oxygen, and prompt administration of nitrates and narcotic analgesics as needed. Rest and cessation of all activity should occur until pain subsides. The nurse should provide comfortable positioning, and supportive calm reassurance to reduce anxiety.

angina sine dolore /sē'nō dolōr'ə, sī'nē/, a painless episode of coronary insufficiency. It is associated with diabetes mellitus. See also **silent ischemia**.

angina trachealis. See **croup**.

angio-, **angi-**, **angi-**, combining forms meaning 'a vessel, usually a blood vessel': **angioblastic**, **angiitis**.

angioblast /an'jō-blast'/ [Gk, *angeion*, vessel + *blastos*, germ], 1. the mesenchymal tissue of the embryo from which the blood cells and blood vessels differentiate. 2. an individual vessel-forming cell.

angioblastic cord /an'jē-ōblas'tik/, any of the cordlike masses of splanchnic mesenchymal cells ventral to the primordial coelom. Angioblastic cords arrange themselves side by side to form the primordia of the endocardial tubes. Also called **angiogenic cell cluster**.

angioblastic meningioma, a tumor of the blood vessels of the meninges covering the spinal cord or the brain.

angioblastoma /an'jē-ōblastō'ma/ pl. *angioblastomas, angioblastomata* [Gk, *angeion*, vessel, *blastos*, germ, *oma*], a tumor of blood vessels in the brain. Kinds of angioblastomas are **angioblastic meningioma** and **cerebellar angioblastoma**.

angiocardioangiogram /an'jē-ōkār'dē-ōgrām/, a series of radiographic images produced by angiocardiography.

angiocardiography /-kār'dē-ōg'rāfē/ [Gk, *angeion* + *kardia*, heart, *graphein*, to record], the process of producing a radiograph of the heart and its great vessels. A radiopaque contrast medium is injected directly into the heart by a catheter introduced through the antecubital or femoral veins. X-ray images are taken as the contrast medium passes through the heart and great vessels. Also called **cardiac angiography**. Compare **angiography**.

angiocardiolopathy /-kār'dē-ōp'əthē/ [Gk, *angeion*, vessel, *kardia*, heart, *pathos*, disease], a disease of the blood vessels of the heart.

angiocarditis /-kārdīt'is/, an inflammation of the heart and large blood vessels.

angiocatheter /an'jē-ōkath'ētēr/, a hollow, flexible tube inserted into a blood vessel to withdraw or instill fluids.

angiochondroma /an'jē-ōkondrō'ma/ pl. *angiochondromas, angiochondromata* [Gk, *angeion* + *chondros*, cartilage, *oma*], a cartilaginous tumor characterized by an excessive formation of blood vessels.

angioedema /an'jē-ō'idē'ma/, a dermal, subcutaneous, or submucosal swelling that is acute, painless, and of short duration. It may involve the face, neck, lips, larynx, hands, feet, genitalia, or viscera. Angioedema may be hereditary or the result of a food or drug allergy, an infection, emotional stress, or a reaction to blood products. Treatment depends on the cause. Severe angioedema may require subcutaneous injections of epINEPHrine, intubation, or tracheotomy to prevent respiratory obstruction. Prevention depends on the identification and avoidance of causative factors. Also called **angioneurotic edema**. See also **anaphylaxis, serum sickness, urticaria**.



Angioedema (Callen et al, 2000)

angioendothelioma. See **hemangioendothelioma**.

angiofibroma /an'jē-ōfibrō'ma/ pl. *angiofibromas, angiofibromata* [Gk, *angeion* + L, *fibra*, fiber; Gk, *oma*], an angioma containing fibrous tissue. Also called **fibroangioma, telangiectatic fibroma**.

angiogenesis /an'jē-ōjēn'ōsis/ [Gk, *angeion* + *genesis*, origin], the formation of new blood vessels, a process controlled by chemicals produced in the body that stimulate blood vessels or form new ones. Angiogenesis plays an important role in the growth and spread of cancer. Angiogenesis also

occurs in the healthy body for healing of wounds and restoring blood flow to tissues after injury.

angiogenesis inhibitor, one of a group of drugs that prevent the growth of new blood vessels into a solid tumor.

angiogenic cell cluster. See **angioblastic cord**.

angiogenin /an'jē-ōjen'in/, a protein that mediates the formation of blood vessels. A single-chain basic protein cloned from molecules of the tumor angiogenesis factor (TAF) in human colon cancer cells, angiogenin is used experimentally to stimulate the development of new blood vessels in wound healing, cerebrovascular accident, and coronary artery disease.

angioglioma pl. *angiogliomas, angiogliomata* /an'jē-ōglē'ō'ma/ [Gk, *angeion* + *glia*, glue, *oma*, tumor], a highly vascular tumor composed of neuroglia.

angiogram /an'jē-ōgram/ [Gk, *angeion*, vessel, *gramma*, writing], a radiographic image of a blood vessel after injection of a radiopaque contrast medium. See also **arteriogram, phlebogram**.

angiograph /an'jē-ōgraf/ [Gk, *angeion*, vessel, *graphein*, to record], an instrument that records the patterns of pulse waves inside blood vessels. See also **sphygmograph**.

angiography /an'jē-ōg'rāfē/ [Gk, *angeion* + *graphein*, to record], the x-ray visualization of the internal anatomy of the heart and blood vessels after the intravascular introduction of radiopaque contrast medium. The procedure is used as a diagnostic aid in myocardial infarction, vascular occlusion, calcified atherosclerotic plaques, cerebrovascular accident, portal hypertension, renal neoplasms, renal artery stenosis as a causative factor in hypertension, pulmonary emboli, and congenital and acquired lesions of pulmonary vessels. The contrast medium may be injected into an artery or vein or introduced into a catheter inserted in a peripheral artery and threaded through the vessel to a visceral site. Because the iodine in the contrast medium may cause a marked allergic reaction in some patients and may lead to death in severe cases, testing for hypersensitivity is indicated before the radiopaque substance is used. Because iodinated contrast agents are nephrotoxic, renal function also must be determined before angiography. After the procedure the patient is monitored for signs of bleeding at the puncture site, and bed rest for a number of hours is indicated. —**angiographic**, adj.



3D angiography (Frank, Long, and Smith, 2012)

angiohemophilia. See **von Willebrand disease**.

angioimmunoblastic lymphadenopathy with dysproteinemia (AILD), a systemic disorder resembling lymphoma, characterized by fever, night sweats, weight loss, and generalized lymphadenopathy. There are cellular infiltration of lymphocytes,

immunoblasts, and plasma cells; change or effacement of lymph node architecture; hepatosplenomegaly; maculopapular rash; polyclonal hypergammaglobulinemia; and Coombs' positive hemolytic anemia. It is considered to be a nonmalignant hyperimmune reaction to chronic antigenic stimulation. There are proliferation of B cells and profound deficiency of T cells. The disease follows a progressive but variable course; some patients have long survival without chemotherapy, whereas others have a rapid course, with death from overwhelming infection.

angiokeratoma /an'jē-ōker'ātō'mə/ pl. *angiokeratomas*, *angiokeratomata* [Gk, *angeion* + *keras*, horn, *oma*], a vascular, horny neoplasm on the skin, characterized by clumps of dilated blood vessels, clusters of verrucae, and thickening of the epidermis, especially the scrotum and the dorsal aspect of the fingers and toes.

angiokeratoma circumscriptum, a rare skin disorder characterized by discrete papules and nodules in small patches on the legs or on the trunk.

angiokeratoma corporis diffusum, an uncommon familial disease in which glycolipids are stored in many parts of the body, especially in the venous and cardiovascular systems, causing vasomotor, urinary, and cutaneous disorders and in some cases, muscular abnormalities. Characteristic signs are dilation of blood vessels in the "bathing suit areas"; edema; hypertension; cardiomegaly, especially enlargement of the left ventricle; diffuse nodularity of the skin; albumin, erythrocytes, leukocytes, and casts in the urine; and vacuoles in muscle bundles. Also called **diffuse angiokeratoma**, **Fabry's disease**, **Fabry's syndrome**.



Angiokeratoma corporis diffusum (Callen et al, 2000)

angiokeratomas, angiokeratomata. See **angiokeratoma**.
angiolipoma /an'jē-ōlipō'mə/ pl. *angiolipomas*, *angiolipomata* [Gk, *angeion* + *lipos*, fat, *oma*], a benign neoplasm containing blood vessels and tissue. Also called **lipoma cavernosum**, **telangiectatic lipoma**.

-angioma, suffix meaning a 'tumor composed chiefly of blood and lymph vessels': *fibroangioma*, *glomangioma*.

angioma /an'jē-ō'mə/ pl. *angiomas*, *angiomata* [Gk, *angeion*, vessel + *oma*, tumor], any benign tumor with blood vessels (**hemangioma**) or lymph vessels (**lymphangioma**). Most angiomas are congenital; some, such as cavernous hemangiomas, may disappear spontaneously. Compare **angiosarcoma**.

angioma arteriale racemosum /är-tir'ē-ä'lē ras'ēmō'səm/ [Gk, *angeion* + *oma* + L, *arteria*, airpipe, *racemus*, grape], a vascular neoplasm characterized by the intertwining of many small, newly formed dilated blood vessels. Normal blood vessels become affected.

angioma cavernosum. See **cavernous hemangioma**.

angioma cutis, a nevus composed of a network of dilated blood vessels.

angioma lymphaticum. See **lymphangioma**.

angioma serpiginosum /sərpīj'īnō'səm/ [Gk, *angeion* + *oma* + L, *serpere*, to creep], a cutaneous disease characterized by rings of tiny vascular points appearing as red dots.

angiomatosis /ān'jē-ōmətō'sis/, a condition characterized by numerous vascular tumors.

angiomyoma /-mī'-ō'mə/ pl. *angiomyomas*, *angiomyomata* [Gk, *angeion* + *mys*, muscle, *oma*], a tumor composed of vascular and muscular tissue elements.

angiomyoneuroma. See **glomangioma**.

angiomyosarcoma /mī'-ōsärkō'mə/ pl. *angiomyosarcomas*, *angiomyosarcomata* [Gk, *angeion* + *mys*, muscle, *sarx*, flesh, *oma*], a tumor containing vascular, muscular, and connective tissue elements.

angioneuroma. See **glomangioma**.

angioneurotic anuria /-nōōrōt'ik ənyōōrē-ə/ [Gk, *angeion* + *neuron*, nerve, *a* + *ouron*, not urine], an abnormal condition characterized by an almost complete absence of urine caused by destruction of tissue in the renal cortex.

angioneurotic edema. See **angioedema**.

angioneurotic gangrene [Gk, *angeion* + *neuron*, nerve, *gaggriana*], the death and putrefaction of tissue caused by an interruption of the blood supply resulting from thrombotic arteries or veins.

angiopathy /an'jē-ōp'āthē/ [Gk, *angeion*, vessel, *pathos*, disease], a disease of the blood vessels.

angioplasty /an'jēōplas'tē/ [Gk, *angeion*, vessel, *plassein*, to mold], the reconstruction of blood vessels damaged by disease or injury, often performed by inflating a balloon within the vessel lumen at the site of narrowing to reconstitute flow. See also **balloon angioplasty**.

angiogenesis /-poi-ē'sis/ [Gk, *angeion*, vessel, *poien*, to make], the process of blood vessel formation.

angiorrhaphy /an'jē-ōr'əfē/ [Gk, *angeion*, vessel, *rhaphe*, suture], the repair by suture of any blood vessel.

angiosarcoma /-särkō'mə/, a rare, malignant tumor consisting of endothelial and fibroblastic tissue that proliferates and eventually surrounds vascular channels. It begins in the lining of the blood vessels. The condition usually occurs in older persons. Angiosarcoma has been associated with exposure to many foreign materials in the body, such as steel, shrapnel, and plastic. This tumor tends to be aggressive and recurs locally as well as metastasizing. Also called **hemangiosarcoma**, **malignant hemangioendothelioma**. Compare **angioma**.



Angiosarcoma (Callen et al, 2000)

angiosclerosis /-sklerō'sis/ [Gk, *angeion*, vessel, *skleros*, hard, *osis*, condition], a thickening and hardening of the walls of the blood vessels. See also **atherosclerosis**.

angioscope /an'jē-ōskōp'/, a type of microscope that permits inspection of the capillaries.

angiospasm /an'jē-ōspaz'əm/, a sudden, transient constriction of a blood vessel. Also called **vasomotor spasm**, **vasospasm**. See also **vasoconstriction**.

angiostrongyliasis /an'jē-ō-stron'jil-ə-sis/, infection by a species of *Angiostrongylus*. Infection comes after eating contaminated raw or insufficiently cooked hosts such as snails, slugs, prawns, or crabs. Adult worms live in rat intestines, in which females lay eggs yielding first stage larvae. These larvae hatch and migrate to the rat's pharynx, where they are swallowed and shed in the feces and ingested by an intermediate host, such as snails or slugs. Most cases occur in Southeast Asia and the Pacific Basin. *A. costaricensis* causes abdominal or intestinal angiostrongyliasis. Abdominal cases have been reported in Costa Rica and occur most commonly in young children. *A. cantonensis* larvae migrate to the central nervous system and cause eosinophilic meningitis.

Angiostrongylus [Gk, *angeion*, vessel + *strongylos*, round], a genus of parasitic nematodes. Species *A. cantonensis* and *A. costaricensis* normally infect other animals but can cause angiostrongyliasis in humans.

angiotensin /-ten'sin/ [Gk, *angeion* + L, *tendere*, to stretch], a polypeptide in the blood that causes vasoconstriction, increased blood pressure, and the release of aldosterone from the adrenal cortex. Angiotensin is formed by the action of renin on angiotensinogen, an alpha-2-glycoprotein that is produced in the liver and that constantly circulates in the blood. Renin, stimulated by juxtaglomerular cells in the kidney in response to decreased blood volume and serum sodium levels, acts as an enzyme in the conversion of angiotensinogen to angiotensin I, which is rapidly hydrolyzed to form the active compound, angiotensin II. The vasoconstrictive action of angiotensin II decreases the glomerular filtration rate, and the concomitant action of aldosterone promotes sodium retention, with the result that blood volume and sodium reabsorption increase. Plasma angiotensin II increases during the luteal phase of the menstrual cycle and is probably responsible for an elevated level of aldosterone during that period. Angiotensin is inactivated by peptidases, called angiotensinases, in plasma and tissues.

angiotensin-converting enzyme (ACE), a glycoprotein (dipeptidyl carboxypeptidase) that catalyzes the conversion of angiotensin I to angiotensin II by splitting two terminal amino acids. ACE-inhibiting agents are used for controlling hypertension and for protecting the kidneys in diabetes mellitus.

angiotensin-converting enzyme (ACE) inhibitor, a protease inhibitor found in serum that promotes vasodilation by blocking the formation of angiotensin II and slowing the degradation of bradykinin and other kinins. It decreases sodium retention, water retention, blood pressure, and heart size and increases cardiac output.

angiotensin-converting enzyme (ACE) test, a blood test used to detect the level of enzyme that converts angiotensinogen into angiotensin.

angiotensinogen /-tensin'əjən/, a serum glycoprotein produced in the liver that is the precursor of angiotensin.

angiotensin sensitivity test (AST), a test for sensitivity to angiotensin II by infusion of angiotensin II amide into the right cubital vein. Angiotensin is metered in doses that increase by 1 ng/kg/min at 5-minute intervals. A positive AST result is an effective pressor dose, or one that causes a 20 mm Hg rise in diastolic blood pressure at an infusion rate of less than 10 ng/kg/min.

angle /ang'gəl/ [L, *angulus*], 1. the space or the shape formed at the intersection of two lines, planes, or borders. The divergence of the lines, planes, or borders may be measured in degrees of a circle. 2. (in anatomy and physiology) the geometric relationships between the surfaces of body structures and the positions affected by movement.

angle board, a device used in dentistry to establish reproducible angular relationships between a patient's head, the x-ray beam, the image receptor, and the x-ray film during dental imaging radiography.

angle-closure glaucoma. See **glaucoma**.

angle former, a hoe-shaped, paired dental instrument whose cutting edges are at an oblique angle to the axis of the blade. It is used to access angles and shape the dental restoration for a class III dental cavity preparation. Also called **bayonet angle former**.

angle of convergence, an angle formed between the visual axis of an eye focused on an object and a median line.

angle of incidence, the angle at which an ultrasound beam hits the interface between two different types of tissues, such as the facing surfaces of bone and muscle. The angle is also affected by the difference in acoustic impedance of the different tissues.

angle of iris, the angle formed between the cornea and the iris at the periphery of the anterior chamber of the eye. The aqueous fluid normally drains through this angle, which may be blocked in glaucoma. Also called **filtration angle**.

angle of Louis [Pierre Charles Alexandre Louis, French physician, 1787–1872], the sternal angle between the manubrium and the body of the sternum.

angle of mandible, the measure in degrees of the relationship between the body and the ramus of the mandible. It is used in cephalometric measurements of skull radiographs. Also called **gonial angle**.

angle of refraction [L, *refringere*, to break apart], the angle that a refracted ray of light makes with a line perpendicular to the refracting surface at the point of refraction. Also called **refracting angle**.

angle of Treitz /trīts/ [Wenzel Treitz, Czech physician, 1819–1872], a sharp curve or flexure at the junction of the duodenum and jejunum.

Angle's classification of malocclusion (modified) [Edward Hartley Angle, American orthodontist, 1855–1930], a classification of the various types of malocclusion. The classification is based on where the buccal groove of the mandibular first molar contacts the mesiobuccal cusp of the maxillary first molar: on the cusp (Class I, neutroclusion, or normal occlusion); distal to the cusp by at least the width of a premolar (Class II, distoocclusion); or mesial to the cusp (Class III, mesioocclusion). Each class contains two or more types or divisions. See also **classification of malocclusion**.



Angle's classification of malocclusion: Class I malocclusion (Bath-Balogh and Fehrenbach, 2011/Courtesy Dr. Dona M. Seely, DDS, MSD, Orthodontics, Bellevue and Seattle, Washington)



Angle's classification of malocclusion: Class III malocclusion (Bath-Balogh and Fehrenbach, 2011/Courtesy Dr. Dona M. Seely, DDS, MSD, Orthodontics, Bellevue and Seattle, Washington)

angor /ang'gôr/, a condition of extreme distress, usually occurring in intestinal or pectoral angina or during a sudden attack of blindness.

angstrom (Å) /ang'strôm/ [Anders Jonas Angström, Swedish physicist, 1814–1874], a unit of measure of length equal to 0.1 nanometer ($1/10,000,000,000$ meter), or 10^{-10} meter. Also called **angstrom unit**.

angular artery /ang'gu-lär är'to-re/, a branch of the facial artery to the medial angle of the eye that supplies the lacrimal sac, lower eyelid, and nose.

angular cheilitis, angular cheilosis. See **perlèche**.

angular gyrus /ang'gyôrə/ [L, *angulus* + Gk, *gyros*], a folded convolution in the inferior parietal lobe where it unites with the temporal lobe of the cerebral cortex.

angular movement [L, *angularis*, sharply bent], one of the four basic movements allowed by the various joints of the skeleton. It is a movement in which the angle between two adjoining bones is decreased, as in flexion, or increased, as in extension. Compare **circumduction**, **gliding**, **rotation**.

angular spinal curvature [L, *angulus* + *spina*, backbone, *curvatura*, bend], a sharp bending or sloping of the vertebral column. See also **gibbus**.

angular stomatitis. See **perlèche**.

angular vein, one of a pair of veins of the face, formed by the junction of the frontal and the supraorbital veins. At the root of the nose, each angular vein receives the flow of venous blood from the infraorbital, superior and inferior palpebral, and external nasal veins, becoming the first part of one of the two facial veins.

angulated fracture /ang'gyôlă'tid/, a fracture in which the fragments of bone are at angles to one another.

angulation [L, *angulatus*, bent]. 1. an angular shape or formation. 2. the discipline of precisely measuring angles, as in mechanical drafting and surveying. 3. (in radiography) the direction of the useful beam of radiation in relation to the object being radiographed and the film used to record its image. See also **horizontal angulation**, **vertical angulation**.

anhedonia /an'hêdō'nē-ə/ [Gk, *a* + *hedone*, not pleasure], the inability to feel pleasure or happiness in response to experiences that are ordinarily pleasurable. It is often a characteristic of major depression and schizophrenia. —*anhedonic*, adj.

anhidrosis /an'hîdrô'sis, an'hî-/ [Gk, *a* + *hidros*, without sweat], an abnormal condition characterized by inadequate perspiration.

anhidrotic /an'hîdrot'ik, an'hî-/ 1. pertaining to anhidrosis. 2. an agent that reduces or suppresses perspiration.

anhidrotic ectodermal dysplasia, a congenital X-linked disorder fully expressed in males, or rarely an autosomal-recessive trait with full expression in both sexes, characterized by ectodermal dysplasia associated with aplasia or hypoplasia of the sudoriferous glands, hypothermia, alopecia, anodontia, conical teeth, and typical facies with frontal bossing, midfacial hypoplasia, saddle nose, large chin, and thick lips. Also called **Christ-Siemens-Touraine syndrome**, **congenital ectodermal defect**, **hypohidrotic ectodermal dysplasia**. Also called **antihidrotic**.



Anhidrotic ectodermal dysplasia (Hordinsky, Sawaya, and Scher, 2000)

anhydrase /anhî'drâs/ [Gk, *a* not + *hydr*, water], an enzyme that catalyzes the elimination of water molecules from certain compounds, as carbonic anhydrase dehydrates carbonic acid, thereby controlling the amount of carbon dioxide in the blood and lungs.

anhydration. See **dehydration**.

anhydride /anhî'drid/ [Gk, *a* + *hydr*, without water], a chemical compound derived by the removal of water from one or more substances, especially an acid.

anhydrous /anhî'drôs/ [Gk, *a* + *hydr*, without water], an absence of water.

anicteric /an'ikter'ik/ [Gk, *a* + *icterus*, not jaundice], pertaining to the absence of jaundice (icterus).

anicteric hepatitis, a mild form of hepatitis in which there is no jaundice (icterus). Symptoms include anorexia, GI disturbances, and slight fever. Levels of aspartate aminotransferase and alanine aminotransferase are elevated. The infection may be mistaken for influenza or may be undetected. Compare **hepatitis**. See also **acute anicteric hepatitis**.

anideus /anid'ë-əs/, an anomalous, rudimentary embryo consisting of a simple rounded mass with little indication of the body parts. A kind of anideus is **embryonic anideus**. Also called **fetus anideus**. —*anidean*, *anidian*, *anidous*, adj.

anidulafungin, a systemic, antifungal agent.

■ **INDICATIONS:** This drug is used to treat *Candida albicans*, *C. glabrata*, *C. parapsilosis*, and *C. tropicalis*.

■ **CONTRAINDICATIONS:** Known hypersensitivity to this drug or other echinocandins prohibits its use.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include dizziness, deep vein thrombosis, hypotension, hypokalemia, hypocalemia, hyperglycemia, hyperkalemia, hypernatremia, and (rarely) hypomagnesemia. Life-threatening side effects include seizures, atrial fibrillation, right bundle branch block, sinus arrhythmia, thrombophlebitis, (rarely) superficial ventricular extra systoles, hepatic necrosis, neutropenia, thrombocytopenia, leukopenia, and coagulopathy. Common side effects include headache, nausea, anorexia, vomiting, diarrhea, rash, back pain, rigors, and increased aspartate aminotransferase and alanine aminotransferase.

anileridine hydrochloride, the hydrochloride salt of anileridine. It is administered orally in the treatment of moderate to severe pain.

aniline ($C_6H_5NH_2$) /ən'īlēn/ [Ar, *alnil*, indigo], an oily, colorless poisonous liquid with a strong odor and burning taste, formerly extracted from the indigo plant and now made synthetically from nitrobenzene and used in the manufacture of aniline dyes. Industrial workers exposed to aniline are at risk of developing methemoglobinemia and bone marrow suppression. Also called *amidobenzene*, *benzenamine*.

aniline dye. See **aniline**.

anilingus /ā'nīlīng'gəs/, sexual stimulation of the anus by the tongue or lips.

anilism [Ar, *alnil*, indigo; Gk, *ismos*, state], a condition of poisoning resulting from exposure to aniline compounds. Symptoms generally include cyanosis, weakness, cold sweats, irregular pulse, breathing difficulty, coma, seizures, and possible sudden heart failure. Also called **anilinism**. See also **aniline**.

anima /ān'īmə/ [L, soul], 1. the soul or life. 2. the active ingredient in a drug. 3. (in analytic psychology) a person's true inner unconscious being or personality. Compare **persona**. 4. (in analytic psychology) the female component of the male personality. Compare **animus**.

animal, a multicellular organism that subsists on the breakdown of organic substances taken into the body, usually by ingestion. Most animals are capable of movement as a result of the actions of nervous tissue and muscle tissue, which are unique to animals.

animal-assisted therapy, a nursing intervention from the Nursing Interventions Classification (NIC) defined as purposeful use of animals to provide affection, attention, diversion, and relaxation. See also **Nursing Interventions Classification**.

animal pole [L, *anima*], the active, formative part of an ovum. It contains the nucleus and the bulk of the cytoplasm and is the site where the polar bodies form. In mammals, the animal pole is also the site where the inner cell mass develops and gives rise to germ layers. Also called **germinal pole**. Compare **vegetal pole**.

animal starch. See **glycogen**.

animation, 1. the state of being alive. 2. an ability to put into action a vivid appearance of life.

animus /ān'īməs/ [L, spirit], 1. the active or rational soul; the animating principle of life. 2. (in analytic psychology) the male component of the female personality. Compare **anima**. 3. (in psychiatry) a deep-seated antagonism that is usually controlled but may erupt with virulence under stress.

anion /ān'īōn/ [Gk, *ana* + *ion*, backward going], a negatively charged ion that is attracted to the positive electrode (anode) in electrolysis. Compare **cation**. —*anionic*, adj.

anion-exchange resin, any one of the simple organic polymers with high molecular weights that exchange the resin anions with other anions in solution. Compare **cation-exchange resin**.

anion gap, the difference between the concentrations of serum or plasma cations and anions, determined by measuring the concentrations of sodium cations and chloride and bicarbonate anions. It is helpful in the diagnosis and treatment of acidosis, and it is estimated by subtracting the sum of chloride and bicarbonate concentrations in the plasma from that of sodium. It is normally about 8 to 14 mEq/L and represents the negative charges contributed to plasma by unmeasured ions or ions other than those of chloride and bicarbonate, mainly phosphate, sulfate, organic acids, and plasma proteins. Anions other than chloride and bicarbonate normally constitute about 12 mEq/L of the total anion concentration in plasma. Acidosis can develop with or without an associated

anion increase. An increase in the anion gap often suggests diabetic ketoacidosis, drug poisoning, renal failure, or lactic acidosis and usually warrants further laboratory tests.

anion gap test, a calculation used to help identify the causes of metabolic acidosis, most of which are associated with an increased anion gap. See also **anion gap**.

aniridia /ān'īrīdē-ə/ [Gk, *a*, without + *iris*], an absence of the iris, a usually bilateral, hereditary anomaly. Often, a rudimentary stump is visible through a gonioscope.

anisakiasis /ān'īsākī-ə-sīs/ [infection of humans or other animals with a nematode of the family Anisakidae, usually *Anisakis marina*]. Human infection is usually caused by third-stage larvae eaten in sushi and undercooked infected marine fish such as herring. The larvae then burrow into the stomach wall, producing an eosinophilic granulomatous mass. The infection is distributed worldwide, but occurs with higher incidence in places where raw fish is consumed, such as Japan. Also called **eosinophilic granuloma**.

Anisakis /ān'ī-sākīs/ [Gk, *an-*, not, without + *isos*, equal + *akis*, point], a genus of nematodes of the super family Ascaridoidea; species *A. marina* is the usual cause of human anisakiasis. Its organisms are found in the stomachs of marine animals and birds. Human infection occurs by ingestion of raw fish that contain larvae.

anise /ān'īs/, the fruit of the *Pimpinella anisum* plant. Extract of anise is used in the preparation of carminatives and expectorants.

aniseikonia /ān'īsīkō'nē-ə/ [Gk, *anisos*, unequal, *eikon*, image], an abnormal ocular condition in which each eye perceives the same image as being of a different form and size.

anismus /ān'īs'məs/, an extreme contraction of the external anal sphincter.

aniso-, **anis-** /ān'īsō-/ [prefixes meaning 'unequal, asymmetric, or dissimilar']: *aniseikonia*, *anisognathus*.

anisocoria /-kōrē-ə/ [Gk, *anisos*, unequal, *kore*, pupil], an inequality of the diameter of the pupils of the two eyes.



Anisocoria (Lemmi and Lemmi, 2000)

anisocytosis /ān'īsōtō'sīs/ [Gk, *anisos* + *kytos*, cell], an abnormal condition of the erythrocytes characterized by variable diameter on a blood film and associated with increased red cell distribution width (RDW). Compare **poikilocytosis**. See also **macrocytosis**, **microcytosis**.

anisogamete /-gām'ēt/ [Gk, *anisos* + *gamos*, marriage], a gamete that differs considerably in size and structure from the one with which it unites, such as the macrogamete and microgamete of certain sporozoa. Also called **heterogamete**. Compare **isogamete**. —*anisogamic*, adj.

anisogamy /ān'īsōgāmē/ [sexual conjugation of gametes of unequal size and structure, as in certain thallophytes and sporozoans]. Compare **heterogamy**, **isogamy**. —*anisogamous*, adj.

anisognathous /ān'īsōnāth'əs/ [Gk, *anisos* + *gnathos*, jaw], an abnormal condition in which the maxillary and mandibular arches or jaws are of significantly different sizes. —*anisognathic*, adj.

anisokaryosis /ān'īsōkārē-ō'sīs/ [nuclear size among cells of the same general type]. —*anisokaryotic*, adj.

anisomastia /anī'sōmas'tē-ə/, a condition in which one female breast is much larger than the other.

anisometropia /anī'sōmētrop'ē-ə/ [Gk, *anisos* + *metron*, measure, *ops*, eye], an abnormal ocular condition characterized by a difference in the refractive powers of the eyes.

anisopia /anī'sōpē-ə/, a condition in which the visual power of one eye is greater than that of the other.

anisopiesis /anī'sōpī-sēs/ [Gk, *anisos*, unequal, *piesis*, pressure], a condition of unequal arterial blood pressure on the left and right sides of the body.

anistreplase, a plasminogen activator.

■ **INDICATION:** This drug is used in acute MI for lysis of coronary artery thrombi.

■ **CONTRAINDICATIONS:** Known hypersensitivity to this drug or streptokinase; active internal bleeding; intraspinal or intracranial surgery; central nervous system neoplasms; severe, uncontrolled hypertension; cerebral embolism; thrombosis; hemorrhage; recent trauma; or history of cerebrovascular accident all prohibit the use of this drug.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include headache, fever, sweating, agitation, dizziness, paresthesia, tremor, vertigo, hypotension, conduction disorders, nausea, vomiting, decreased hematocrit, surface bleeding, rash, urticaria, phlebitis at the injection site, itching, flushing, low back pain, arthralgia, altered respirations, and dyspnea. Life-threatening side effects include intracranial hemorrhage, dysrhythmias, GI bleeding, genitourinary bleeding, intracranial bleeding, retroperitoneal bleeding, thrombocytopenia, bronchospasm, lung edema, and anaphylaxis.

ankle [AS, *ancleow*], 1. the joint of the tibia and fibula of the leg with the talus of the foot. 2. the part of the lower limb where this joint is located.

ankle-arm index (AAI). See **ankle-brachial index**.

ankle bandage, a figure-eight bandage looped under the sole of the foot and around the ankle. The heel may be covered or left exposed, although covering is preferable because it prevents "window edema."

ankle bone. See **talus**.

ankle-brachial index (ABI), the ratio of ankle systolic pressure to the arm systolic pressure, used in assessing the status of lower extremity arteries. It is calculated by dividing the higher of the left and right ankle pressures by the higher of the two brachial artery pressures. Also called **ankle-arm index**.

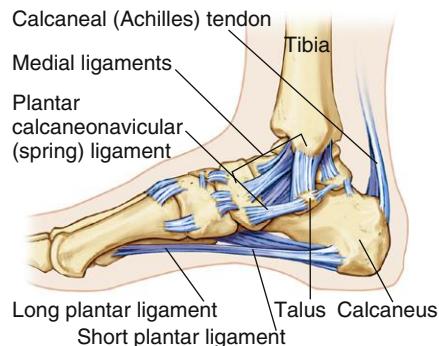
ankle clonus, an involuntary tendon reflex that causes repeated flexion and extension of the foot. It may be caused by pressure on the foot or corticospinal disease. More than four beats of clonus is pathological.



Ankle clonus (Elkin, Perry, and Potter, 2004)

ankle-foot orthosis (AFO), any of a variety of protective external devices that can be applied to the ankle area to prevent injury in a high-risk athletic activity, to protect a previous injury such as a sprain, or to assist patients with chronic joint instability with walking. An AFO is often used by patients unable to dorsiflex the ankle during gait. It may be used to maintain anatomical position in a person that has a footdrop.

ankle joint [AS, *ancleow* + L, *jungere*, to join], a synovial hinge joint between the leg and the foot. The rounded malleolar prominences on each side of the joint form a mortise for the upper surface of the talus.



Ankle joint of the right foot: medial view

ankle reflex. See **Achilles tendon reflex**.

ankyl-, ankylo-. See **ancylo-**.

ankyloblepharon /ang'kō-lō-blef'ō-ron/ [Gk, *agkylos*, crooked + *blepharon*, eyelid], the adhesion of the ciliary edges of the eyelid to each other.

ankyloblepharon-ectodermal dysplasia-clefting syndrome. See **Hay-Wells syndrome**.

ankyloglossia /ang'kilōglos'ē-ə/ [Gk, *agkylos*, crooked, *glossa*, tongue], a severe restriction of tongue movement as a result of fusion or adherence of the tongue to the floor of the mouth. Partial ankyloglossia (also called **tongue-tie**) is caused by a frenum of the tongue that is abnormally short or is attached too close to the tip of the tongue; this condition may be surgically corrected by simple excision. Complete ankyloglossia requires extensive surgical reconstruction of the tongue and the floor of the mouth.



Ankyloglossia (Zitelli and Davis, 2007)

ankylosed /ang'kilōst/, pertaining to the immobility or fusion of a joint resulting from pathological changes in it or in adjacent tissues.

ankylosing spondylitis /ang'kilō'sing/, a chronic inflammatory disease associated with human leukocyte antigen B27, first affecting the spine and adjacent structures and commonly progressing to eventual fusion (ankylosis) of the involved joints. In extreme cases a forward flexion of the spine, called a “poker spine” or “bamboo spine,” develops. The disease primarily affects males under 30 years of age and generally follows a course of 20 years. There is a strong hereditary tendency. In addition to the spine, the joints of the hip, shoulder, neck, ribs, and jaw are often involved. When the costovertebral joints are involved, the patient may have difficulty in expanding the rib cage while breathing. Ankylosing spondylitis is a systemic disease, often affecting the eyes and heart. Many patients also have inflammatory bowel disease. The aim of treatment is to reduce pain and inflammation in the involved joints, usually with nonsteroidal antiinflammatory drugs and tumor necrosis factor drugs. Physical therapy helps keep the spine as erect as possible to prevent flexion contractures. In advanced cases, surgery may be performed to straighten a badly deformed spine. Also called **Marie-Strümpell arthritis, Marie-Strümpell disease**. See also **ankylosis, rheumatoid arthritis**.



Ankylosing spondylitis (Goldman et al, 2012)

ankylosis /ang'kilō'sis/ [Gk, *ankylosis*, bent condition], 1. the fusion of a joint, often in an abnormal position, usually resulting from destruction of articular cartilage and subchondral bone, as occurs in rheumatoid arthritis. It may also occur in immobilized patients when active or passive range of motion is not provided. Also called **true ankylosis**. See also **acampsia**. 2. the surgically induced fusion of a joint to relieve pain or provide support. Also called **arthrodesis, fusion**. —*ankylosed, adj.*

anlage. See **primordium**.

ANLL, abbreviation for **acute nonlymphocytic leukemia**. See **acute myelocytic leukemia**.

ANNA, abbreviation for **American Nephrology Nurses' Association**.

ANNA-1, abbreviation for **type 1 antineuronal antibody**.

ANNA-2, abbreviation for **type 2 antineuronal antibody**.

anneal [AS, *aelan*, to burn], 1. to temper metals, glass, or other materials by controlled heating and cooling to make them more malleable and ductile. 2. to cause the interaction of two separate strands of nucleic acid to form a duplex molecule, often by using a related technique of controlled heating and cooling.

annexa. See **adnexa**.

annihilation /ənī'lā'shən/, the total transformation of matter into energy, as when an antimatter positron collides with an electron. Two photons are created, each with an energy equaling the mass of the individual particles at rest.

annular. See **anular**.

annular ligament. See **anular ligament**.

annulus. See **anulus**.

annulus conjunctivae. See **conjunctival ring**.

anode, the electrode at which oxidation occurs.—*anodal, adj.*

anodic stripping voltammetry /ənō'dik, anōd'ik/, a process of electroanalytic chemistry used to detect trace metals. It involves the use of a metal-exchange reagent that releases lead or other metals from macromolecular binding sites.

anodontia /ənō'don'tē-ə/ [Gk, *a*, not, *odous*, tooth], a congenital anomaly in which some or all of the teeth are missing. The term is generally applied to cases in which most teeth are missing and no tooth follicles are present.

anodyne /ənō'dēn/ [Gk *a* + *odyne*, not pain], a drug that relieves or lessens pain. Compare **analgesic**.

anomalo-, anomal-, combining forms meaning ‘uneven, deviation from normal, or irregular’: *anomalopia, anomalous*.

anomalous. See **anomaly**.

anomalous trichromatism, anomalous trichromatic vision.

anomaly /ənom'älē/ [Gk, *anomalon*, irregular], 1. a deviation from what is regarded as normal. 2. a congenital malformation, such as the absence of a limb or the presence of an extra finger. —*anomalous, adj.*

anomia /ənō'mē-ə/ [Gk, *a* + *onoma*, without name], a form of aphasia characterized by the inability to name objects. Comprehension and repetition are unaffected.

anomie /ənō'mē/, a state of apathy, alienation, anxiety, personal disorientation, and distress resulting from the loss of social norms and goals previously valued. Also spelled **anomy**.

anonychia /ənō'nik'ē-ə/ [Gk, *a* + *onyx* without nail], an absence of a nail or nails.

anoopsia /ənō'op'sē-ə/ [Gk, *ana*, up, *ops*, eye], a strabismus in which one or both eyes are deviated upward. Also called **hypertropia**.

Anopheles /ənof'əlēz/ [Gk, *anopheles*, harmful], a genus of mosquito containing over 90 species, many of which are vectors of malaria. See also **Plasmodium**.

anopia /ənō'pē-ə/ [Gk, *a* + *ops*, not eye], a blindness resulting from a defect in or the absence of one or both eyes.

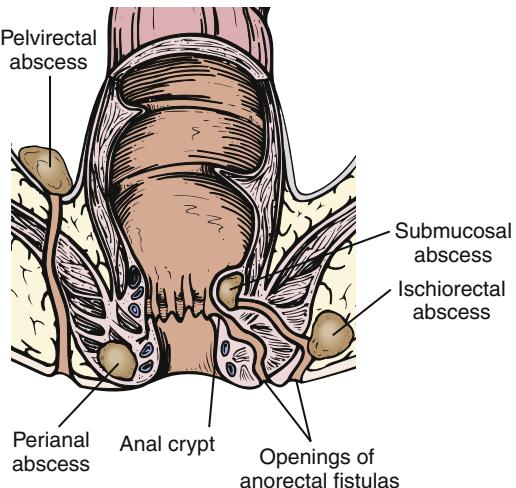
-anopia, -anopsia, 1. suffixes meaning ‘(condition involving) nonuse or arrested development of the eye’: *hemianopia, quadrantanopsia*. 2. suffixes meaning ‘(condition of) defective color vision’: *cyanopia, tritanopia*.

anoplasty /ənō'plas'tē/ [L, *anus* + Gk, *plassein*, to shape], a restorative operation on the anus.

anorchia /ənōr'kē-ə/ [Gk, *a* + *orchis*, not testis], the congenital absence of one or both testes.

anorectal /ān'ōrek'təl, ā'nō-/ [L, *anus* + *rectus*, straight], pertaining to the anal and rectal portions of the large intestine.

anorectal abscess [L, *anus* + *rectus*, straight, *abscedere*, to go away], an abscess in the area of the anus and rectum.



Common sites of anorectal abscess (Lewis et al, 2011)

anorectal stricture [L, *anus* + *rectus*, straight, *strictura*, compression], a narrowing of the anorectal canal. It is sometimes congenital but also may result from surgery to correct an anal fissure or to remove hemorrhoids.

anorectic /an'ōrek'tik/, 1. pertaining to anorexia. 2. causing a loss of appetite, as an anorexiant drug. Also **anorectous, anorexiant, anorexic**.

anorectoperineal muscle, any of the bands of smooth muscle fibers extending from the perineal flexure of the rectum to the membranous urethra in the male.

anorexia /an'ōrek'sē-ə/ [Gk, *a* + *orexis*, not appetite], a lack or loss of appetite, resulting in the inability to eat. The condition may result from poorly prepared or unattractive food or surroundings, unfavorable company, or various physical and psychological causes. Compare **pseudoanorexia**. See also **anorexia nervosa**.

anorexia nervosa, a disorder characterized by a prolonged refusal to eat, resulting in emaciation, amenorrhea, emotional disturbance concerning body image, and fear of becoming obese. The condition is seen primarily in adolescents, predominantly in girls, and is usually associated with emotional stress or conflict, such as anxiety, irritation, anger, and fear, which may accompany a major change in the person's life. Treatment consists of measures to improve nourishment, followed by therapy to overcome the underlying emotional conflicts.

anorexiant /an'ōrek'sē-ənt/, a drug or other agent that suppresses the appetite, such as amphetamine.

anorexic. See **anorectic**.

anorgasmic /an'ōrgaz'mē-ə/, inability to achieve orgasm during coitus or masturbation.

anorthopia /an'ōrthō'pē-ə/, a visual disorder in which straight lines appear to be curved or angular. The person also may have a diminished perception of symmetry.

anosmia /anōz'mē-ə/ [Gk, *a* + *osme*, without smell], a loss or an impairment of the sense of smell. It can occur as a temporary condition when a person has a head cold or respiratory infection or when intranasal swelling or other obstruction prevents odors from reaching the olfactory region. It becomes permanent when the olfactory neuroepithelium or any part of the olfactory nerve is destroyed as a result of intracranial trauma, neoplasms, or disease, such as atrophic rhinitis or the chronic rhinitis associated with the granulomatous diseases. In some instances, the condition may be caused by psychological factors, such as a phobia or fear associated with a particular smell. Kinds of anosmia include

anosmia gustatoria and preferential anosmia. Also called **anospresia, olfactory anesthesia**. —*anosmatic, anosmic, adj.*

anosmia gustatoria, the inability to smell foods.

anosognosia /an'ōsog'nōz̄hə/ [Gk, *a* + *nosos*, not disease, *gnosis*, knowing], a lack of awareness or a denial of a neurological defect or illness in general, especially paralysis, on one side of the body. It may be attributable to a lesion in the right parietal lobe.

anospresia. See **anosmia**.

anotia /anōtē-ə/ [Gk, *a* + *ous*, without ear], a congenital absence of one or both ears. Compare **microtia**.

ANOVA, abbreviation for **analysis of variance**.

anovaginal /a'nōvaj'īnəl/ [L, *anus* + *vagina*, sheath], pertaining to the perineal region of the anus and vagina.

anovarism /anō'vär-iz'əm/ [Gk, *a*, without; L, *ovum*, egg], an absence of the ovaries. Also called **anovarianism**.

anovesical /-ves'ikəl/ [L, *anus* + *vesicula*, small bladder], pertaining to the anus and bladder.

anovular menstruation [Gk, *a* + *ovulum*, not egg], menstruation not associated with the production or release of an ovum. The ovum either remains within the ovarian follicle and undergoes degeneration or in rare cases becomes impregnated, resulting in an ovarian pregnancy.

anovulation /anōv'yəlā'shən/, a failure of the ovaries to produce, mature, or release ova. The condition may result from ovarian immaturity or postmaturity; altered ovarian function, as in pregnancy and lactation; primary ovarian dysfunction, as in ovarian dysgenesis; or disturbed interaction of the hypothalamus, pituitary gland, and ovary caused by stress or disease. Oral contraceptives suppress ovulation. Anovulation may also be an adverse side effect of medications prescribed in the treatment of other disorders. —*anovular, anovulatory, adj.*

anoxemia /an'ōksē'mē-ə/, a deficiency of oxygen in the blood. Also spelled **anoxaemia**. See also **hypoxia**.

anoxia /anok'sē-ə/ [Gk, *a* + *oxys*, not sharp], an abnormal condition characterized by a local or systemic lack of oxygen in body tissues. It may result from an inadequate supply of oxygen to the respiratory system, an inability of the blood to carry oxygen to the tissues, or a failure of the tissues to absorb the oxygen from the blood. Kinds of anoxia include **anemic anoxia** and **stagnant anoxia**. See also **hypoxemia, hypoxia**. —*anoxic, adj.*

-ans, a suffix meaning ‘-ing’: *penetrans, proliferans*.

ansa /an'sə/ pl. **ansae** [L, handle], (in anatomy) a looplike structure resembling a curved handle of a vase.

ansa cervicalis, one of three loops of nerves in the cervical plexus, branches of which innervate the infrahyoid muscles. Also called **ansa hypoglossi**.

-anserin, a suffix designating a serotonin antagonist.

ANSER system, a pattern of questionnaires for studying development, behavior, and health in children ages 3 to 12.

ANSI, abbreviation for **American National Standards Institute**.

ant-. See **anti-**.

Antabuse, a trademark for an alcohol-use deterrent (**disulfiram**).

antacid /antas'īd/ [Gk, *anti*, against, *acidus*, sour], 1. opposing acidity. 2. a drug or dietary substance that buffers, neutralizes, or absorbs hydrochloric acid in the stomach. Nonsystemic antacids containing aluminum and calcium are constipating; those containing magnesium have a laxative effect. Systemic antacids such as sodium bicarbonate are rarely used.

antagonism /antag'ōniz'əm/ [Gk, *antagonisma*, struggle],

1. an inhibiting action between physiological processes, such as muscle actions. 2. the opposing actions of drugs.

antagonist /antəgō'nist/ [Gk, *antagonisma*, struggle], 1. one who contends with or is opposed to another. 2. (in physiology) any agent, such as a drug or muscle, that exerts an opposite action to that of another or competes for the same receptor sites. Kinds of antagonists include the **antimetabolite**, **associated antagonist**, **direct antagonist**, and **opioid antagonist**. Compare **agonist**. 3. (in dentistry) a tooth in the upper jaw that articulates during mastication or occlusion with a tooth in the lower jaw. —*antagonistic*, adj., *antagonize*, v.

antagonistic reflexes [Gk, *antagonisma* + L, *reflectere*, to bend back], two or more reflexes initiated at the same time that produce opposite effects. An example is the opposition between the biceps and the triceps; the biceps flexes the arm while the triceps extends it.

antazoline /an-taz'o-lēn/, a derivative of ethylenediamine, used as an antihistamine. The phosphate salt is applied topically to the eyes in treatment of allergic conjunctivitis.

ante-, a prefix meaning ‘before in time or in place’: *anteflexion*, *antepartal*.

antebrachial region /an'tə-brā'kē-əl/ [L. *ante*, before + *brachium*, arm], an anatomical term denoting the forearm, divided into the anterior or palmar antebrachial region and the posterior or dorsal antebrachial region.

antebrachium. See **forearm**.

antecardium. See **epigastric region**.

antecedent /an'ti-sē'dənt/ [L, *antecedentem*], a thing or period that precedes others in time or order.

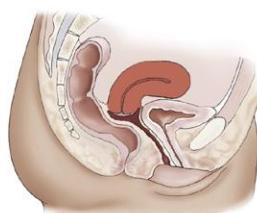
antecubital /-kyoo'bītəl/ [L, *ante*, before, *cubitum*, elbow], in front of the elbow; at the bend of the elbow.

antecubital fossa [L, *ante*, before, *cubitum*, elbow, *fossa*, ditch], a depression at the bend of the elbow.

antecurvature /-kur'vechər/, a slight degree of anteflexion or forward curvature.

antefebrie, the time preceding the development of a fever.

anteflexion /-flek'shən/ [L, *ante* + *flexare*, bend], an abnormal position in which an organ is tilted acutely forward, folded over on itself.



Anteflexion of the uterus (Leonard, 2009)

antegonial notch /-gō'nē-əl/ [L, *ante* + *gonia*, angle], a depression or concavity commonly present on the lower edge of the mandible on each side, immediately in front of the angle, or corner of the jaw, near the anterior margin of the masseter muscle attachment.

antegrade /an'təgrād/ [L, *ante*, before, *gredi*, to go], moving forward, or proceeding toward the front. Also called **anterograde**.

antegrade colonic enema, the creation of a continent stoma in the right colon through which an irrigation fluid may be infused. It is used in the management of chronic evacuation disorders when other methods to control constipation or fecal incontinence have not been successful. Also called **antegrade colonic irrigation**.

-antel, a combining form designating an anthelmintic.

ante mortem [L, *ante*, before, *mors*, death], before death.

antenatal. See **prenatal**.

antenatal care. See **antepartal care**.

antenatal diagnosis. See **prenatal diagnosis**.

antepartal /an'tō-pär'täl/ [L, *ante* + *parturire*, to have labor pains], pertaining to the period spanning conception and labor.

antepartal care, the care of a pregnant woman during the time in the maternity cycle that begins with conception and ends with the onset of labor. A medical, surgical, gynecological, obstetric, social, and family history is taken, with particular emphasis on the discovery of familial or transmissible diseases. A physical examination is performed, including observation and evaluation of all body systems and pelvic organs. The vaginal part of the pelvic examination may include estimation of the size of the pelvis; a Papanicolaou (Pap) smear; and tests for *Neisseria gonorrhoeae*, *Candida albicans*, *Chlamydia* species, *Trichomonas vaginalis*, syphilis, herpes genitalis, and other infections. Blood pressure, weight, urinalysis (primarily for glucose and protein levels), measurement of fundal height, and auscultation of the fetal heart are routinely performed at monthly intervals or even more frequently in the second and third trimesters. Laboratory tests are performed to determine blood type and Rh factor, rubella titers, hematocrit, and hemoglobin or complete blood count. Ultrasound and/or amniocentesis may be performed if certain fetal abnormalities are suspected. Also called **antenatal care**, **prenatal care**. See also **intrapartal care**, **postpartal care**.

antepartum hemorrhage [Gk, *ante*, before; L, *parturire*, to have labor pains; Gk, *haima*, blood, *rhegnynai*, to burst forth], bleeding from the uterus during a pregnancy in which the placenta appears to be normally situated, particularly after the 28th week.

antipyretic /-pīré'tik/ [L, *ante*, before; Gk, *pyretos*, fever], before the onset of fever. Also called **antifebrile**.

anterior (A) /antirē'ē-ər/ [L, *ante* + *prior*, foremost], 1. the front of a structure. 2. pertaining to a surface or part situated toward the front or facing forward. Compare **posterior**. See also **ventral**.

anterior Achilles bursitis. See **Albert’s disease**.

anterior asynditism. See **asynditism**.

anterior atlantoaxial ligament /atlan'tō-ak'sē-əl/, one of five ligaments connecting the atlas to the axis. It is fixed to the inferior border of the anterior arch of the atlas and to the ventral surface of the body of the axis. Compare **posterior atlantoaxial ligament**.

anterior atlantooccipital membrane, one of two broad, densely woven fibrous sheets that form part of the atlantooccipital joint between the atlas and the occipital bone. Also called **anterior atlantooccipital ligament**. Compare **posterior atlantooccipital membrane**.

anterior axillary line (AAL), an imaginary vertical line on the body wall continuing the line of the anterior axillary fold with the upper arm.

anterior cardiac vein, one of several small vessels that return deoxygenated blood from the ventral portion of the myocardium of the right ventricle to the right atrium. See also **coronary sinus**.

anterior central gyrus. See **precentral gyrus**.

anterior cerebral commissure [L, *ante* + *prior*, foremost, *cerebrum*, brain, *commissura*, ajoining], a bundle of fibers in the anterior wall of the prosencephalon connecting the olfactory bulb and olfactory cortex on one side with the similar structures on the other side.

anterior cervical decompression and fusion (ACDF), a surgical procedure to treat cervical disk herniation or degeneration in the spine. A discectomy is performed on the patient, who is under general anesthesia and supine, with the

neck extended by a small shoulder roll placed horizontally. Fusion of a bone graft, either an autograft from the patient's iliac crest or an allograft from a bone bank, preserves the disk space and provides spinal stability. A spinal plate and screws are secured to the vertebral bodies above and below the graft. Patients should be observed postoperatively for dysphagia, hematoma, and recurrent laryngeal nerve palsy.

anterior chamber [L, *ante + prior*, foremost; Gk, *kamara*, an arched cover], the part of the anterior cavity of the eye in front of the iris. It contains the aqueous humor.

anterior column. See **anterior horn.**

anterior common ligament. See **anterior longitudinal ligament.**

anterior corticospinal tract, a group of nerve fibers in the anterior funiculus of the spinal cord, originating in the cerebral cortex.

anterior cruciate ligament (ACL), a strong band that arises from the posterior middle part of the lateral condyle of the femur, passes anteriorly and inferiorly between the condyles, and is attached to the depression in front of the intercondylar eminence of the tibia. The ACL is often injured in athletic activity and is the main control for rotation of the knee.

anterior crural nerve. See **femoral nerve.**

anterior cutaneous nerve, one of a pair of cutaneous branches of the cervical plexus. It arises from the second and the third cervical nerves and divides into the ascending and the descending branches. The ascending branches are distributed to the cranial, ventral, and lateral parts of the neck. The descending branches are distributed to the skin of the ventral and the lateral parts of the neck as far down as the sternum.

anterior determinants of cusp, the characteristics of the anterior teeth that determine the cusp elevations and the fossae in restoration of the postcanine teeth. Such determinants include occlusion, alignment overlaps, and the capacity to disocclude conjointly with condylar trajectories.

anterior drawer sign or test, a test for rupture of the anterior cruciate ligament. The result is positive if there is increased anterior gliding of the tibia when the knee is flexed at a 90-degree angle. See also **drawer sign.**

anterior elastic lamina. See **Bowman's lamina.**

anterior ethmoidal artery, an artery that supplies the nasal septum and lateral wall and ends as the dorsal nasal artery.

anterior ethmoidal nerve, a nerve that innervates the anterior cranial fossa, the nasal cavity, and the skin of the lower half of the nose.

anterior fontanel, a diamond-shaped unossified area between the frontal and two parietal bones just above an infant's forehead at the junction of the coronal and sagittal sutures. Also called (*informal*) **soft spot.** See also **fontanel.**

anterior guide, the portion of an articulator that is contacted by the incisal guide pin to maintain the selected separation of the upper and lower members of the articulator. The anterior guide influences the changing relationships of mounted casts in eccentric movements. Also called **incisal guide.** Compare **condylar guide.**

anterior horn [L, *ante + prior*, foremost, *cornu*, horn, *spina*, spine; Gk, *chorde*, string], one of the hornlike projections of gray matter into the white matter of the spinal cord. The anterior horn contains efferent fibers innervating skeletal muscle tissue. Also called **anterior column, ventral column, ventral horn.**

anterior horn cell, motor neuron in the anterior horn.

anterior longitudinal ligament, the broad, strong ligament attached to the ventral surfaces of the vertebral bodies. It extends from the occipital bone and the anterior tubercle of

the atlas to the sacrum. Also called **anterior common ligament.** Compare **posterior longitudinal ligament.**

anterior malleolar artery, one of two arteries, the medial and the lateral, that arise from the anterior tibial artery and connect with vessels from the posterior tibial and fibular arteries to form an anastomotic network around the ankle.

anterior mediastinal node, a node in one of the three groups of thoracic visceral nodes of the lymphatic system that drains lymph from the nodes of the thymus, pericardium, and sternum. The nodes are located ventral to the brachiocephalic vein and to the arterial trunks from the aortic arch. See also **thoracic visceral node.**

anterior mediastinum, a caudal portion of the mediastinum in the middle of the thorax, bounded ventrally by the body of the sternum and parts of the fourth through the seventh ribs and dorsally by the parietal pericardium, extending downward as far as the diaphragm. Compare **middle mediastinum, posterior mediastinum, superior mediastinum.**

anterior nares, the ends of the nares, which open anteriorly into the nasal cavity and allow the inhalation and exhalation of air. Each is an oval opening that measures about 1.5 cm anteroposteriorly and about 1 cm in diameter. The anterior nares connect with the nasal fossae. Also called **nostrils.** Compare **posterior nares.**

anterior nasal spine, the sharp anterosuperior projection at the anterior extremity of the line of union of the two maxillae.

anterior neuropore, the opening of the embryonic neural tube in the anterior portion of the prosencephalon. It closes on day 25. Compare **posterior neuropore.** See also **horizon.**

anterior pituitary. See **adenohypophysis.**

anterior ramus, a branch of each spinal nerve as it exits the vertebral canal. The anterior rami form the major somatic plexuses of the body. Major visceral components of the peripheral nervous system are also associated mainly with the anterior rami of spinal nerves.

anterior rhizotomy [L, *ante + prior*, foremost; Gk, *rhiza*, root, *temnein*, to cut], the surgical cutting of the ventral root of a spinal nerve, usually to relieve persistent spasm, involuntary movement, or intractable pain.

anterior spinal artery, an artery that originates within the cranial cavity and passes inferiorly along the surface of the spinal cord. It is reinforced along its length by 8 to 10 segmental medullary arteries, the largest of which is the artery of Adamkiewicz.

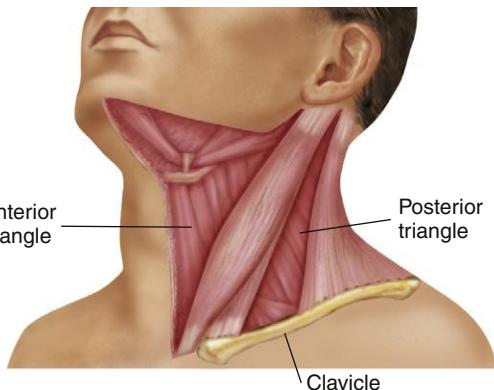
anterior temporal artery, the anterior temporal branch of the middle cerebral artery. Its origin is the middle cerebral artery, and it supplies blood to the cortex of the anterior temporal lobe.

anterior tibial artery, one of two divisions of the popliteal artery, arising in back of the knee, dividing into six branches, and supplying various muscles of the leg and foot. Branches are the posterior tibial recurrent, anterior tibial recurrent, lateral anterior malleolar artery, medial anterior malleolar artery, lateral malleolar rete, and medial malleolar rete. Compare **posterior tibial artery.**

anterior tibial node, one of the small lymph glands of the lower limb, lying on the interosseous membrane of the leg near the proximal portion of the anterior tibial vessels. Compare **inguinal node, popliteal node.**

anterior tooth, any of the central incisors, lateral incisors, or canines of the maxillary or mandibular teeth. Compare **posterior tooth.**

anterior triangle of the neck, a triangular area bounded by the median line of the neck in front, the lower border of the mandible, and a line extending back to the sternocleidomastoid muscle.



Anterior triangle of the neck (Seidel et al, 2011)

antero-, anter- /an'tərō-/; prefixes denoting front: **antero-occlusion**, **anterolateral**.

antero-occlusion /an'tərōkloo'shən/ [L, *ante* + *occludere*, to shut], a malocclusion in which the mandibular teeth are anterior to their normal position relative to the maxillary teeth. Compare **anteverision**. See also **Angle's classification of malocclusion (modified)**.

anteroexternal. See **anterolateral**.

anterograde. See **antegrade**.

anterograde amnesia [L, *ante* + *prior*, foremost, *gredi*, to go], 1. the inability to form new memories. 2. the inability to recall events that occur after the onset of amnesia, usually with an inability to form new memories, which can be temporary. Compare **anterograde memory**, **retrograde amnesia**.

anterograde memory, the ability to recall events in the distant past but not recent occurrences. Compare **anterograde amnesia**.

anteroinferior /an'tərō-infir'ē-ər/, situated in front of but at a lower level.

anterointernal. See **anteromedial**.

anterolateral /-lat'ərlə/, in front and on each side of another structure or object. Also called **anteroexternal**.

anterolateral thoracotomy, a surgical technique in which entry to the chest is made with an incision below the breast but above the costal margins. The incision involves the pectoralis, serratus anterior, and intercostal muscles. Compare **median sternotomy**, **posteriorlateral thoracotomy**.

anteromedial /an'tərō-mē'dē-əl/, located anteriorly and to the medial side. Also called **anterointernal**.

anteromedial central artery, any of the branches of the anterior communicating artery that supply the corpus callosum, septum pellucidum, lentiform nucleus, and caudate nucleus.

anteroposterior (AP) /an'tərōpostir'ē-ər/ [L, *ante* + *prior*, foremost, *posterus*, coming after], from the front to the back of the body.

anteroposterior diameter of the pelvic outlet, the distance between the middle of the pubic symphysis and the upper border of the third sacral vertebra.

anteroposterior vaginal repair, a surgical procedure in which the upper and lower walls of the vagina are reconstructed to correct relaxed tissue. Relaxed vaginal tissue may result from aging changes, childbirth, or surgical trauma, or it may be inherited.

anterosuperior, situated in front of but at a higher level.

anteverision /-vur'shən/ [L, *ante* + *versio*, turning], 1. an abnormal position of an organ in which it is tilted or bent forward on its axis, away from the midline. 2. (in dentistry)

the tipping or tilting of teeth or other mandibular structures more anteriorly than normal. Compare **anteroocclusion**.

3. the angulation created in the transverse plane between the neck of the femur and shaft of the femur. The normal angle is between 15 and 20 degrees. —*anteverted*, adj.

anthelmintic /an'thelmin'tik/ [Gk, *anti* + *helmins*, against worms], 1. pertaining to a substance that destroys or prevents the development of parasitic worms, such as filariae, flukes, hookworms, pinworms, roundworms, schistosomes, tapeworms, trichinae, and whipworms. 2. an anthelmintic drug. An anthelmintic may interfere with the parasites' carbohydrate metabolism, inhibit their respiratory enzymes, block their neuromuscular action, or render them susceptible to destruction by the host's macrophages. Drugs used in treating specific helminthic infections include piperazine, pyrantel pamoate, pyrvinium pamoate, mebendazole, niclosamide, hexylresorcinol, diethylcarbamazine, and thiabendazole.

-anthema, a suffix meaning a '(specified) type of skin eruption or rash': **enanthema**, **exanthema**.

anthraco-, a combining form meaning 'carbuncle or coal': **anthraconecrosis**, **anthracosis**.

anthracosis /an'thrəkō'sis/ [Gk, *anthrax*, coal, *osis*, condition], a chronic lung disease characterized by the deposit of coal dust in the lungs and by the formation of black nodules on the bronchioles, resulting in focal emphysema. The condition occurs in coal miners and is aggravated by cigarette smoking. There is no specific treatment; most cases are asymptomatic, and preventing further exposure to coal dust may halt progress of the condition. Also called **black lung disease**, **coal worker's pneumoconiosis**, **miner's pneumoconiosis**. See also **inorganic dust**.

anthralin /an'thrəlin/, a topical antipsoriatic.

■ **INDICATIONS:** It is prescribed in the treatment of psoriasis and chronic dermatitis.

■ **CONTRAINdications:** Known hypersensitivity to this drug prohibits its use. It is not applied to acute psoriatic eruptions or near the eyes.

anthranilic acid. See **aminobenzoic acid**.

anthrax /an'thraks/ [Gk, *anthrax*, coal, carbuncle], an acute infectious disease (reportable to public health officials) caused by the spore-forming bacterium *Bacillus anthracis* and occurring most frequently in herbivores (cattle, goats, sheep). Humans can become infected through skin contact, ingestion, or inspiration of spores from infected animals or animal products. Person-to-person transmission of inhalational disease does not occur. Anthrax in animals is usually fatal. Inspiration causes the most serious form in humans and is usually fatal, but in 95% of the cases it is acquired when a break in the skin has direct contact with infected animals and their hides. The cutaneous form begins with itching and then a 1- to 3-cm reddish brown lesion that ulcerates and then forms dark eschar surrounded by brawny edema; the signs and symptoms that follow include internal hemorrhage, muscle pain, headache, fever, nausea, and vomiting. The pulmonary form, called **woolsorter's disease**, is often fatal unless treated early. Early symptoms include low-grade fever, nonproductive cough, malaise, fatigue, myalgia, profound sweating, and chest discomfort. Later symptoms include an abrupt onset of a high fever and severe respiratory distress (cyanosis, dyspnea, stridor). Treatment is a 60-day course of antibiotics such as ciprofloxacin, levofloxacin, doxycycline, and penicillin. Contaminated surfaces should be cleaned with a 5% hypochlorite solution. A vaccine is available for veterinarians and for others for whom anthrax is an occupational hazard. The incubation period for anthrax is 7 to 42 days. Anthrax is an important potential bioterrorism agent. Also called **malignant edema**, **malignant pustule**, **ragpicker disease**.

■ **OBSERVATIONS:** **Cutaneous anthrax** begins as an itchy, raised, red-brown skin bump, which develops into a vesicle and then a painless ulcer with a depressed black necrotic center. Lymph nodes in the adjacent area may be swollen and there may be fever, fatigue, and headache. Eschar from the ulcer dries and drops off with little or no scarring after 1 to 2 weeks. Cutaneous forms respond readily to treatment, but 20% of untreated cases result in death. **Inhalation anthrax** starts with a brief prodrome that resembles a viral respiratory illness followed by hypoxia, dyspnea, fever, muscle aches, headaches, and fatigue. Once the spores travel to the lymphatic system, respiratory failure and shock occur and death usually ensues regardless of treatment. **Gastrointestinal anthrax** presents with severe abdominal pain, fever, fatigue, anorexia, hematemesis, and bloody diarrhea. In some cases there may be lesions in the nose, mouth, and throat. The disease spreads systemically and is fatal in 30% to 60% of cases if not treated immediately. Diagnosis in all forms is made by history of possible exposure; by physical exam for presenting symptomatology and by isolation of *Bacillus anthracis* in blood, skin lesions, or respiratory secretions. Serological testing with enzyme-linked immunosorbent assay can confirm diagnosis. An anthracis test (available in specialized labs) can be used to detect anthrax cell-mediated immunity. Chest x-rays may detect mediastinal widening, pleural effusion, and infiltrates in inhalation anthrax.

■ **INTERVENTIONS:** Antiinfectives, such as penicillin, doxycycline, Cipro, and/or Floxin, are primary treatment. IV hydration and ventilator support are used for the inhalation form. Local and state authorities need to be notified in all suspected cases. Use of the anthrax vaccine is recommended in limited use for those at risk (e.g., military personnel, veterinarians, and livestock handlers). Side effects are high and schedule is six doses over an 18-month period. Treatment for exposure is usually a post exposure anthrax vaccine and 60-day course of antibiotics.

■ **NURSING CONSIDERATIONS:** Nursing care for inhalation anthrax is largely supportive and centers on management of airway and mechanical ventilation, fluid management, and comfort measures. Every member of the health care team should be prepared for an effective response should anthrax be used in a bioterrorism event. This includes familiarization of institution policies, procedures, and protocols, and maintenance of current knowledge regarding bioterrorism threats.



Anthrax

(Swartz, 2009/Courtesy of the Centers for Disease Control [CDC])

anthrax vaccine, a cell-free protein extract of cultures of *Bacillus anthracis*, used for immunization against anthrax.

anthro-, a prefix meaning 'man or human': *anthropoid*, *anthropology*.

anthropoid /an'thrəpoid/ [Gk, *anthropos*, human, *eidos*, form], resembling a man or human.

anthropoid pelvis [Gk, *anthropos*, human, *eidos*, form], a type of pelvis in which the pelvic inlet is oval and the

anteroposterior diameter of the pelvic inlet is much greater than the transverse. The posterior portion of the space in the true pelvis is much greater than the anterior portion. If the pelvis is large, vaginal delivery is not compromised, but the occiput posterior position of the fetus is favored. This type of pelvis is present in 40% of women who are not Caucasian and in more than 25% of Caucasian women. See also **pelvis**. **anthropology** [Gk, *anthropos*, human, *logos*, science], the science of human beings, from animal-like characteristics to social and environmental aspects.

anthropometry /an'thrəpom'ētrē/ [Gk, *anthropos* + *metron*, measure], the science of measuring the human body as to height, weight, and size of component parts, including skin-fold thickness, to study and compare the relative proportions under normal and abnormal conditions. Also called **anthropometric measurement**. —*anthropometric*, adj.

anthropomorphism /an'thrəpōmōr'fizəm/ [Gk, *anthropos*, human, *morphe*, form], the assignment of human shapes and qualities to other animals.

anti-, ant-, prefixes meaning 'against or over against': *antibody*, *antacid*.

antiadrenergic /an'ti-ad'rənur'jik, an'ti-/ [Gk, *anti* + L, *ad* + *ren*, to kidney], 1. pertaining to the blockage of the effects of impulses transmitted by the adrenergic postganglionic fibers of the sympathetic nervous system. 2. an antiadrenergic agent. These drugs block the response to norepinephrine bound to alpha receptors and reduce the tonus of smooth muscle in peripheral blood vessels, causing increased peripheral circulation and decreased blood pressure. Alpha₁-blocking agents include ergotamine derivatives, phenoxybenzamine, phentolamine, and tolazoline hydrochloride; they are used to treat conditions such as migraines, Raynaud's disease, pheochromocytoma, diabetic gangrene, and spastic vascular disease. Beta₁-blocking agents decrease the rate and force of heart contractions and are administered for hypertension, angina, and arrhythmias; propranolol hydrochloride and its congeners are examples. Also called **sympatholytic**. Compare **adrenergic**, **anticholinergic**.

antiagglutinin /-aglōō'tinīn/ [Gk, *anti*, against; L, *agglutinare*, to glue], a specific antibody that counteracts the effects of an agglutinin.

antiamebic /an'ti-āmē'bik/, pertaining to a medication that treats amebic infections.

antianabolic /-an'ābol'ik/, pertaining to drugs or other agents that inhibit or retard anabolic processes, such as cell division and the creation of new tissue by protein synthesis.

antianaphylaxis /-an'āfilak'sis/ [Gk, *anti*, against, *ana*, back, *phylaxis*, protection], a procedure to prevent anaphylactic reactions by injecting a patient with small desensitizing doses of the antigen. Also called **allergy immunotherapy**.

antianemic /-ānē'mik/ [Gk, *anti* + *a* + *haima*, without blood], 1. pertaining to a substance or procedure that counteracts or prevents a deficiency of erythrocytes. 2. an agent used to treat or to prevent anemia. Whole blood is transfused in the treatment of anemia resulting from acute blood loss, and packed cells are usually administered when the deficiency is caused by chronic blood loss. Transfusions of blood components are used in the treatment of aplastic anemia. Iron deficiency anemia is usually treated with oral preparations of ferrous sulfate, fumarate, or gluconate, but a parenteral preparation is indicated for people who are unable to absorb iron from the GI tract or for those who respond with nausea and diarrhea to the oral administration of iron. Cyanocobalamin is administered parenterally in the treatment of pernicious anemia. Folic acid is prescribed to correct a deficiency of that vitamin in the anemias accompanying general malnutrition or Laënnec's cirrhosis and to treat the anemia of infants on an

exclusive milk diet. A combination of folic acid and vitamin B₁₂ is prescribed for people who are anemic as a result of an inadequate dietary intake of both vitamins.

antianginal /-anjī'nəl/, **1.** pertaining to the reduction of myocardial oxygen consumption or the increase of oxygen supply to the myocardium to prevent symptoms of angina pectoris. **2.** an antianginal agent.

antiantibody /an'ti-ant'ibodē/ [Gk, *anti* + *anti* + AS, *bodig*], an immunoglobulin formed as the result of the administration of an antibody that acts as an immunogen. The antiantibody then interacts with the antibody. See also **immune gamma globulin**.

antiantitoxin /-tok'sin/ [Gk, *anti* + *anti* + *toxikon*, poison], an antiantibody that may form in the body during immunization, inhibiting or counteracting the effect of the antitoxin administered.

antianxiety agent, a drug that reduces anxiety. The group includes the benzodiazepine derivatives and a few less widely used nonbenzodiazepines such as meprobamate and hydroxyzine hydrochloride. Also called **anxiolytic**.

antiarrhythmic /-rith'mik/ [Gk, *anti* + *rhythmos*, rhythm], **1.** pertaining to a procedure or substance that prevents, alleviates, or corrects an abnormal cardiac rhythm. **2.** an antiarrhythmic agent. A defibrillator that delivers a precordial electric shock is often used to restore a normal rhythm to rapid, irregular atrial or ventricular contractions. A pacemaker may be implanted in a patient with an extremely slow heart rate or another arrhythmia. The electrode catheter of an external pacemaker may be threaded through a vein to the heart in cases of ventricular standstill or complete heart block. The major antiarrhythmic drugs are lidocaine hydrochloride, and a combination of disopyramide phosphate, procainamide hydrochloride, and quinidine. The antiadrenergic blocking agent propranolol hydrochloride may be used in treating arrhythmias. Isoproterenol hydrochloride is indicated for complete heart block and ventricular arrhythmias requiring an increased force of cardiac contractions to establish a normal rhythm. Atropine may be used in the treatment of bradycardia, a sedative in the treatment of tachycardia, and digitalis in the treatment of atrial fibrillation. Calcium channel blockers control arrhythmias by inhibiting calcium ion influx across the plasma membrane of cardiac muscle, thus slowing atrioventricular conduction and prolonging the effective refractory period within the AV node. See also **arrhythmia**.

antiarthritic /-ärthrit'ik/ [Gk, *anti*, against, *artron*, joint, *itis*, inflammation], **1.** pertaining to a therapy that relieves symptoms of arthritis. **2.** an antiarthritic agent.

antibacterial /-baktirē'əl/ [Gk, *anti* + *bakterion*, small staff], **1.** pertaining to a substance that kills bacteria or inhibits their growth or replication. **2.** an antibacterial agent. Antibiotics synthesized chemically or derived from various microorganisms exert their bactericidal or bacteriostatic effect by interfering with the production of the bacterial plasma wall; by interfering with protein synthesis, nucleic acid synthesis, or plasma membrane integrity; or by inhibiting critical biosynthetic pathways in the bacteria.

antiberiberi factor. See **thiamine**.

antibiotic /-brōt'ik/ [Gk, *anti* + *bios*, life], **1.** pertaining to the ability to destroy or interfere with the development of a living organism. **2.** an antimicrobial agent, derived from cultures of a microorganism or produced semisynthetically, used to treat infections. The **penicillins**, derived from species of the fungus *Penicillium* or manufactured semisynthetically, consist of a thiazolidine ring fused to a beta-lactam ring connected to side chains; these agents exert their action by inhibiting mucopeptide synthesis in bacterial plasma walls during multiplication of the organisms. Penicillin G is

widely used to treat many gram-positive coccal infections.

Aminoglycoside antibiotics, composed of amino sugars in glycoside linkage, interfere with the synthesis of bacterial proteins and are used primarily for treating infections caused by gram-negative organisms. The aminoglycosides include gentamicin sulfate derived from *Micromonospora*, semisynthetic amikacin sulfate, kanamycin sulfate, neomycin sulfate, streptomycin sulfate, and tobramycin sulfate. These agents commonly cause nephrotoxic and ototoxic reactions as well as GI disturbances. **Macrolide antibiotics**, consisting of a large lactone ring and deoxamino sugar, interfere in the protein synthesis of susceptible bacteria during multiplication without affecting nucleic acid synthesis. They are produced by actinomycetes or their derivatives, with the name derived from the large size of the molecules. Macrolides are generally used against gram-positive bacteria and in patients allergic to penicillins. Oleandomycin, which is added to feed to improve the growth of poultry and swine, and broad-spectrum erythromycin, used to treat various gram-positive and gram-negative infections and intestinal amebiasis, are macrolides derived from species of *Streptomyces*. Erythromycin may cause mild allergic reactions and GI discomfort, but nausea, vomiting, and diarrhea occur infrequently with the usual oral dose. Polypeptide antibiotics derived from species of *Streptomyces* or certain soil bacilli vary in their spectra; most agents are nephrotoxic and ototoxic. Bacitracin and vancomycin are polypeptides used to treat severe staphylococcal infections; capreomycin and vancomycin are antitubercular agents; and gramicidin is included in ointments for topical infections. Among polypeptide antibiotics effective against gram-negative organisms, colistin sulfate and neomycin sulfate are administered for diarrhea caused by enteropathogenic *Escherichia coli*. The tetracycline antibiotics, including the prototype derived from *Streptomyces*, chlortetracycline HCl, demeclocycline HCl, doxycycline, minocycline HCl, and oxytetracycline, are active against a wide range of gram-positive and gram-negative organisms and some rickettsiae. Antibiotics in this group are primarily bacteriostatic and are thought to exert their effect by inhibiting protein synthesis in the organisms. Tetracycline therapy may cause GI irritation, photosensitivity, nephrotoxicity, and hepatotoxicity. Administering a drug of this group in patients during the last half of pregnancy or before 8 years of age may result in permanent discoloration of the teeth. The **cephalosporin antibiotics**, derived from the soil fungus *Cephalosporium falciforme* or produced semisynthetically, inhibit bacterial plasma wall synthesis and resist the action of penicillinase. Cephalosporins are similar in structure to penicillins except for a beta-lactam dihydrothiazine ring in place of beta-lactam thiazolidin in penicillin. They are used in treating infections of the respiratory tract, urinary tract, middle ear, and bones, as well as septicemia caused by a wide range of gram-positive and gram-negative organisms. The group includes cefadroxil monohydrate, cefamandole nafate, cefazolin, cephalexin, cephaloglycin, cephaloridine, cephalothin sodium, cephapirin, and cephadrine. Treatment with a cephalosporin may cause nausea, vomiting, diarrhea, enterocolitis, or an allergic reaction, such as a rash, angioedema, or exfoliative dermatitis; use of antibiotics in this group is contraindicated in patients who have shown hypersensitivity to a penicillin. Chloramphenicol, a broad-spectrum antibiotic initially derived from *Streptomyces venezuelae*, inhibits protein synthesis in bacteria. Because the drug may cause life-threatening blood dyscrasias, its use is reserved for the treatment of acute typhoid fever, serious gram-negative infections (including meningitis caused by *Haemophilus influenzae*), and rickettsial diseases.

antibiotic anticancer agent, a drug that blocks mammalian cell proliferation in addition to microbial proliferation, making them too dangerous for treating bacterial infections but useful for treating cancer. Examples include bleomycin sulfate, dactinomycin, DAUNOrubicin citrate liposomal, and mitomycin.

antibiotic resistant, pertaining to strains of microorganisms that either developed a resistance to antibiotics or were never sensitive to them.

antibiotic sensitivity test, a laboratory method for determining the susceptibility of organisms to therapy with antibiotics. After the infecting organism has been recovered from a clinical specimen, it is cultured and tested against a panel of antibiotic drugs (the specific panel is determined by whether the organism is gram-positive and gram-negative). If the growth of the organism is inhibited by the action of the drug, it is reported as sensitive to that antibiotic. If the organism is not susceptible to the antibiotic, it is reported as resistant to that drug. See also **sensitivity test**.

antibody (Ab) /an'tibodē/ [Gk, *anti* + AS, *bodigl*], an immunoglobulin produced by B-lymphocytes in response to bacteria, viruses, or other antigenic substances. An antibody is specific to an antigen. Each class of antibody is named for its action. Antibodies include **agglutinins**, **bacteriolysins**, **opsonins**, and **precipitins**. See also **antiantibody**, **B cell**, **immune response**.

antibody absorption, the process of removing or tying up undesired antibodies in an antiserum reagent by allowing them to react with their antigens.

antibody-instructive model, a hypothetical explanation for antibody formation. It postulates that each antigenic contact in the life of an individual causes a new antibody to develop, as when a B cell comes in contact with an antigen and subsequently produces plasma cells and memory cells. The model maintains that the random contact of B cells with antigens induces the reticuloendothelial system to instruct memory cells to produce antibodies against antigens at any time. This model is not supported by experimental evidence. Compare **antibody-specific theory**.

antibody-specific model, a proposed explanation for antibody formation that states that precommitted clones of lymphoid cells produced in the fetus are capable of interacting with a limited number of antigenic determinants with which they may have contact. Any such cells that encounter their specific antigenic determinant in utero are destroyed or suppressed. This action removes cells programmed to produce endogenous autoantibodies and prevents the development of autoimmune diseases, leaving intact those cells capable of reacting with exogenous antigens. The model holds that the body contains an enormous number of diverse clones of cells, each genetically programmed to synthesize a different antibody. Any antigen entering the body selects the specific clone programmed to synthesize the antibody for that antigen and stimulates the cells of the clone to proliferate and produce more of the same antibody. Also called **clonal selection model**. Compare **antibody-instructive model**. See also **autoimmunity**.

antibody therapy, the administration of parenteral immunoglobulins as a treatment for patients with immunodeficiency diseases.

antibody titer, the concentration of antibodies circulating in the bloodstream of an individual. A rising titer usually indicates the body's response to antigens associated with an active infection.

antibromic. See **deodorant**.

anticancer diet /-kan'sər/, a diet, based on recommendations of the American Cancer Society, National Cancer

Institute, and National Academy of Sciences, to reduce cancer risk factors associated with eating habits.

anticarcinogenic /-kär'sinjen'ik/ [Gk, *anti*, against, *karkinos*, crab, *oma*, tumor, *genein*, to produce], pertaining to a substance or device that neutralizes the effects of a cancer-causing substance.

anticardiolipin antibodies test, a blood test used to diagnose systemic lupus erythematosus. Elevated levels can also indicate thrombosis, thrombocytopenia, syphilis, and acute infection.

anticentromere antibody test, a blood test used to diagnose CREST syndrome.

anticholinergic /-kō'lənur'jik/ [Gk, *anti* + *chole*, bile, *ergein*, to work], 1. pertaining to a blockade of acetylcholine receptors that results in the inhibition of the transmission of parasympathetic nerve impulses. 2. an anti-cholinergic agent that functions by competing with the neurotransmitter acetylcholine for its receptor sites at synaptic junctions. Anticholinergics are used to treat spastic disorders of the GI tract, to reduce salivary and bronchial secretions before surgery, or to dilate the pupil. Some anticholinergics reduce parkinsonian symptoms but are never considered primary agents for therapy. Atropine in large doses stimulates the central nervous system and in small doses acts as a depressant. Among numerous cholinergic blocking agents are atropine, belladonna, glycopyrrolate, hyoscyamine, methoxene hydrochloride, trihexyphenidyl hydrochloride, and scopolamine. Also called **cholinergic-blocking agent**, **parasympatholytic**. See also **antidiuretic**.

anticholinergic poisoning, poisoning caused by overdosing with an anticholinergic or by ingesting of plants such as jimsonweed that contain belladonna alkaloids. It is characterized by dry mouth; hot, dry, flushed skin; fixed, dilated pupils; sinus tachycardia; urinary retention; disorientation; agitation; impairment of short-term memory; slurred speech; hallucinations; respiratory depression; seizures; and coma. In rare cases, death may occur. Treatment is by induced vomiting and administration of activated charcoal; physostigmine salicylate may be used in severe cases to reverse the anticholinergic effects.

anticholinesterase /an'tikol'ōnes'tərās/, a drug that inhibits or inactivates the action of acetylcholinesterase. Drugs of this class cause acetylcholine to accumulate at the junctions of various cholinergic nerve fibers and their effector sites or organs, allowing potentially continuous stimulation of cholinergic fibers throughout the central and peripheral nervous systems. Anticholinesterases include physostigmine salicylate, neostigmine, edrophonium, and pyridostigmine. Neostigmine and pyridostigmine are prescribed in the treatment of myasthenia gravis; edrophonium in the diagnosis of myasthenia gravis and the treatment of overdose of curariform drugs. Many agricultural insecticides have been developed from anticholinesterases; these are the highly toxic chemicals called organophosphates. Nerve gases developed as potential chemical warfare agents contain potent, irreversible forms of anticholinesterase.

anticipation /antis'ipā'shən/, an appearance before the expected time of a periodic sign or symptom. Examples are a malarial paroxysm or a hereditary disorder.

anticipatory adaptation /antis'əpətōr'ē/ [L, *anticipare*, to receive before], the act of adapting to a potentially distressing situation before actually confronting the problem. An example is when a person tries to relax before learning the results of a medical examination.

anticipatory grief, feelings of grief that develop before, rather than after, a loss.

anticipatory guidance¹, the psychological preparation of a person to help relieve the fear and anxiety of an event

expected to be stressful. An example is the preparation of a child for surgery by explaining what will happen and what it will feel like and showing equipment or the area of the hospital where the child will be. It is also used to prepare parents for the normal growth and development of their child.

anticipatory guidance², a nursing intervention from the Nursing Interventions Classification (NIC) defined as preparation of patient for an anticipated developmental and/or situational crisis. See also **Nursing Interventions Classification**.

anticipatory nausea and vomiting, nausea and/or vomiting occurring before a new cycle of chemotherapy in response to conditioned stimuli, such as the smells, sights, and sound of the treatment room. It usually occurs after the person has experienced acute nausea and vomiting.

anticoagulant /-kō-ag'yələnt/ [Gk, *anti* + *coagulare*, curdle], 1. pertaining to a substance that prevents or delays coagulation of the blood. 2. an anticoagulant drug. Heparin is a potent anticoagulant that interferes with the formation of thromboplastin, with the conversion of prothrombin to thrombin, and with the formation of fibrin from fibrinogen. Phenindione derivatives administered orally or by injection are vitamin K antagonists that prevent coagulation by inhibiting the formation of vitamin K-dependent clotting factors. See also **antithrombotic**.

anticoagulant citrate phosphate dextrose adenine solution, citrate phosphate dextrose adenine.

anticoagulant citrate phosphate dextrose solution, citrate phosphate dextrose.

anticoagulant therapy [Gk, *anti* + L, *coagulare*, to curdle; Gk, *therapeia*], the use of drugs that suppress blood clot formation (thrombosis) and propagation. In patients who have experienced thrombotic events, anticoagulant therapy is used to prevent secondary coronary thrombosis, peripheral artery disease, cerebrovascular occlusion, thrombophlebitis, deep venous thrombosis, and pulmonary embolism. Anticoagulants are administered prophylactically subsequent to orthopedic surgery and in atrial fibrillation.

anticodon /an'tikō'don/ [Gk, *anti* + *caudex*, book], a sequence of three nucleotides found in transfer RNA. Each anticodon pairs complementarily with a specific codon of messenger RNA during protein synthesis and specifies a particular amino acid in the protein. See also **genetic code, transcription, translation**.

anticomplement, a substance other than an antigen-antibody complex that activates serum complement, resulting in complement fixation.

anticonvulsant /-kōnvl'sənt/ [Gk, *anti* + L, *convellere*, to shake], 1. pertaining to a substance or procedure that prevents or reduces the severity of epileptic or other convulsive seizures. 2. an anticonvulsant drug. Hydantoin derivatives, especially phenytoin, apparently exert their anticonvulsant effect by stabilizing the plasma membrane and decreasing intracellular sodium levels; as a result, the excitability of the epileptogenic focus is reduced. Phenytoin prevents the spread of excessive discharges in motor areas and suppresses arrhythmias originating in the thalamus, frontal lobes, and other brain areas. Succinic acid derivatives, valproic acid, and various barbiturates are among the drugs prescribed to limit or prevent absence seizures. Some benzodiazepines are also useful as anticonvulsants. Many of these agents can produce fetal malformations when administered to pregnant women. Also called **antiepileptic**.

anticyclic citrullinated peptide antibody test, a blood test used to diagnose rheumatoid arthritis in its early stages.

antideformity positioning and splinting /-dəfōr'mitē/, the use of splints, braces, or similar devices to prevent or control

contractures or other musculoskeletal deformities that may result from disuse, burns, or other injuries. Examples include the application of an axillary or airplane splint to prevent adduction contracture of the shoulder and a neck conformer splint to prevent flexion contractures of the neck.

antideoxyribonuclease-B titer test, a blood test used to diagnose acute rheumatic fever and poststreptococcal glomerulonephritis. Its results are variable and for accuracy should be done in conjunction with the antistreptolysin O titer test.

antidepressant /-dəpres'ənt/, 1. pertaining to a substance or a measure that prevents or relieves depression. 2. an antidepressant drug.

antidiabetic /-drī'bēt'ik/, pertaining to an agent that prevents or relieves symptoms of diabetes.

antidiarrheal /-dī'ərē'əl/, a drug or dietary fiber-forming agent that relieves the symptoms of diarrhea. The most effective antidiarrheal drugs are opioid derivatives, which slow intestinal motility to permit greater time for the absorption of water and electrolytes. Dietary fiber-forming agents improve stool consistency but may not decrease fluid and electrolyte loss. Infectious diarrhea (for example, traveler's diarrhea) may require antibiotics if severe.

antidiuretic /-dī'ərēt'ik/ [Gk, *anti* + *dia*, through, *ouein*, to urinate], 1. pertaining to the suppression of urine formation. 2. an antidiuretic hormone, produced in hypothalamic nuclei and stored in the posterior lobe of the pituitary gland, that suppresses urine formation by permitting the resorption of water-collecting ducts in the kidneys. —*antidiurexis*, n.

antidiuretic hormone (ADH), a hormone that decreases the production of urine by increasing the reabsorption of water by the renal tubules. It is secreted by cells of the hypothalamus and stored in the neurohypophysis. ADH is released in response to a decrease in blood volume, an increased concentration of sodium or other substances in plasma, pain, stress, or the action of certain drugs. ADH causes contraction of smooth muscle in the digestive tract and blood vessels, especially capillaries, arterioles, and venules. Acetylcholine, methacholine, nicotine, large doses of barbiturates, anesthetics, epINEPHrine, and norepinephrine stimulate ADH release; ethanol and phentytoin inhibit production of the hormone. Increased intracranial pressure promotes inappropriate increases and decreases in ADH. Synthetic ADH is used in the treatment of diabetes insipidus. Normal values are 1 to 5 pg/mL or less than 1.5 ng/L. Also called **vasopressin**.

antidiuretic hormone (ADH) test, a blood test that may be used to diagnose diabetes insipidus (both the neurogenic and nephrogenic forms) and the syndrome of inappropriate ADH secretion (SIADH), which is associated with tumors, pulmonary diseases, infection, trauma, Addison's disease, and myxedema.

anti-DNA antibody test, a blood test that is useful for the diagnosis and follow-up of systemic lupus erythematosus (SLE). The test uses double-stranded deoxyribonucleic acid (DNA) as antigen to detect anti-DNA antibodies. High titers characterize SLE, and low to moderate levels may indicate other rheumatic diseases as well as chronic hepatitis, infectious mononucleosis, and biliary cirrhosis.

antidotai. See **antidote**.

antidote /an'tidōt/ [Gk, *anti* + *dotos*, that which is given], a drug or other substance that opposes the action of a poison. An antidote may be mechanical, such as activated charcoal, which absorbs poisons in the GI tract and prevents their absorption; chemical, acting to neutralize the toxin; or physiological, acting to oppose the action of the poison, as when a sedative is given to a person who has ingested a large amount of a stimulant or when a receptor blocker is

administered to a person who has taken a large dose of the receptor agonist. —**antidotal**, *adj.*

antidromic conduction /an'tidrom'ik/ [Gk, *anti* + *dromos*, course], the conduction of a neural impulse backward from a receptor in the midportion of an axon. It is an unnatural phenomenon and may be produced experimentally. Because synaptic junctions allow conduction in one direction only, backward, antidromic impulses fail to pass the synapse, dying at that point. Compare **orthodromic conduction**.

antidyskinetic /an'te-, an'ti-dis'ki-net'ik/, 1. pertaining to the relief or prevention of dyskinesia. 2. an antidyskinetic agent.

antiembolism (AE) hose /-em'bəliz'əm/ [Gk, *anti* + *embolos*, plug], elasticized stockings worn to prevent the formation of emboli and thrombi, especially in patients who have had surgery or who have been restricted to bed. Return flow of the venous circulation is promoted, preventing venous stasis and dilation of the veins, conditions that predispose individuals to varicosities and thromboembolic disorders. Also called **thromboembolic disorder (TED) hose**.



Antiembolism hose (Elkin, Perry, and Potter, 2007)

antiemetic /-imētik/ [Gk, *anti* + *emesis*, vomiting], 1. pertaining to a substance or procedure that prevents or alleviates nausea and vomiting. 2. an antiemetic drug or agent. ChlorproMAZINE and other phenothiazines are sometimes effective antiemetic agents. In kinesia, scopolamine and anti-histamines provide relief. SHT₃-receptor antagonists such as dolasetron and the corticosteroid dexamethasone may relieve chemotherapy-induced nausea. Cannabis derivatives such as dronabinol may also alleviate nausea induced by certain anti-neoplastic drugs in cancer patients.

antiepileptic. See **anticonvulsant**.

antiestrogen /-es'trōjən/, a hormone-based product used predominantly in cancer chemotherapy. The group of anti-estrogen drugs includes tamoxifen. They are used mainly in treating estrogen-dependent tumors, such as breast cancer.

antiextractable nuclear antigens test, a blood test used to help diagnose systemic lupus erythematosus and mixed connective tissue disease and to rule out other rheumatoid diseases.

antifebrile. See **antipyretic**.

antifibrillatory /-fibril'ĕtôr'ĕ/, pertaining to a medication or other agent that suppresses atrial or ventricular fibrillation.

antifilarial, 1. pertaining to a substance or agent destructive to filariae. 2. an antifilarial agent.

antiflux /an'ti-fluks/ [Gk, *anti*, against + L, *fluere*, to flow], a substance that prevents the attachment of solder.

antifungal /-fung'gəl/, 1. pertaining to a substance that kills fungi or inhibits their growth or reproduction. 2. an antifungal, antibiotic drug. Amphotericin B and ketoconazole, both effective against a broad spectrum of fungi, probably act by binding to sterols in the fungal plasma membrane and changing the membrane's permeability. Griseofulvin,

another broad-spectrum antifungal agent, binds to the host's new keratin and renders it resistant to further fungal invasion. Miconazole nitrate inhibits the growth of common dermatophytes, including yeastlike *Candida albicans*; nystatin is effective against yeast and yeastlike fungi. Also called **antimycotic**.

antigalactic /-gälak'tik/, pertaining to a drug or other agent that prevents or reduces milk secretion in some mothers of newborns.

anti-GBM disease, a rare autoimmune disease; kidney or pulmonary disorder in which the glomerular basement membrane is damaged by an antigen-antibody reaction. The kidney itself may serve as the antigenic target in the reaction. Also called *Goodpasture's disease*.

antigen /an'tijən/ [Gk, *anti* + *genein*, to produce], a substance that the immune system recognizes as foreign and mounts an immune response against. The immune response may be either production of an antibody, a cell-mediated response, or both. —**antigenic**, *adj.*

antigen-antibody reaction, a process of the immune system in which immunoglobulin-coated B cells recognize a specific antigen and stimulate antibody production. T cells also play an essential role in the reaction. An antigen-antibody reaction begins with the binding of antigens to antibodies to form antigen-antibody complexes. These complexes may render toxic antigens harmless (neutralization), agglutinate antigens on the surface of microorganisms, or activate the complement system by exposing the complement binding sites on antibodies. Certain complement protein molecules immediately bind to these sites and trigger the activity of the other complement protein molecules, which cause antigen-bearing cells to lyse. Antigen-antibody reactions may start immediately with antigen contact or as much as 48 hours later. They normally produce immunity but may also be responsible for allergy, autoimmunity, and fetomaternal hematologic incompatibility. In the immediate allergic response, the antigen-antibody reaction activates certain enzymes and causes an imbalance between those enzymes and their inhibitors. Simultaneously released into the circulation are several pharmacologically active substances, including acetylcholine, bradykinin, histamine, immunoglobulin G, and leukotaxine. See also **allergen**, **allergic reaction**, **humoral immunity**, **serum sickness**.

antigenic. See **antigen**.

antigenic determinant, a site on an antigen molecule to which an antibody molecule binds. Also called **epitope**.

antigenic drift [Gk, *anti*, against, *genein*, to produce; AS, *drifan*, drift], a gradual relatively minor change in the antigenicity of a virus, periodically producing a mutant antigen requiring new antibodies and vaccines to combat its effects. Compare **antigenic shift**.

antigenicity /an'tijənɪs'ĕtē/, the ability to cause the production of antibodies. The degree of antigenicity of a substance depends on the kind and amount of that substance and on the degree to which the host is sensitive to it and able to produce antibodies. Also called **immunogenicity**. See also **antigen-antibody reaction**.

antigenic shift, a sudden, major change in the antigenicity of a virus, seen especially in influenza viruses, resulting from the recombination of the genomes of two different strains; it is associated with pandemics because hosts do not have immunity to the new strain. Compare **antigenic drift**.

antigen presentation, biological assemblage of ingested antigens on the surface of macrophages and dendritic cells. Antigens are taken up by macrophage endocytosis, digested in the lysosome, and displayed on the surface of the cell within the class II major histocompatibility molecule. Endogenous

antigens can be presented by any infected cell and are presented by a type I major histocompatibility molecule.

antigen-presenting cell, a cell that can break down protein antigens into peptides and present the peptides, in conjunction with major HLA complex class II molecules, on the cell surface, where they can interact with T cell receptors. Macrophages are one type of antigen-presenting cell.

antigen processing, the steps that occur in an immune response after a protein is recognized as foreign.

antigen unit, the smallest amount of antigen required to fix one unit of complement.

antigenuria /an'ti-jē-nū're-ah/, the presence of a specific antigen in the urine.

antigerminal pole. See **vegetal pole**.

antiglaucoma /an'te-glaw-kō'mah, -glou-kō'mah/, 1. preventing or alleviating glaucoma. 2. an antiglaucoma agent.

antiglobulin /an'tiglob'yōōlin/ [Gk, *anti* + L, *globulus*, small globe], an antibody against gamma globulin. Also called antihuman globulin. See also **antiglobulin test**, **precipitin**.

antiglobulin test, a test for the presence of antibodies that coat and damage erythrocytes as a result of any of several diseases or conditions. The test can detect Rh antibodies in maternal blood and is used to anticipate hemolytic disease in the newborn. It is also used to diagnose and screen for autoimmune hemolytic anemias and to determine the compatibility of blood types. When exposed to a sample of the patient's serum, the antiglobulin serum causes agglutination if human globulin antibody or its complement is present. Also called **Coombs' test**.

antiglomerular basement membrane antibodies test, a blood or tissue test used to diagnose Goodpasture's syndrome, which is associated with the presence of circulating glomerular basement membrane antibodies.

antigravity muscle /-grav'itē/, any of the muscle groups involved in the stabilization of joints or other body parts by opposing the effects of gravity. Examples include the muscles of the jaw that automatically keep the mandible raised and the mouth closed.

anti-G suit, a rarely used garment designed to produce pressure on the lower part of the body. See **military anti-shock trousers**.

antihelix, a small curved rim parallel and interior to the auricular helix.

antihemophilic C factor. See **factor XI**.

antihemophilic factor (recombinant), a sterile, purified, coagulation factor VIII concentrate produced by recombinant technology that possesses biological activity comparable with that of human plasma-derived coagulation factor VIII. It is used to prevent or stop hemorrhage during surgery or other procedures in patients with hemophilia A. It is administered intravenously.

antihemophilic factor VII concentrate (AHF) /-hē'mōfil'ik/, plasma derivative used to treat bleeding in hemophilia A patients. May be prepared by fractionation of human plasma or affinity column purification. A recombinant DNA product is also available.

■ **CONTRAINDICATIONS:** There are no known contraindications.

■ **ADVERSE EFFECTS:** The most serious adverse reaction is hepatitis, which occurs because the factor is obtained from pools of human plasma. Allergic reactions may also occur.

antihemorrhagic /-hē'mōrāj'ik/, any drug or agent used to prevent or control bleeding, such as thromboplastin or thrombin, either of which mediates the blood-clotting process.

antihidrotic. See **anhidrotic**.

antihistamine /-his'tōmīn/ [Gk, *anti* + *histos*, tissue, amine (ammonia compound)], any substance capable of reducing

the physiological and pharmacological effects of histamine, including a wide variety of drugs that block histamine receptors. Many such drugs are readily available as over-the-counter medicines for the management of allergies. Toxicity resulting from the overuse of antihistamines and their accidental ingestion by children is common and sometimes fatal. These substances do not completely stop the release of histamine, and the ways in which they act on the central nervous system are not completely understood. The antihistamines are divided into histamine₁ (H₁) and histamine₂ (H₂) blockers, depending on the responses to histamine they prevent. H₁-blocking drugs, such as alkylamines, ethanolamines, ethylenediamines, and piperazines, are effective in the symptomatic treatment of acute allergies. Second-generation H₁ blockers, such as cetirizine, fexofenadine, and loratadine, cause less sedation. The H₂-blocking drugs are effective in the control of gastric secretions and are often used in the treatment of gastroesophageal reflux. Antihistamines can both stimulate and depress the central nervous system.—*antihistaminic, adj.*

antihistamine poisoning, an adverse reaction to an excessive intake of antihistamines. Symptoms include fatigue, lethargy, delirium, hallucinations, loss of striated muscle control, hyperreflexia, tachycardia, dilated pupils, and in severe cases, coma.

anti-Hu antibody, any of the polyclonal immunoglobulin G autoantibodies directed against the proteins of the Hu antigen family; they are associated with paraneoplastic sensory neuropathy and encephalomyelitis in oat cell carcinoma of the lung and more rarely, sarcoma and neuroblastoma. Also called **type 1 antineuronal antibody**.

antihypercholesterolemic /-hī'pərkō'les'tərōlē'mik/, a drug that prevents or controls an increase of cholesterol in the blood. See also **antilipidemic**.

antihyperglycemic /an'te-, an'ti-hī'per-gli-se'mik/, 1. pertaining to a substance or therapy that counteracts high levels of glucose in the blood. 2. an antihyperglycemic agent.

antihyperglycemic agent. See also **hypoglycemic agent**.

antihyperkalemic /an'te-, an'ti-hī'per-kah-le'mik/, 1. pertaining to a substance or procedure effective in decreasing or preventing increases in serum potassium levels. 2. an antihyperkalemic agent.

antihyperlipidemic /an'te-, an'ti-hī'per-lipi'de'mik/, 1. pertaining to a substance or procedure that promotes a reduction of lipid levels in the blood. 2. an antihyperlipidemic agent.

antihypertensive /-hī'pərten'siv/, 1. pertaining to a substance or procedure that reduces high blood pressure. 2. an antihypertensive agent. Various drugs achieve their antihypertensive effect by depleting tissue stores of catecholamines in peripheral sites, by stimulating pressor receptors in the carotid sinus and heart, by blocking autonomic nerve impulses that constrict blood vessels, by stimulating central inhibitory alpha₂ receptors, or by causing vasodilation. Thiazides and other diuretic agents inhibit the reabsorption of sodium in the renal tubules, increasing urinary excretion of sodium and decreasing plasma and extracellular fluid volume, decreasing blood volume. Drugs that act on adrenergic control of blood pressure include beta-adrenergic blocking agents, which act at beta-adrenergic receptors in the heart and kidneys to reduce cardiac output and renin secretion; and others that act on alpha-adrenergic mechanisms in the central or sympathetic nervous system to reduce peripheral vascular resistance. Vasodilators act directly on the arterioles to produce the same effect. Other drugs used to treat hypertension are HCl, angiotensin-converting enzyme inhibitors, nonnitrate vasodilators, calcium channel blockers, and angiotensin receptor blockers. Almost every case of hypertension can be

controlled by one of these drugs or a combination of them. The proper combination is determined by the response of the individual. In some cases, several drugs must be tried before the right combination is found. Compare **antihypotensive**. **antihypoglycemic** /an'te-, an'ti-hi'po-gli-se'mik/, pertaining to a substance or therapy that counteracts low blood sugar.

antihypotensive /-hi'rōtēn'siv/, 1. pertaining to a substance or other agent that tends to increase blood pressure. 2. an antihypotensive drug. Compare **antihypertensive**.

antimmune /an'ti-imyōōn'/ [Gk, *anti* + L, *immunis*, free from], pertaining to the prevention or inhibition of immunity. See also **immune response**.

antinfection vitamin. See **vitamin A**.

antiinfective /-infek'tiv/ [Gk, *anti* + L, *inficere*, to stain], 1. pertaining to an agent that prevents or treats infection. 2. an antiinfective drug.

antiinflammatory /-inflam'ātōrē/ [Gk, *anti* + L, *inflammare*, to set afire], 1. pertaining to a substance or procedure that counteracts or reduces inflammation. 2. an antiinflammatory drug.

antiinhibitor coagulant complex (AICC), a concentrated fraction from pooled human plasma, which includes vitamin K-dependent coagulation factors (factors II, VII, IX, and X), factors of the kinin-generating system, and factor VIII coagulant antigen. It is administered intravenously as an antihemorrhagic in hemophilic patients with factor VIII inhibitors. Its mechanism of action has not been elucidated but may result at least from part to its factor Xa content.

antiinitiator /-inishē-ātōr/, a substance that is a potential cocarcinogen but that may protect cells against cancer development if given before exposure to an initiator. An example is the food additive butylated hydroxytoluene (BHT). An antiinitiator given after exposure to an initiator may also act as a promoter and encourage rather than block cancer development.

antileprotic /-leprōt'ik/, 1. a substance or other agent that is effective in treating leprosy. 2. an antileprotic drug.

antilipidemic /an'tilip'ide'mik/ [Gk, *anti* + *lipos*, fat, *haima*, blood], 1. pertaining to a regimen, diet, or agent that reduces the level of lipids in the serum. Antilipidemic diets and drugs are prescribed to reduce the risk of atherosclerosis for two reasons: atheromatous plaques contain free cholesterol, and lower serum cholesterol levels and a lower incidence of coronary artery disease are found in populations consuming a low-fat diet than in those on a high-fat diet. 2. an antilipidemic drug. A number of pharmacological agents are used to reduce serum lipid levels, bile acid sequestrants, and HMG-CoA reductase inhibitors. Cholestyramine and colestipol exert their antilipidemic action by combining with bile acids in the intestine to form an insoluble complex that is excreted in the feces; they may reduce serum cholesterol levels but prevent the absorption of essential fat-soluble vitamins and may be associated with several serious side effects. A newer class of HMG-CoA reductase inhibitors interfere with the biosynthesis of cholesterol. See also **hyperlipidemia**.

Antilirium, a trademark for an acetylcholinesterase inhibitor (**physostigmine salicylate**).

antilymphocyte globulin. See **antithymocyte globulin**.

antimalarial /-məlērē-ā'lē/, 1. pertaining to a substance that destroys or suppresses the development of malaria plasmodia or to a procedure that exterminates the mosquito vectors of the disease, such as spraying insecticides or draining swamps. 2. an antimalarial drug. Chloroquine and hydroxychloroquine sulfate are effective against *Plasmodium vivax*, *P. malariae*, and certain strains of *P. falciparum*. Patients

with drug-resistant *P. falciparum* are often treated with a combination of quinine, pyrimethamine, and sulfadoxine.

antisense, a strand of viral RNA that cannot act as messenger RNA because of its negative coding sequence. It must be converted to a positive-strand sequence by a viral transcriptase before its message can be translated in a host cell.

antimetabolite /-mətāb'älit/ [Gk, *anti* + *metabole*, change], a drug or other substance that is an antagonist to or resembles a normal human metabolite and interferes with its function in the body, usually by competing for its receptors or enzymes. Among the antimetabolites used as antineoplastic agents are the folic acid analog methotrexate and the pyrimidine analog fluorouracil. The antineoplastic mercaptopurine, an analog of the nucleotide adenine and the purine base hypoxanthine, is a metabolic antagonist of both compounds. Thioguanine, another member of a large series of purine analogs, interferes with nucleic acid synthesis. Cytarabine, used in the treatment of acute myelocytic leukemia, is a synthetic nucleoside that resembles cytidine and kills cells that actively synthesize deoxyribonucleic acid (DNA), apparently by inhibiting the enzyme DNA polymerase.

antimicrobial /-mīkro'bē-ā'lē/ [Gk, *anti* + *mikros*, small, *bios*, life], 1. pertaining to a substance that kills microorganisms or inhibits their growth or replication. 2. an antimicrobial agent. Also called **antimicrobic**. See also **antibiotic**.

Antiminth, a trademark for an anthelmintic (**pyrantel pamoate**).

antimitochondrial antibody (AMA) /-mītōkon'drē-ā'lē/, an antibody that acts specifically against mitochondria. These antibodies are not normally present in the blood of healthy people.

antimitochondrial antibody (AMA) test, a blood test that is used to determine the presence of antimicrobial antibody in the blood. Low titers may occur in chronic hepatitis, drug-induced hepatotoxicity, and various other diseases. High titers are often diagnostic of primary biliary cirrhosis. Patients with autoimmune hepatitis, extrahepatic obstruction, or acute infection may also test positive for AMA.

antimitotic /-mītōt'ik/, inhibiting cell division.

antimony (Sb) /an'tomō'nē/ [L, *antimonium*], a bluish, crystalline metallic element occurring in nature. Various antimony compounds are used in the treatment of filariasis, leishmaniasis, lymphogranuloma, schistosomiasis, and trypanosomiasis. They are also used as emetics.

antimony poisoning, a toxic effect caused by the ingestion or inhalation of antimony or antimony compounds. It is characterized by vomiting, diaphoresis, diarrhea, and a metallic taste in the mouth. Irritation of the skin or mucous membranes may result from external exposure. Severe poisoning resembles arsenic poisoning. Antimony and antimony compounds are common ingredients of many substances used in medicine and industry.

antimorph /an'tomōrf/ [Gk, *anti* + *morphe*, form], a mutant allele that inhibits or antagonizes the influence of the normal allele in the expression of a trait. Compare **amorph**, **hypermorph**, **hypomorph**.

antimuscarinic /-mus'kərīn'ik/ [Gk, *anti* + L, *musca*, fly], effective against the poisonous activity of muscarine. Compare **muscarinic**.

antimutagen /-myōō'tājən/ [Gk, *anti* + L, *mutare*, to change; Gk, *genein*, to produce], 1. any substance that reduces the rate of spontaneous mutations or counteracts or reverses the action of a mutagen. 2. any technique that protects cells against the effects of mutagens. —**antimutagenic**, adj.

antimyasthenic /an'te-, an'ti-mi'as-thē'nik/, 1. counteracting or relieving muscular weakness in myasthenia gravis. 2. an antimyasthenic.

antimycotic. See **antifungal**.

antimyocardial antibody (AMA) test, a blood test used to detect an autoimmune source of myocardial injury and disease, such as rheumatic heart disease, myocarditis, postthoracotomy syndrome, and myocardial infarction. This test may also be used to monitor the effect of treatment on these conditions.

antineoplastic /-nē'ōplas'tik/ [Gk, *anti* + *neos*, new, *plasma*, something formed], 1. pertaining to a substance, procedure, or measure that prevents the proliferation of cells. 2. a chemotherapeutic agent that controls or kills cancer cells. Drugs used in the treatment of cancer are cytotoxic but are generally more damaging to dividing cells than to resting cells. Cycle-specific antineoplastic agents are more effective in killing proliferating cells than resting cells, and phase-specific agents are most active during a specific phase of the cell cycle. Most anticancer drugs prevent the proliferation of cells by inhibiting the synthesis of deoxyribonucleic acid (DNA) by various mechanisms. **Alkytating agents**, such as mechlorethamine HCl derivatives, ethylenimine derivatives, and alkyl sulfonates, interfere with DNA replication by causing cross-linking of DNA strands and abnormal pairing of nucleotides. **Antimetabolites** exert their action by interfering with the formation of compounds required for cell division. Methotrexate, folic acid analog, and 5-fluorouracil, a pyrimidine analog, inhibit enzymes required for the formation of the essential DNA constituent thymidine. 6-Mercaptopurine, a hypoxanthine analog, and 6-thioguanine, an analog of guanine, interfere with the biosynthesis of purines. VinBLAS-tine sulfate and vinCRISTine sulfate, **alkaloids** derived from the periwinkle plant, disrupt cell division by interfering with the formation of the mitotic spindle. **Antineoplastic antibiotics**, such as DOXOrubicin HCl, daunomycin, and mitomycin, block or inhibit DNA synthesis; dactinomycin and plicamycin interfere with ribonucleic acid synthesis. Cytotoxic chemotherapeutic agents may be administered via the oral or intravenous route or by infusion. All have untoward and unpleasant side effects and are potentially immunosuppressive and dangerous. Estrogens and androgens, although not considered antineoplastic agents, frequently cause tumor regression when administered in high doses to patients with hormone-dependent cancers.

antineoplastic antibiotic, a chemical substance derived from a microorganism or a synthetic analog of the substance, used in cancer chemotherapy. Dactinomycin, used in the treatment of Wilms' tumor, testicular carcinoma, choriocarcinoma, rhabdomyosarcoma, and some other sarcomas, exerts its antineoplastic effect by interfering with ribonucleic acid (RNA) synthesis. Plicamycin, with a similar mechanism of action, is also administered for testicular cancer and for trophoblastic cancer. DOXOrubicin HCl, a broad-spectrum agent that is especially useful in treating breast carcinoma, lymphomas, sarcomas, and acute leukemia, and closely related daunomycin, which is also effective in acute leukemias, block the biosynthesis of RNA. Mitomycin C, prescribed for gastric, breast, cervical, and head and neck carcinomas, cross-links strands of deoxyribonucleic acid (DNA). Bleomycin sulfate, used in the treatment of squamous cell carcinomas of the head and neck, testicular carcinoma, and lymphomas, damages DNA and prevents its repair. Antineoplastic antibiotics cause bone marrow depression and usually cause nausea and vomiting; several cause alopecia.

antineoplastic hormone, a chemically synthesized or a synthetic analog of the naturally occurring compound used to control certain disseminated cancers. Hormonal therapy is designed to counteract the effect of an endogenous hormone

required for tumor growth. The estrogens diethylstilbestrol (DES) and ethinyl estradiol may be used in the palliative treatment of a prostatic carcinoma that is nonresectable or unresponsive to radiotherapy. An androgen, such as testosterone propionate, testolactone, or fluoxymesterone, may be administered after surgery to control disseminated breast cancer in women whose tumor is estrogen dependent. The antiestrogen tamoxifen produces responses in many patients with advanced estrogen-dependent breast cancer. Paradoxically, large doses of estrogen, frequently used to control disseminated breast cancer in postmenopausal women, apparently check the growth of tumors by inhibiting the secretion of estrogen by the adrenal gland. Some progestins produce a favorable response in women with disseminated endometrial carcinoma and, occasionally, in patients with prostate or renal cancers. These progestins include megestrol acetate, medroxyprogesterone acetate, and 17-alpha-hydroxyprogesterone caproate.

antineoplaston, a naturally occurring peptide, amino acid derivative, or carboxylic acid proposed to control neoplastic cell growth using the patient's own biochemical defense system, which works jointly with the immune system.

antineuritic vitamin. See **thiamine**.

antineutrophil cytoplasmic antibody (ANCA) test, a blood test used to diagnose Wegener's granulomatosis. It is also used to follow the course of the disease, monitor its response to therapy, and detect early relapse.

antinuclear antibody (ANA) /-nōō'klē-ər/, an autoantibody directed against nuclear antigens. Antinuclear antibodies are found in the blood serum of patients with rheumatoid arthritis, systemic lupus erythematosus, Sjögren's syndrome, polymyositis, scleroderma, Raynaud's disease, mixed connective tissue disease, and a number of nonrheumatic disorders ranging from lymphomas, leukemias, primary biliary cirrhosis, thyroiditis, chronic active hepatitis, and adverse drug reactions. The antibodies are often detected with an immunofluorescent assay technique.

antinuclear antibody (ANA) test, a blood test used to detect antinuclear antibodies. The antibodies in the serum of the blood are exposed in the laboratory to cells. It is then determined whether or not antibodies are present that react to various parts of the nucleus of cells. Fluorescence techniques are frequently used to detect the antibodies.

antioncogene /an'ti-on'kōjēn/, a tumor-suppressing gene that may act by controlling cellular growth. When an oncogene is inactivated, tumor cellular proliferation begins, and tumor activity accelerates.

antioxidant /-ok'sidənt/, a chemical or other agent that inhibits or retards oxidation of a substance to which it is added. Examples include butylated hydroxyanisole and butylated hydroxytoluene, which are added to foods or the packaging of foods containing fats or oils to prevent oxygen from combining with the fatty molecules, thereby causing them to become rancid.

antioxidation /-ok'sidā'shən/, the prevention of oxidation.

antiparallel /-per'ələl/ [Gk, *anti* + *parallelos*, side-by-side], pertaining to molecules, such as strands of DNA, that are parallel but are oriented in opposite directions.

antiparasitic /-per'əsít'ik/ [Gk, *anti* + *parasitos*, guest], 1. pertaining to a substance or procedure that kills parasites or inhibits their growth or reproduction. 2. an antiparasitic drug such as an amebicide, an anthelmintic, an antimalarial, a schistosomicide, a trichomonacide, or a trypanocide.

antiparietal cell antibody (APCA) test, a blood test used to measure the level of APCA, the presence of which indicates pernicious anemia, atrophic gastritis, Hashimoto's thyroiditis, myxedema, juvenile diabetes, or Addison's disease.

antiparkinsonian /-pär'kənsoñē-ən/, pertaining to a substance or procedure used to treat parkinsonism. Drugs for this neurological disorder are of two kinds: those that compensate for the lack of DOPamine in the corpus striatum and anticholinergic agents that counteract the activity of the abundant acetylcholine in the corpus striatum. Synthetic levodopa, a DOPamine precursor that crosses the blood-brain barrier, reduces the rigidity, sluggishness, dysphagia, drooling, and instability characteristic of the disease but does not alter its relentless course. Centrally active cholinergic blockers, notably benztrapine mesylate, biperiden hydrochloride, procyclidine hydrochloride, and trihexyphenidyl hydrochloride, may relieve tremors and rigidity and improve mobility. The antiviral agent amantadine hydrochloride is often effective in the treatment of parkinsonism; its mechanism of action is not established, but it apparently increases release of DOPamine in the brain. Therapeutic approaches to the relief of the symptoms of parkinsonism include alcohol injection, cauter, cryosurgery, and surgical excision performed to destroy the globus pallidus (reducing rigidity) and parts of the thalamus (reducing tremor). Extrapyramidal symptoms similar to those of idiopathic parkinsonism are frequently induced by antipsychotic drugs.

antipathy /antip'əthē/ [Gk, *anti* + *pathos*, suffering], a strong feeling of aversion or antagonism to particular objects, situations, or individuals. —*antipathic*, adj.

antiperistalsis /-per'əstäl'sis/, a wave of contractions in the digestive tract that moves toward the oral end of the tract. In the duodenum, stomach, or esophagus it results in regurgitation. Also called **reverse peristalsis**.

antiperistaltic /-per'əstäl'tik/ [Gk, *anti* + *peristellein*, to wrap around], 1. pertaining to a substance that inhibits or diminishes peristalsis. 2. an antiperistaltic agent. Opioids, such as paregoric, diphenoxylate hydrochloride, and loperamide hydrochloride, provide symptomatic relief of diarrhea. Anticholinergics reduce spasms of intestinal smooth muscle and are frequently prescribed to decrease excessive GI motility.

antipernicious anemia factor. See **cyanocobalamin**.

antiplatelet agent /-plat'lit/, therapeutic agent that inhibits its platelet function. Often employed to prevent clot propagation or secondary thrombosis in patients who have had a primary arterial thrombolytic event such as acute myocardial infarction, peripheral artery disease, or cerebrovascular accident.

antipode /an'tipōd/, something that is diametrically opposite.

antipraxia /-prak'sē-ə/, a condition in which functions or symptoms appear to oppose each other.

antiprogestin /-prōjēst'in/, a substance that interferes with the production, uptake, or effects of progesterone. The most common example is mifepristone.

antiprotease, a substance that can prevent the digestion of proteins.

antiprothrombin /-prōthrom'bīn/, a substance that inhibits the conversion of prothrombin to thrombin.

antiprotoplasmatic /-prōtəplasmat'ik/, pertaining to an agent that damages the protoplasm of cells.

antiprotozoal /an'te-, an'ti-pro-to-zo'al/, 1. destroying protozoa or checking their growth or reproduction. 2. an anti-protozoal agent. An example is antimalarial agents.

antipruritic /-prōōrit'ik/ [Gk, *anti* + L, *prurire*, to itch], 1. pertaining to a substance or procedure that tends to relieve or prevent itching. 2. an antipruritic drug. Topical anesthetics, corticosteroids, and antihistamines are used as antipruritic agents.

antipsoriatic /an'tisôr'ē-at'ik/ [Gk, *anti* + *psora*, itch], pertaining to an agent that relieves the symptoms of psoriasis.

antipsychotic /-sikot'ik/ [Gk, *anti* + *psyche*, mind, *osis*, condition], 1. pertaining to a substance or procedure that counteracts or diminishes symptoms of a psychosis. 2. an antipsychotic drug. Categories include the phenothiazine derivatives, butyrophenones, thioxanthene derivatives, dibenzodiazepines, diphenylbutylpiperidines, dihydroindolones, and dibenzoxazepines. They are chemically diverse but pharmacologically similar. Formerly called **major tranquilizer**.

anti-Purkinje cell antibody (APCA). See **anti-Yo antibody**.

antipyresis /-pîrē'sis/ [Gk, *anti* + *pyretos*, fever], the condition or state of being free from fever.

antipyretic /-pîret'ik/ [Gk, *anti* + *pyretos*, fever], 1. pertaining to a substance or procedure that reduces fever.

—**antipyresis**, n. 2. an antipyretic agent. Such drugs usually lower the thermoregulation set point of the hypothalamic heat regulatory center, with resulting vasodilation and dia-phoresis. Widely used antipyretic agents are acetaminophen, aspirin, and NSAIDs. Also called **antifebrile**, **antifebrile**, **antithermic**.

antipyretic bath, a bath in which tepid water is used to reduce body temperature.

antipyrotic /-pîrot'ik/ [Gk, *anti* + *pyr*, fire], pertaining to the treatment of burns or scalds.

antirabies serum, an antiserum obtained from the blood serum or plasma of animals immunized with rabies vaccine; it is used for postexposure prophylaxis against rabies if rabies immune globulin is unavailable.

antirachitic /-răkit'ik/, pertaining to an agent used to treat rickets.

antiretroviral /an'te-, an'ti-ret'ro-vi'rāl/, 1. effective against retroviruses. 2. a substance or drug that stops or suppresses the activity of retroviruses such as HIV.

anti-Rh agglutinin, an antibody to an Rh antigen on Rh⁺ erythrocytes that causes these cells to agglutinate. Appears in Rh⁻ persons after exposure to Rh⁺ erythrocytes, as when an Rh⁻ mother is pregnant with an Rh⁺ fetus. See also **Rh factor**.

antirheumatic /-rōōmat'ik/ [Gk, *anti* + *rheumatismos*, that which flows], pertaining to the relief of symptoms of any painful or immobilizing disorder of the musculoskeletal system.

anti-Ri antibody, an autoantibody having neuronal binding characteristics similar to those of anti-Hu antibody but directed against a different RNA binding site; it is associated with paraneoplastic opsoclonus-myoclonus in small cell lung carcinoma and in cancer of the breast and fallopian tube. Also called **type 2 antineuronal antibody**.

antiscleroderma antibody test, a blood test to assist in the diagnosis of scleroderma.

ascorbic acid. See **vitamin C**.

antiseborrheic /-seb'ərē'ik/, pertaining to a drug or agent applied to the skin to control seborrhea or seborrheic dermatitis.

antisense /an'tēsens/, pertaining to a ribonucleic acid (RNA) molecule that is complementary to the messenger RNA (mRNA) produced by transcription of a given gene. Antisense RNA synthesized in the laboratory hybridizes with the complementary mRNA molecules, thereby blocking the synthesis of specific proteins. Compare **sense**.

antisense strand, the strand of a double-stranded nucleic acid that is complementary to the sense strand, in DNA being the template strand on which the mRNA is synthesized. Compare **sense strand**.

antisepsis /-sep'sis/ [Gk, *anti* + *sepein*, putrefaction], processes, procedures, or chemical treatments that kill or inhibit microorganisms to prevent infection.

antiseptic /-sep'tik/, 1. tending to inhibit the growth and reproduction of microorganisms. 2. a substance that tends to inhibit the growth and reproduction of microorganisms when applied to living tissue. See also **disinfectant**.



Antiseptic solutions (Bonewit-West, 2012)

antiseptic dressing, a fabric, gauze, or pad treated with an antiseptic, a germicidal, or a bacteriostatic solution and applied to a wound or an incision to prevent or treat infection.

antisera /an'tisir'əm/ pl. *antisera, antiserums* [Gk, *anti* + L, whey], the serum of an animal or human containing antibodies against a specific disease, used to confer passive immunity to that disease. Antisera do not provoke the production of antibodies. There are two types of antisera: antitoxin neutralizes the toxin produced by specific bacteria but does not kill the bacteria, and antimicrobial serum acts to destroy bacteria by making them more susceptible to leukocytic action. Polyvalent antiserum acts on more than one antigenic determinant; monovalent antiserum acts on only one. Antibiotic drugs have largely replaced antimicrobial antisera. Caution must always be used in the administration of all antisera, since hepatitis or hypersensitivity reactions can result. Also called **immune serum**. Compare **vaccine**.

antisera anaphylaxis, exaggerated hypersensitivity in a normal person after the injection of serum from a sensitized individual. Also called **passive anaphylaxis**. Compare **active anaphylaxis**.

antishock garment, a garment used to maintain blood pressure. See **shock trousers**.

antisialogog /-sī'äl'əgōg'/ [Gk, *anti* + *sialon*, saliva, *agogo*, leading], a drug that reduces saliva secretion.

anti-smooth muscle antibody test, a blood test used primarily to help diagnose active autoimmune chronic hepatitis, although a low-level positive result may be associated with viral infections, malignancy, multiple sclerosis, primary biliary cirrhosis, and *Mycoplasma* infections.

antisocial personality /-sō'shəl/ [Gk, *anti* + L, *socius*, companion], a person who exhibits attitudes and overt behavior contrary to the customs, standards, and moral principles accepted by society. The individual also is lacking a sense of moral conscience. Also called **psychopathic personality, sociopathic personality**. See also **antisocial personality disorder**.

antisocial personality disorder, a condition characterized by repetitive behavioral patterns that are contrary to usual moral and ethical standards and cause a person to experience continuous conflict with society. Symptoms include aggression, callousness, impulsiveness, irresponsibility, hostility, a low frustration level, marked emotional immaturity, and poor judgment. A person who has this disorder overlooks the rights of others, is incapable of loyalty to others or to social values, is unable to experience guilt or to learn from past behaviors, is impervious to punishment, and tends to rationalize his or her behavior or to blame it on others. Also called **antisocial reaction**.

antispasmodic /-spazmod'ik/, a drug or other agent that prevents smooth muscle spasms, as in the uterus, digestive system, or urinary tract. Belladonna and dicyclomine hydrochloride are among drugs used in antispasmodic preparations. See also **anticholinergic, cholinergic blocking agent**.

antispastic /an'ti-spas'tik/, an antispasmodic with specific reference to striated muscle.

antisperm antibody (ASA), any of the various surface-bound antibodies found on spermatozoa after infection, trauma to the testes, or vasectomy; they interfere with fertilization or result in nonviable zygotes.

antispermatozoal antibody test, a fluid analysis or blood test used as a screening test for infertility. The test may be performed on men and women to detect the presence of sperm antibodies that may diminish fertility.

anti-SS-A (ro), anti-SS-B (La), and anti-SS-C antibody test, a blood test to measure the presence of antinuclear antibodies, which indicates Sjögren's syndrome.

antistreptolysin-O test (ASOT, ASO, ASLT) /an'tistrep'tolī'sinō/, a streptococcal antibody test for finding and measuring serum antibodies to streptolysin-O, an exotoxin produced by most group A and some group C and G streptococci. The test is often used as an aid in the diagnosis of rheumatic fever and glomerulonephritis. A low titer of antistreptolysin-O antibody is present in most people, since streptococcal infection is common. Elevated or increasing titers indicate a recent infection.

antithermic. See **antipyretic**.

antithrombin /-throm'bīn/, a plasma serine protease inhibitor that neutralizes thrombin. Antithrombin is a major coagulation control protein.

antithrombin III (ATT-III) test, a blood test used to confirm hypercoagulability and to help identify the cause of heparin resistance in patients receiving heparin therapy.

antithrombotic /-thrombot'ik/, preventing or interfering with the formation of a thrombus or blood clotting.

antithymocyte globulin (ATG) /-an'tithī'mosīt/, the gamma globulin fraction of antiserum derived from animals that have been immunized against human thymocytes; an example is an immunosuppressive agent that causes specific destruction of T cells, used in treatment of allograft rejection. Also called **antilymphocyte globulin**.

antithymocyte globulin (rabbit), a purified gamma globulin obtained from rabbits immunized with human thymocytes; it is administered intravenously in the treatment of acute rejection occurring after renal transplantation.

antithyroglobulin antibody test, a blood test used primarily in the differential diagnosis of thyroid diseases such as Hashimoto's disease. This test is usually performed in conjunction with the antithyroid microsomal antibody test.

antithyroid drug /-thī'roid/, a preparation that inhibits the synthesis of thyroid hormones and is commonly used in the treatment of hyperthyroidism. The major antithyroid drugs are thioamide derivatives, such as propylthiouracil,

and methimazole. Such substances interfere with the incorporation of iodine into the tyrosyl residues of thyroglobulin required for the production of the hormones thyroxine and triiodothyronine. They are often used to control hyperthyroidism during an anticipated remission and before a thyroidectomy.

antithyroid microsomal antibody test, a blood test used primarily in the differential diagnosis of thyroid diseases such as Hashimoto's disease. This test is usually performed in conjunction with the antithyroglobulin antibody test.

antithyroid peroxidase antibody (anti-TPO) test, a blood test used in the differential diagnosis of thyroid diseases, such as Hashimoto's disease or chronic lymphocytic thyroiditis.

antitoxin /-tok'sin/ [Gk, *anti* + *toxikon*, poison], a subgroup of antisera usually prepared from the serum of horses immunized against a particular toxin-producing organism, such as botulism antitoxin given therapeutically in botulism and tetanus and diphtheria antitoxins given prophylactically to prevent those infections.

anti-TPO, abbreviation for **antithyroid peroxidase antibody**.

antitragus, an elevation of the auricle of the ear opposite the tragus and above the fleshy lobule.

antitrusmus /-tris'məs/, a tonic muscular spasm that forces the mouth to open.

antitrust /-trust'/, (in law) against the operation, establishment, or maintenance of a monopoly in the manufacture, production, or sale of a commodity, provision of a service, or practice of a profession.

antitrypsin. See **alpha₁-antitrypsin**.

antitubercular /-tōōbur'kyələr/, any agent or group of drugs used to treat tuberculosis. At least two drugs, and usually three, are required in various combinations in pulmonary tuberculosis therapy. These include isoniazid, ethambutol hydrochloride, streptomycin sulfate, and rifampin. Supplements of pyridoxine (vitamin B₆) also may be needed to relieve the symptoms of peripheral neuritis that can occur as a side effect of isoniazid.

antitumor antibodies, a natural product that interferes with deoxyribonucleic acid in such a way as to prevent its further replication and the transcription of ribonucleic acid. They are known as antibiotics because they are produced from natural products in a manner similar to the production of antibiotics.

antitussive /an'titus'iv/ [Gk, *anti* + L, *tussive*, cough], 1. against a cough. 2. any of a large group of opioid and nonopioid drugs that act on the central and peripheral nervous systems to suppress the cough reflex. Because the cough reflex is necessary for clearing the upper respiratory tract of obstructive secretions, antitussives should not be used with a productive cough. Codeine phosphate and hydrocodone bitartrate are potent opioid antitussives. Dextromethorphan hydrobromide is an effective antitussive with no dependence liability. Antitussives are administered orally, usually in a syrup with a mucolytic or expectorant and alcohol, or, sometimes in a capsule with an antihistaminic and a mild analgesic.

antiurolithic /an'ti-u'rō-lith'ik/, 1. preventing the formation of urinary calculi. 2. an antiurolithic agent.

antivenin /an'tiven'in/ [Gk, *anti* + L, *venenum*, poison], a suspension of venom-neutralizing antibodies prepared from the serum of immunized horses. Antivenin confers passive immunity and is given as a part of emergency first aid for various snake and insect bites. Also called **antivenom**.

Antivert, a trademark for an antihistaminic antivertigo agent (**meclizine hydrochloride**).

antiviral, destructive to viruses.

antivirus software, a software program written so that on execution (this is usually automatic on boot up) it scans the hard drive and related processors to identify, isolate, and eradicate the virus. Modern antivirus software requests updates automatically on a schedule set either by default or by the user.

antivitamin factor [Gk, *anti* + L, *vita*, life, *amine*], a substance that inactivates a vitamin.

antixerophthalmic vitamin. See **vitamin A**.

anti-Yo antibody, polyclonal IgG autoantibody directed against Purkinje's cells and associated with paraneoplastic cerebellar degeneration in oat cell carcinoma of the lung and cancer of the breast or ovary. Also called **anti-Purkinje cell antibody**.

Anton's syndrome [Gabriel Anton, German neuropsychiatrist, 1858–1933], a form of anosognosia in which a person with partial or total blindness denies being visually impaired, despite medical evidence to the contrary. The patient typically contrives excuses for the inability to see, such as suggesting that the light is inadequate.

Antopol-Goldman lesion. See **subepithelial hematoma of renal pelvis**.

antr-. See **antro-**.

antra. See **antrum**.

antral gastritis [Gk, *antron*, cave], an abnormal narrowing of the antrum of the stomach. The narrowing is not a true gastritis but a radiographic finding that may represent a peptic ulcer or a tumor.

antrectomy /antrek'təmē/, the surgical excision of the pylorus.

antro-, antr-, prefix meaning 'antrum or sinus': *antrocele*, *antrodynia*.

antrum pl. antra [Gk, *antron*, cave], a cavity or chamber that is nearly closed and usually surrounded by bone. The antrum cardiacum is a dilation of the esophagus. The fluid-filled cavity in a mature graafian follicle is also termed an antrum.

antrum of Highmore. See **maxillary sinus**.

Anturane, a trademark for a uricosuric drug (**sulfapyrazone**).

anular /an'yələr/ [L, *annulus*, ring], describing a ring-shaped lesion surrounding a clear, normal, unaffected disk of skin.



Anular psoriasis (du Vivier, 1993)

anular ligament, a ligament that encircles the head of the radius and holds it in the radial notch of the ulna. Distal to the notch, the anular ligament forms a complete fibrous ring. Also spelled **annular ligament**.

anulus /an'yələs/, a ring of circular tissue, such as the whitish tympanic anulus around the perimeter of the tympanic membrane. Also spelled **annulus**. —**annular, anular, adj.**

anulus fibrosus, an outer ring of collagen in an intervertebral disk arranged in a lamellar configuration that surrounds a wider zone of fibrocartilage.

anuresis. See **anuria**.

anuria /ənōōrēə/ [Gk, *a, ouron*, not urine], the absence of urine production or a urinary output of less than 100 mL per day. Anuria may be caused by a failure or kidney dysfunction, a decline in blood pressure below that required to maintain filtration pressure in the kidney, or an obstruction in the urinary passages. A rapid decline in urinary output, leading ultimately to anuria and uremia, occurs in acute renal failure. Kinds of anuria include **angioneurotic anuria**, **obstructive anuria**, **postrenal anuria**, and **renal anuria**. Also called **anuresis**, **prerenal anuria**. Compare **oliguria**, **—anuretic**, **anuric**, *adj.*

anus /ā'nəs/, the outlet at the terminal end of the anal canal lying in the fold between the buttocks. —**anal**, *adj.*

anxietas /angzī'ētəs/ [L, anxiety], a state of anxiety, nervous restlessness, or apprehension, often accompanied by a feeling of oppression in the epigastric region. Kinds of anxietas are **anxietas presenilis** and **restless legs syndrome**.

anxietas presenilis [L, *anxietas + p̄ae*, before, *senex*, aged], a state of extreme anxiety associated with the climacteric.

anxietas tibiarum. See **restless legs syndrome**.

anxiety /angzī'ētē/ [L, *anxietas*], anticipation of impending danger and dread accompanied by restlessness, tension, tachycardia, and breathing difficulty not necessarily associated with an apparent stimulus. Kinds of anxiety include **castration anxiety**, **generalized anxiety disorder** or “**free-floating**” anxiety, **panic disorder**, **separation anxiety**, and **situational anxiety**.

anxiety attack, an acute, psychobiological reaction manifested by intense anxiety and panic. Symptoms include palpitations, shortness of breath, dizziness, faintness, profuse diaphoresis, pallor of the face and extremities, GI

discomfort, and an intense feeling of imminent doom or death. Attacks usually occur suddenly, last from a few seconds to an hour or longer, and vary in frequency from several times a day to once a month. Treatment consists of reassurance, desensitization statement, separation of the individual from anxiety-producing situations, administration of a sedative if necessary, and appropriate psychotherapy to identify the stresses perceived as threatening.

anxiety complex. See **castration anxiety**.

anxiety disorder, a disorder in which anxiety is the most prominent feature. The symptoms range from mild, chronic tenseness, with feelings of timidity, fatigue, apprehension, and indecisiveness, to more intense states of restlessness and irritability that may lead to aggressive acts, persistent helplessness, or withdrawal. In extreme cases, the overwhelming emotional discomfort is accompanied by physical responses, including tremor, sustained muscle tension, tachycardia, dyspnea, hypertension, increased respiration, and profuse diaphoresis. Other physical signs include changes in skin color, nausea, vomiting, diarrhea, restlessness, immobilization, insomnia, and changes in appetite, all occurring without identification of a known underlying organic cause. See also **anxiety**, **anxiety attack**, **anxiety reaction**, **anxiety state**, **obsessive-compulsive disorder**, **phobia**, and **posttraumatic stress disorder**.

anxiety dream, a dream that is accompanied by restlessness and a gradual increase in pulse rate. Anxiety dreams tend to occur in children, who usually recall the content clearly.

anxiety level, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as severity of manifested apprehension, tension, or uneasiness arising from an unidentifiable source. See also **Nursing Outcomes Classification**.

anxiety reaction [L, *anxietas + re, agere*, to act], a clinical characteristic in which anxiety is the predominant feature

Physiological, behavioral, cognitive, and affective responses to anxiety

Physiological	Physiological—cont'd	Behavioral	Cognitive—cont'd
<i>Cardiovascular</i>	<i>Neuromuscular</i>	Restlessness	Loss of objectivity
Palpitations	Increased reflexes	Physical tension	Fear of losing control
Racing heart	Startle reaction	Tremors	Frightening visual images
Increased blood pressure	Eyelid twitching	Startle reaction	Fear of injury or death
Faintness*	Insomnia	Hypervigilance	Flashbacks
Actual fainting*	Tremors	Rapid speech	Nightmares
Decreased blood pressure*	Rigidity	Lack of coordination	
Decreased pulse rate*	Fidgeting	Accident proneness	
	Pacing	Interpersonal withdrawal	
<i>Respiratory</i>	Strained face	Inhibition	
Rapid breathing	Generalized weakness	Flight	
Shortness of breath	Wobbly legs	Avoidance	
Pressure on chest	Clumsy movement	Hyperventilation	
Shallow breathing			
Lump in throat	<i>Urinary tract</i>	Cognitive	
Choking sensation	Pressure to urinate*	Impaired attention	
Gasping	Frequent urination*	Poor concentration	
	<i>Skin</i>	Forgetfulness	
<i>Gastrointestinal</i>	Flushed face	Errors in judgment	
Loss of appetite	Localized sweating (e.g., palms)	Preoccupation	
Revulsion toward food	Itching	Blocking of thoughts	
Abdominal discomfort	Hot and cold spells	Decreased perceptual field	
Abdominal pain*	Pale face	Reduced creativity	
Nausea*	Generalized sweating	Diminished productivity	
Heartburn*		Confusion	
Diarrhea*		Self-consciousness	

*Parasympathetic response.

From Stuart GW: *Principles and practice of psychiatric nursing*, ed 9, St Louis, 2009, Mosby.

or is experienced by a person facing a dreaded situation to the extent that his or her functioning is impaired. The reaction may be expressed as an anxiety attack, a phobia, or a compulsion.

anxiety reduction. a nursing intervention from the Nursing Interventions Classification (NIC) defined as minimizing apprehension, dread, foreboding, or uneasiness related to an unidentified source of anticipated danger. See also **Nursing Interventions Classification.**

anxiety self-control, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as personal actions to eliminate or reduce feelings of apprehension, tension, or uneasiness from an unidentifiable source. See also **Nursing Outcomes Classification.**

anxiety state [L, *anxietas + state*], a mental or emotional reaction characterized by apprehension, uncertainty, and irrational fear. Anxiety states may be accompanied by physiological changes such as diaphoresis, tremors, rapid heartbeat, dilated pupils, and xerostomia.

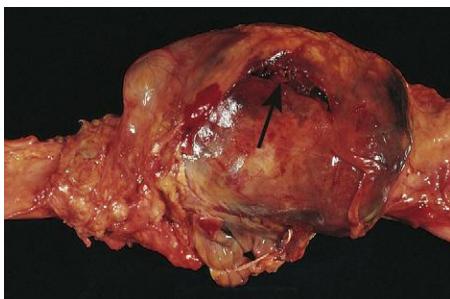
anxiolytic. See **antianxiety agent.**

AOA, abbreviation for **Administration on Aging.**

AORN, abbreviation for **Association of Operating Room Nurses.**

aorta /ā-ôr'tə/ [Gk, *aerein*, to raise], the main trunk of the systemic arterial circulation, comprising four parts: the ascending aorta, the arch of the aorta, the thoracic portion of the descending aorta, and the abdominal portion of the descending aorta. It starts at the aortic opening of the left ventricle, rises a short distance, bends over the root of the left lung, descends within the thorax on the left side of the vertebral column, and passes through the aortic hiatus of the diaphragm into the abdominal cavity. It branches into the two common iliac arteries. —*aortic, adj.*

aortic aneurysm, a localized dilation of the wall of the aorta caused by atherosclerosis, hypertension, connective tissue disease such as Marfan's, or less frequently, syphilis. The lesion may be a saccular distension or a fusiform or cylindrical swelling of a length of the vessel. Syphilitic aneurysms almost always occur in the thoracic aorta and usually involve the arch of the aorta. The more common atherosclerotic aneurysms are usually in the abdominal aorta below the renal arteries and above the bifurcation of the aorta. These lesions often contain atheromatous ulcers covered by thrombi that may discharge emboli, causing obstruction of smaller vessels. See also **dissecting aneurysm.**



Ruptured abdominal aortic aneurysm (Kumar et al, 2010)

aortic angiogram. See **aortogram.**

aortic arch (AA). See **arch of the aorta.**

aortic arch syndrome, any of a group of occlusive conditions of the arch of the aorta, producing a variety of symptoms related to obstruction of the large branch arteries, including the brachiocephalic, left common carotid, and left subclavian. It may be caused by atherosclerosis, Takayasu's arteritis,

syphilis, and other conditions. Symptoms include syncope, temporary blindness, hemiplegia, aphasia, and memory loss.

aortic atresia [Gk, *aeirein + a, tressis*, a boring], a congenital anomaly in which the left side of the heart is defective and there is an imperforation of the aortic valve into the aorta.

aortic balloon pump. See **intraaortic balloon pump.**

aortic body, one of several small structures on the arch of the aorta that contain neural tissue sensitive to the chemical composition of arterial blood. The aortic bodies respond primarily to large reductions in blood oxygen content and trigger an increase in respiratory rate. See also **aortic-body reflex, carotid body.**

aortic-body reflex, a neural reflex in which a decrease in the oxygen content of arterial blood is sensed by the aortic bodies, which signal the medullary respiratory center to increase respiratory rate. See also **carotid-body reflex.**

aortic hiatus, an opening behind the diaphragm for the aorta and thoracic duct.

aortic insufficiency. See **aortic regurgitation.**

aortic notch [Gk, *aeirein*, to raise; OFr, *enochier*], the dicrotic notch on the descending limb of an arterial pulse sphygmogram. It marks the closure of the aortic valve.

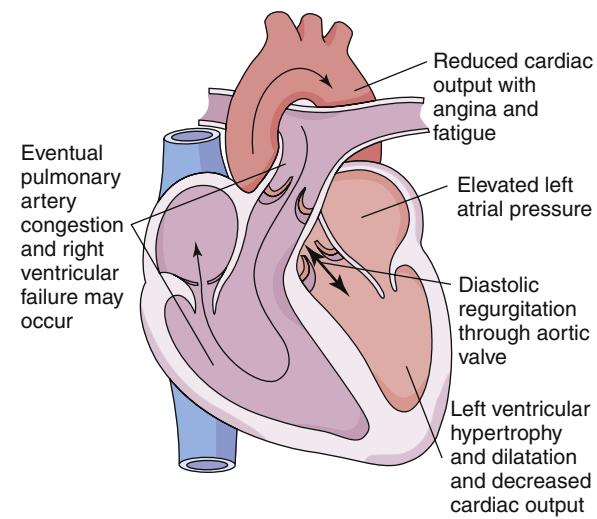
aortic obstruction [L, *obstruere*, to build against], a blockage or impediment that interrupts the flow of blood in the aorta.

aorticopulmonary septum, a septum, formed by fusion of the bulbar ridges, that divides the bulbus cordis into aortic and pulmonary trunks.

aortic reconstruction, restoration of function to a damaged or atretic aorta as by bypass or aortoplasty.

aortic regurgitant murmur [Gk, *aeirein*, to raise; L, *re*, again, *gurgitare*, to flow, *murmur*, humming], a high-pitched, soft, blowing, decrescendo, early diastolic heart murmur that is a sign of aortic regurgitation.

aortic regurgitation, the flow of blood from the aorta back into the left ventricle during diastole, resulting from a failure of the aortic valve to close completely. Also called **aortic insufficiency.**



Effects of aortic regurgitation (Beare and Myers, 1998)

aortic sinus [Gk, *aeirein*, to raise; L, *sinus*, little hollow], any of three dilations, one anterior and two posterior, between the aortic wall and the semilunar cusps of the aortic valve. Also called **Petit's sinus, sinus of Morgagni, sinus of Valsalva.**

aortic stenosis (AS) [Gk, *aeirein* + *stenos*, narrow, *osis*, condition], a narrowing or stricture of the aortic valve. Common causes include calcification of the valve because of age, congenital malformations such as bicuspid or unicuspid valves, or direct damage to the valve from rheumatic fever, which leads to fusion of the cusps. Aortic stenosis obstructs the flow of blood from the left ventricle into the aorta, causing decreased cardiac output and pulmonary vascular congestion. It may lead to congestive heart failure. Clinical manifestations include faint peripheral pulses, exercise intolerance, angina-type pain, syncope, and a harsh midsystolic murmur often introduced by an ejection sound. Diagnosis is confirmed by cardiac catheterization or echocardiography. Surgical repair may be indicated. Surgery is followed by frequent examinations because prosthetic valve dysfunction and bacterial endocarditis are relatively common sequelae. Children with aortic stenosis are usually restricted from strenuous activities. See also **congenital cardiac anomaly**, **valvular heart disease**.



Aortic stenosis (Damjanov and Linder, 2000)

aortic thrill [Gk, *aeirein*, to raise; AS, *thyrlan*], a palpable chest vibration caused by aortic stenosis or an aortic aneurysm. It is usually felt in systole by placing the flat of the hand or the fingertips on the second intercostal space to the right of the sternum.

aortic valve, a valve in the heart between the left ventricle and the aorta. It is composed of three semilunar cusps that close in diastole to prevent blood from flowing back into the left ventricle from the aorta. The three cusps are separated by sinuses that resemble tiny buckets when they are filled with blood. These cup-shaped flaps grow from the lining of the aorta and, in systole, open to allow oxygenated blood to flow from the left ventricle into the aorta and on to the peripheral circulation. Compare **mitral valve**, **pulmonary valve**, **tricuspid valve**.

aortic valvular stenosis. See **subaortic stenosis**.

aortitis /a'ôrtî'tis/, an inflammation of the aorta. It occurs most frequently in tertiary syphilis and occasionally in rheumatic fever.

aortocoronary /a'ôr'tôkôr'âner'ë/ [Gk, *aeirein* + L, *corona*, crown], pertaining to the aorta and coronary arteries.

aortocoronary bypass [AS, *bi*, alongside; Fr, *passer*], a surgical procedure for the treatment of angina pectoris or coronary vessel disease, in which a saphenous vein, mammary artery, or other blood vessel or a synthetic graft is used to build a shunt from the aorta to one of the coronary arteries to bypass a circulatory obstruction.

aortogram /a'ôr'tôgram/ [Gk, *aerein* + *gramma*, record], a radiographic image of the aorta made after the injection of a radiopaque contrast medium in the blood. Also called **aortic angiogram**.

aortography /a'ôrtog'râfë/ [Gk, *aerein* + *graphein*, to record], a radiographic process in which the aorta and its branches are injected with any of various contrast media for visualization. —*aortographic*, adj.

aortopulmonary fenestration /a'ôr'tôpôl'môner'ë/ [Gk, *aerein* + L, *pulmoneus*, lung, *fenestra*, window], a congenital anomaly characterized by an abnormal fenestration in the ascending aorta and the pulmonary artery cephalad to the semilunar valve, allowing oxygenated and unoxygenated blood to mix, resulting in a decrease in the oxygen available in the peripheral circulation.

aosmic. See **anosmia**.

AOTA, abbreviation for **American Occupational Therapy Association**.

AOTF, abbreviation for **American Occupational Therapy Foundation**.

AP, abbreviation for **anteroposterior**.

ap-, **apo-**, prefixes meaning ‘separation or derivation from; away from’: *apeidosis*, *aponeurosis*.

APA, 1. abbreviation for **American Psychiatric Association**. 2. abbreviation for **American Psychological Association**.

APACHE /ə'pach'ë/, abbreviation for **Acute Physiology and Chronic Health Evaluation**, a system of classifying severity of illnesses in patients in the intensive care unit.

apareunia /a'pärôō'në-ë/, an inability to perform coitus caused by a physical or psychological sexual dysfunction.

apathetic hyperthyroidism /ap'âthet'ik/, a form of Graves’ disease that tends to affect mainly older adults who have stereotyped “senile” physical features and whose behavior is apathetic and inactive rather than hyperkinetic. Medical treatment not only restores normal behavioral activity but also results in a loss of wrinkles and a more youthful physical appearance. Untreated, the patient is likely to succumb to the effects of stress or acute illness.

apathy /ap'âthë/ [Gk, *a*, *pathos*, not suffering], an absence or suppression of emotion, feeling, concern, or passion; an indifference to stimuli found generally to be exciting or moving. The condition is common in patients with neurasthenia, depressive disorders, and schizophrenia. —*apathetic*, adj.

apatite /ap'âtët/ [Gk, *apate*, deceit], an inorganic mineral composed of calcium and phosphate that is found in the bones and teeth.

APC, 1. abbreviation for **atrial premature complex**. 2. abbreviation for **adenomatous polyposis coli**.

APCA, 1. abbreviation for **antiparietal cell antibody**. 2. abbreviation for **anti-Purkinje cell antibody**.

APCC, abbreviation for **activated prothrombin complex concentrate**.

APD, abbreviation for **adult polycystic disease**. See **polycystic kidney disease**.

apepsia /äpep'së-ë/ [Gk, *a*, without, *pepsis*, digestion], a condition involving a failure of the digestive functions.

aperient /spir'ë-ënt/ [L, *aperire*, to open], a mild laxative.

aperistalsis /äper'istal'sës/ [Gk, *a*, without, *peristellein*, to clasp], a failure of the normal waves of contraction and relaxation that move contents through the digestive tract. Compare **peristalsis**.

aperitive /äper'itiv/ [L, *aperere*, to open], a stimulant of the appetite. Also called **aperitif**.

Apert's syndrome /äperz'/ [Eugène Charles Apert, French pediatrician, 1868–1940], a rare genetic condition characterized by an abnormal craniofacial appearance

in combination with partial or complete fusion (webbing) of the fingers and toes. A characteristic feature is the premature joining of cranial bones, with resultant growth disturbances. Signs of Apert's syndrome include a peaked and vertically elongated head, widespread and bulging eyes, and a high, arched posterior palate with bony defects of the maxilla and the mandible, including cleft palate or uvula and extreme malocclusion. The degree of fusion varies greatly and may be complete. Also called **acrocephalosyndactyly; acrocephalosyndactyly, type I.**

aperture /ap'ərcher/ [L, *apertura*, an opening], an opening or hole in an object or anatomical structure.

aperture of the frontal sinus, an external opening of the frontal sinus into the nasal cavity.

aperture of the glottis, an opening between the true vocal cords and the arytenoid cartilages.

aperture of the larynx, an opening between the pharynx and larynx.

aperture of the sphenoid sinus, a round opening between the sphenoid sinus and the nasal cavity, situated just above the superior nasal concha.

apex /ā'peks/ pl. **apices** [L, tip], 1. the top, the end, the summit, or the extremity of a structure, such as the apex cordis or the apices of the teeth. —**apical**, adj. 2. pertaining to the end of the root of a tooth.

apex beat, a pulsation of the left ventricle of the heart, palpable and sometimes visible at the fifth intercostal space, approximately 9 cm to the left of the midline. Also called **apical beat**.

apexcardiogram (ACG) /-kär'dē-əgrām/, a graphic representation of the pulsations of the chest over the heart in the region of the cordis apex. The purpose is to provide additional information regarding the diagnosis of ventricular abnormalities.

apexcardiography (ACG) /-kär'dē-og'rəfē/, the recording of heart pulsations obtained from the cordis apex.

apex cordis [L, *apex* + *cordis*, of the heart], the pointed lower border of the heart. It is directed downward, forward, and to the left and is usually located at the level of the fifth intercostal space.

apexification /-if'ikāshən/ [L, *apex* + *facere*, to make], a process of promoting apical closure of the root in an endodontically treated tooth by placement of calcium hydroxide paste or other tissue-tolerant material in the root canal after an apicoectomy.

apexigraph /āpek'sigraf/, a device used for determining the position of the apex of a tooth root.

apex murmur [L, *apex*, summit, *murmur*, humming], a heart sound heard best at the apex of the heart, which in most individuals is at the level of the fifth intercostal space. Also called **apical murmur**.

apex of the heart, the lowest superficial part of the heart, formed by the inferolateral part of the left ventricle.

apex of the urinary bladder, the superior area of the urinary bladder, opposite the fundus. It is at the junction of the superior and inferolateral surfaces of the bladder, and from it the middle umbilical ligament (urachus) extends to the umbilicus. Also called *vertex* or *summit of urinary bladder*.

apex pneumonia [L, *apex*, summit; Gk, *pneumon*, lung], pneumonia in which consolidation is limited to the upper lobe of one lung. Also called **apical pneumonia**.

apex pulmonis /pəlmō'nīs/ [L, *apex* + *pulmoneus*, lung], the rounded upper border of each lung, projecting above the clavicle.

APP, abbreviation for *acidulated phosphate fluoride*, a preparation of sodium fluoride acidulated with phosphoric

acid for topical application to the teeth in the prevention of dental caries.

Apgar score /ap'gär/ [Virginia Apgar, American anesthesiologist, 1909–1974], an evaluation of a newborn's physical condition, usually performed 1 minute and again 5 minutes after birth, based on a rating of five factors that reflect the infant's ability to adjust to extrauterine life. The system rapidly identifies infants requiring immediate intervention or transfer to a neonatal intensive care unit.

■ **METHOD:** The infant's heart rate, respiratory effort, muscle tone, reflex irritability, and color are scored from a low value of 0 to a normal value of 2. The five scores are combined, and the totals at 1 minute and 5 minutes are noted; for example, Apgar 9/10 is a score of 9 at 1 minute and 10 at 5 minutes.

■ **NURSING CONSIDERATIONS:** A low 1-minute score requires immediate intervention, including administration of oxygen, clearing of the nasopharynx, and usually transfer to a neonatal intensive care unit. A baby with a low score that persists at 5 minutes requires expert care, which may include assisted ventilation, umbilical catheterization, cardiac massage, blood gas analysis, correction of acid-base deficit, or medication to reverse the effects of maternal medication.

■ **OUTCOME CRITERIA:** A score of 0 to 3 represents severe distress, a score of 4 to 7 indicates moderate distress, and a score of 7 to 10 indicates an absence of difficulty in adjusting to extrauterine life. The 5-minute total score is normally higher than the 1-minute score. Because a normal, vigorous, healthy newborn almost always has bluish hands and feet at 1 minute, the first score for color will include a 1 rather than a perfect 2; however, at 5 minutes the blueness may have passed, and a score of 2 may be given. A 5-minute overall score of 0 to 1 correlates with a 50% neonatal mortality rate; infants who survive exhibit three times as many neurological abnormalities at 1 year of age as do children with a 5-minute score of 7 or more.

APHA, abbreviation for *American Public Health Association*.

aphacia. See **aphakia**.

aphagia /əfājē-ə/ [Gk, *a* + *phagein*, not to eat], a condition characterized by the loss of the ability to swallow as a result of organic disease or psychological causes such as cerebrovascular accident and anxiety. A kind of aphagia is **aphagia algera**. See also **dysphagia**.

aphagia algera, a condition characterized by the refusal to eat or swallow because doing so causes pain.

aphakia /əfākē-ə/ [Gk, *a*, *phakos*, not lens], (in ophthalmology) a condition in which the crystalline lens of the eye is

Infant evaluation at birth—Apgar scoring system

Sign	0	1	2
Heart rate	Absent	Slow, <100 BPM	>100 BPM
Respiratory effort	Absent	Irregular, slow, weak cry	Good, strong cry
Muscle tone	Limp	Some flexion of extremities	Well-flexed
Reflex irritability	No response	Grimace	Cry, sneeze
Color	Blue, pale	Body pink, extremities blue	Completely pink

BPM, beats per minute.

absent, usually because it has been surgically removed, as in the treatment of cataracts. Also called **aphacia**. —**aphacic**, **aphakic**, *adj.*

aphasia /əfā'zheə/ [Gk, *a* + *phasis*, not speech], an abnormal neurological condition in which language function is disordered or absent because of an injury to certain areas of the cerebral cortex. The deficiency may be **sensory aphasia**, in which language is not understood, or **motor aphasia**, in which words cannot be formed or expressed. Aphasia may be complete or partial, affecting specific language functions. Most commonly, the condition is a mixture of incomplete sensory and motor aphasia. It may occur after severe head trauma, prolonged hypoxia, or cerebrovascular accident. It is sometimes transient, as when the swelling in the brain that follows aphasia or injury subsides and language returns. See also **anomia**, **aphasia**, **Broca's aphasia**, **Wernicke's aphasia**. —*aphasic*, *adj.*

aphemia /əfē'mē-ə/, a loss of the ability to speak. The term is applied to emotional disorders as well as neurological causes. A person may suffer aphemia because a fear of speaking or a refusal to participate in verbal communication. —*aphemic*, *adj.*

apheresis /əfer'ē-sis, əfērē'sis/ [Gk, *aphairesis*, removal], a procedure in which blood is temporarily withdrawn, one or more components are selectively removed, and the rest of the blood is reinfused into the donor. The process is used in treating various disease conditions in the donor and for obtaining blood elements for the treatment of other patients or for research. Also called **pheresis**. See also **leukapheresis**, **plasmapheresis**, **plateletpheresis**.

-aphia, -aphia, suffixes meaning a 'condition of the sense of touch': *hyperaphia, paraphia*.

aphonia /āfō'nē-ə/ [Gk, *a*, *phone*, without voice], a condition characterized by loss of the ability to produce normal speech sounds that results from overuse of the vocal cords, organic disease, or psychological causes, such as anxiety. Kinds of aphonia include **aphonia clericorum**, **aphonia paralytica**, **aphonia paranoica**, and **spastic aphonia**. See also **speech dysfunction**. —*aphonic*, *aphonus*, *adj.*

aphonia paralytica /par'älit'ikə/, a condition characterized by a loss of the voice caused by paralysis or disease of the laryngeal nerves. See also **aphonia**.

aphonic pectoriloquy /āfōn'ik/, the abnormal transmission of voice sounds through a cavity or a serous pleural effusion, detected during auscultation of a lung.

aphonic speech, abnormal speech in which vocalizations are whispered.

aphonous. See **aphonia**.

aphoria /əfōrē-ə/, a condition in which physical weakness is not lessened as a result of exercise.

aphrasia /əfrā'zheə/, a form of aphasia in which a person may be able to speak single words or understand single words but is not able to communicate with words that are arranged in meaningful phrases or sentences.

-aphrodisia, a suffix meaning a '(specified) condition of sexual arousal': *anaphrodisia, hypaphrodisia*.

aphronia /əfrō'nē-ə/ [Gk, *a*, *phronein*, not to understand], (in psychiatry) a condition characterized by an impaired ability to make commonsense decisions. —*aphronic*, *adj.*

aphtha /af'thē/ pl. **aphthae** [Gk, *aphtha*, eruption], a small, shallow, painful ulceration that usually affects the oral mucosa, but not underlying bone. Aphthae occasionally may affect other body tissues, including those of the GI tract and the external genitals. They do not appear to be infectious, contagious, or sexually transmitted. See also **aphthous stomatitis**, **foot-and-mouth disease**. —*aphthous*, *adj.*

aphthous fever. See **foot-and-mouth disease**.

aphthous stomatitis /af'thōtēs/ [Gk, *aphtha*, eruption; *stoma*, mouth, *itis*, inflammation], a recurring condition characterized by the eruption of painful ulcers (commonly called canker sores) on the mucous membranes of the mouth. Evidence suggests that the condition is an immune response. Heredity, some foods, emotional stress, cancer, and fever are also possible causes.



Aphthous stomatitis
(Feldman, Friedman, and Brandt, 2010)

APIC, abbreviation for **Association for Professionals in Infection Control and Epidemiology**.

apical. See **apex**.

apical beat. See **apex beat**.

apical curettage [L, *apex*; Fr, scraping], the debridement of the apical surface of a tooth and the removal of diseased soft tissues in the surrounding bony crypt. Compare **apicoectomy**, **root curettage**, **subgingival curettage**.

apical fiber, one of the many fibers of the periodontal ligament. These fibers radiate around the apex of the tooth at approximately right angles to their cementum attachment, extending into the bone at the bottom of the alveolus. Apical fibers resist forces that tend to lift the tooth from its socket and, with the other fibers of the periodontal ligament, stabilize the tooth against tilting movements.

apical impulse. See **precordial movement**.

apical lordotic view /lōrdot'ik/, a radiograph made with the patient leaning backward at an angle of approximately 45 degrees, allowing visualization of the apices of the lung under the clavicle.

apical membrane, the layer of plasma membrane on the apical side (the side toward the lumen) of the epithelial cells in a body tube or cavity, separated from the basolateral membrane by the zonula occludens.

apical murmur. See **apex murmur**.

apical odontoid ligament /ōdon'toid/, a ligament connecting the axis to the occipital bone. It extends from the odontoid process of the axis (dens) to the anterior margin of the foramen magnum and lies between the two alar ligaments, blending with the anterior atlantooccipital membrane.

apical perforation, a mechanically induced channel running from the pulp canal into the periodontal space at or near the apex of the root.

apical periodontitis [L, *apex*, summit; Gk, *peri*, near, *odous*, tooth, *itis*, inflammation], an inflammation of the tissues around the apex of a tooth root.

apical pneumonia. See **apex pneumonia**.

apical pulse, the heartbeat as heard with a stethoscope placed on the chest wall adjacent to the apex cordi.



Apical pulse (Perry, Potter, and Elkin, 2012)

apicectomy. See **apicoectomy**.

apices. See **apex**.

apicitis /ap'i-si-tis/, an inflammation of the apex of a body structure, such as the apex pulmonis or the end of the root of a tooth.

apicoectomy /ap'ikō-ek'tomē/ [L, *apex* + Gk, *ektomē* excision], the surgical removal of the apex or the apical portion of an infected or damaged tooth root, which is then sealed with a special type of dental amalgam, usually in conjunction with apical curettage or root canal therapy. Also called **apicectomy**, **partial root amputation**, **root-end resection**, **root resection**.

apicotomy /ā'pikot'ōmē/, a surgical incision into the apex of a body structure.

pituitarism /ā'pityūt'ōrīz'ōm/ [Gk, *a*, without; L, *pituita*, phlegm; Gk, *ismos*, a state], an absence or loss of function of the pituitary gland.

aplasia /aplā'zhe/ [Gk, *a*, *plassein*, not to form], 1. a developmental failure resulting in the absence of an organ or tissue. 2. (in hematology) a failure of the normal process of cell generation and development in the bone marrow. See also **aplastic anemia**. Compare **hyperplasia**, **hypoplasia**. —*aplastic*, adj.

aplasia cutis congenita [Gk, *a*, *plassein*; L, *cutis*, skin, *congenitus* born with], the congenital absence of a localized area of skin. The defect occurs predominantly on the scalp, less frequently on the limbs and trunk. It is usually covered by a thin, translucent membrane or scar tissue, or it may be raw and ulcerated. The condition is genetically transmitted, although the mode of inheritance is not known.



Aplasia cutis congenita (Callen et al, 2000)

aplastic. See **aplasia**.

aplastic anemia, a deficiency of all of the formed elements of blood (specifically erythrocytes, leukocytes, and platelets), representing a failure of the cell-generating capacity of bone marrow. Aplastic anemia is often of unknown origin and may involve destruction of bone marrow by exposure to toxic chemicals, ionizing radiation, or some antibiotics. Also spelled **aplastic anaemia**. Compare **alymphocytosis**, **hemolytic anemia**, **hypoplastic anemia**. See also **aleukia**, **leukopenia**.

Apley's scratch test, a method for assessing the range of motion of the shoulders. The patient is asked to scratch his or her back while reaching over the head with one hand and behind the back with the other hand. The test requires abduction and lateral rotation of one shoulder and adduction and medial rotation of the other shoulder.

Alisol, a trademark for a tuberculin purified protein derivative used for tuberculin tests.

APMA, abbreviation for *American Podiatric Medical Society*.

AP mobile projection, a radiographic examination performed with a portable x-ray machine outside of the radiology department. The image receptor is placed behind the patient and the x-ray tube in front. See **AP portable chest radiograph**.

APN, abbreviation for **advanced practice nurse**.

apnea /apnē'ō, ap'nē-ō/ [Gk, *a* + *pnein*, not to breathe], an absence of spontaneous respiration. Types of apnea include **cardiac apnea**, **deglycation apnea**, **periodic apnea of the newborn**, **primary apnea**, **reflex apnea**, **secondary apnea**, and **sleep apnea**. Also spelled **apnoea**. —*apneic*, adj.

apnea monitor [Gk, *a* + *pnein*, not to breathe], a device designed to sound an alarm if an individual stops breathing for a given period of time. It may be a bed pad (alarm mattress) or a nasal flow sensor.

apnea monitoring, the act of closely observing the respiration of individuals, particularly infants. The procedure may involve the use of electronic devices that detect changes in thoracic or abdominal movements and in heart rate. Such devices may include an alarm that sounds if breathing stops. See also **apnea monitor**.

apneic. See **apnea**.

apneumia /ap-nōō'mē-ō/ [Gk, *a*, *pneumon*, without lung], a congenital absence of the lungs.

apneustic breathing /apnōō'stik/ [Gk, *a*, *pneusis*, not breathing], a pattern of breathing characterized by a prolonged inspiratory phase followed by expiration apnea. The rate of apneustic breathing is usually around 1.5 breaths per minute. This breathing pattern is often associated with head injury.

apneustic center, an area in the lower portion of the pons that controls the inspiratory phase of respiration. Disorders involving abnormal stimulation of the apneustic center can produce a gasping type of ventilation with maximum inspirations. Also called **pontine respiratory center**.

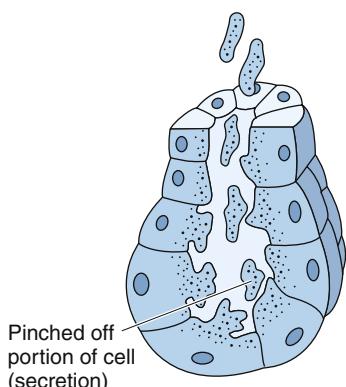
apnoea. See **apnea**.

apocrine gland /ap'ōkrīn, -krīn/ [Gk, *apo* + *krinein*; L, *secernere*, to separate], a gland whose secretion contains part of the secreting cell. Compare **holocrine gland**, **merocrine gland**.

apocrine miliaria. See **Fox-Fordyce disease**.

apocrine sweat gland [Gk, *apo*, from, *krinein*, to separate], one of the large dermal sudoriferous glands located in the axillary, anal, genital, and mammary areas of the body. Apocrine sweat glands open into the upper portion of a hair follicle instead of onto the skin's surface. Becoming functional only after puberty, they secrete perspiration containing

nutrients consumed by skin bacteria. The bacterial waste products produce a characteristic odor. Compare **eccrine gland**. See also **sudoriferous gland**.



Apocrine gland (Gartner and Hiatt, 2007)

apodal /ə·pōdəl/ [Gk, *a*, *pous*, without foot], having no feet. See also **symmetria**.

apodial symmetria. See **sirenomelia**.

apoenzyme /ap'ōēn'zim/ [Gk, *apo* + *en*, into, *zyme*, ferment], the protein part of a holoenzyme. The nonprotein part is the prosthetic group, which is usually permanently attached to the apoenzyme.

apogee /ap'ōjē/ [Gk, *apo* + *ge*, earth], the climax of a disease or the period of greatest severity of signs and symptoms, usually followed by a crisis.

Apokyn, a trademark for **apomorphine**.

apolipoprotein /ap'ōlip'ōprō'tēn/ [Gk, *apo* + *lipos*, fat, *pro-*, first], the protein component of lipoprotein complexes. Apolipoproteins bind to specific enzymes or transport specific proteins and direct lipoproteins to their sites of metabolism. See also **apolipoprotein test**.

apolipoprotein A-I, a protein component of lipoprotein complexes found in high-density lipoprotein (HDL) and chylomicrons. It is an activator of lecithin-cholesterol acyltransferase, which forms cholesteryl esters in HDL. All apoproteins of plasma lipoproteins bind and transport lipid in the blood. A deficiency of apolipoprotein A-I is associated with low HDL levels and Tangier disease.

apolipoprotein A-II, a protein component of lipoprotein complexes found in high-density lipoprotein and chylomicrons, which activates hepatic lipase.

apolipoprotein A-III, a protein component of high-density lipoproteins. Also called **apolipoprotein D**.

apolipoprotein B-100, a protein component of lipoprotein involved in the hepatic transport of lipid as very-low-density lipoprotein and low-density lipoprotein (LDL). Apoprotein B-100 links to cellulose LDL receptors. It is elevated in the plasma of patients with familial hyperlipoproteinemia.

apolipoprotein C-I, a protein component of lipid that activates lecithin-cholesterol acyltransferase.

apolipoprotein C-II, a protein component of chylomicrons and very-low-density lipoprotein that activates lipoprotein lipase.

apolipoprotein D. See **apolipoprotein A-III**.

apolipoprotein E, a protein component of lipoprotein complexes found in very-low-density lipoprotein (VLDL), high-density lipoprotein, chylomicrons, and chylomicron

remnants. It facilitates hepatic uptake of chylomicron and VLDL remnants and is elevated in patients with type III hyperlipoproteinemia. One form of apolipoprotein E has been linked to Alzheimer's disease.

apolipoprotein test, a blood test used to evaluate the risks of atherogenic disease of the heart and peripheral arteries. Specific levels of certain apolipoproteins are also associated with conditions such as Alzheimer's disease, low-density lipoprotein receptor disorder, some types of renal failure, nephrotic syndrome, and estrogen depletion in women over the age of 50.

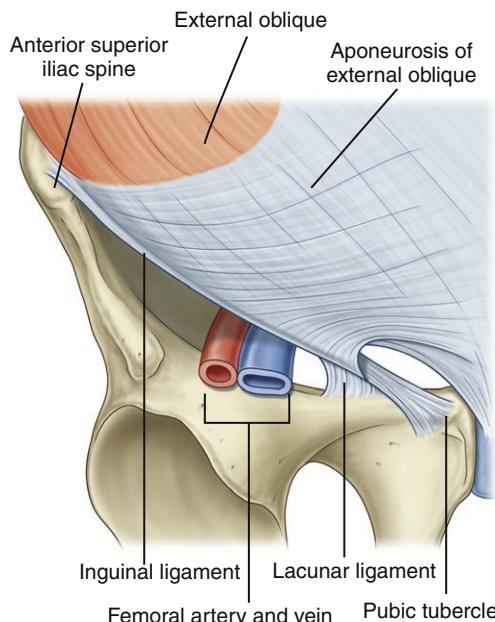
apomorphine, an antiparkinson agent.

■ **INDICATIONS:** This drug is used for acute, intermittent treatment of hypomobility episodes in advanced parkinsonism.

■ **CONTRAINDICATIONS:** Known hypersensitivity to this drug prohibits its use.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include psychosis, hallucination, depression, dizziness, headache, confusion, yawning, dyskinésias, drowsiness, somnolence, edema, syncope, tachycardia, blurred vision, rhinorrhea, sweating, vomiting, constipation, dysphagia, dry mouth, impotence, and urinary frequency. Life-threatening side effects include sleep attacks, hemolytic anemia, leukopenia, and agranulocytosis. Common side effects include agitation, orthostatic hypotension, nausea, and anorexia.

aponeurosis /ap'ōnōōrō'sis/ pl. **aponeuroses** [Gk, *apo* + *neuron*, nerve, sinew], a strong flat sheet of fibrous connective tissue that serves as a tendon to attach muscles to bone or as fascia to bind muscles together or to other tissues at their origin or insertion. —**aponeurotic**, adj.



Aponeurosis (Drake, Vogl, and Mitchell, 2010)

aponeurosis of the external abdominal oblique, the strong membrane that covers the entire ventral surface of

the abdomen and lies superficial to the rectus abdominis muscles. Fibers from both sides of the aponeurosis interlace in the midline to form the linea alba. The upper part of the aponeurosis serves as the inferior origin of the pectoralis major muscle; the lower part ends in the inguinal ligament.

aponeurotic fascia /-nōōrōt'ik/ [Gk, *apo*, from, *neuron*, tendon], a thickened layer of connective tissue that provides attachment to a muscle.

aponeurotic fibroma, a recurrent benign tumor seen mainly in persons under 20 years of age, most often on the hand, occurring as a firm, fixed nodule composed of fibroblastic tissue with finely stippled calcifications, not attached to the overlying skin and infiltrating into surrounding soft tissue. Also called **juvenile aponeurotic fibroma**.

Aponomma hydrosauri, a tick that infests reptiles. It is the arthropod reservoir for *Rickettsia honei* on Flinders Island, Australia, and transmits Flinders Island spotted fever.

apophyseal. See **apophysis**.

apophyseal fracture, a fracture occurring in pre-adolescent individuals that separates the growth plate (apophysis) of a bone from the main osseous tissue at a point of strong tendinous or ligamentous attachment.

apophysis /əpof'isis/ [Gk, a growing away], any small projection, process, or outgrowth, usually on a bone without an independent center of ossification. Examples include the zygomatic apophysis of the temporal bone and the basilar apophysis of the occipital bone. —**apophyseal**, *apophysial*, adj.

apophysitis /əpof'əsī'tis/, an inflammation of an outgrowth, projection, or swelling, especially a bony outgrowth that is still attached to the rest of the bone. Apophysitis occurs due to excessive traction or stress most frequently affecting the calcaneus (Sever's disease), the knee (Osgood-Schlatter), the shoulder (Little Leaguer shoulder) or elbow (Little Leaguer elbow).

apoprotein /ap'ōprō'tēn/, a polypeptide chain not yet complexed to its specific prosthetic group.

apoprotein B-48, a protein component of lipoprotein found in chylomicrons. It is involved in the intestinal absorption of lipids.

apoptosis /ā'pōtō'sis, ā'pōptō'sis/ [Gk, *apo*, away, *ptosis*, falling], necrosis of keratinocytes in which the nuclei of the necrotic cells dissolve and the cytoplasm shrinks, rounds up, and is subsequently phagocytized. The term generally refers to "programmed" cell death.

aposia /āpō'shā/ [Gk, *a*, not, *posis*, thirst], a complete lack of thirst.

apothecaries' measure /əpoth'ēker'ēz/ [Gk, *apotheke*, store], a system of graduated liquid volumes originally based on the minim, formerly equal to one drop of water but now standardized to 0.06 mL; 60 minims equals 1 fluid dram, 8 fluid drams equals 1 fluid ounce, 16 fluid ounces equals 1 pint, 2 pints equals 1 quart, 4 quarts equals 1 gallon. See also **apothecaries' weight, metric system**.

apothecaries' weight, a system of graduated amounts arranged in order of heaviness and based on the grain, formerly equal to the weight of a plump grain of wheat but now standardized to 65 mg; 20 grains equals 1 scruple, 3 scruples equals 1 dram, 8 drams equals 1 ounce, 12 ounces equals 1 pound. Compare **avordupois weight**. See also **apothecaries' measure, metric system**.

apothecary /əpoth'ēker'ē/ [Gk, *apotheke*, store], a pharmacist. See also **apothecaries' measure, apothecaries' weight**.

apparatus /ap'ərat'əs/ [L, *ad*, toward, *parare*, to make ready], a device or a system composed of different parts that act together to perform some special function.

apparent death. See **death**.

apparent leukonychia, a white discoloration of the nail that fades when pressure is applied and with maintenance of transparency of the nail plate.

appendage. See **appendix**.

appendectomy /ap'əndek'tomē/ [L, *appendere* + Gk, *ektomē*, excision], the surgical removal of the vermiform appendix. The operation is performed in acute appendicitis to remove an inflamed appendix before it ruptures. If the appendix has perforated and risk of peritonitis is high, a drain may be left in the incision, the wound is left open, dressing changes are more frequent, and appropriate antibiotics are prescribed; ileus may develop within days, and pain may be acute. This procedure can be performed via laparoscope or open laparotomy. Also called **appendicectomy**. See also **abdominal surgery**.

appendical. See **appendix**.

appendical reflex /əpen'dikəl/, extreme tenderness at McBurney's point, a diagnostic finding in appendicitis.

appendiceal. See **appendix**.

appendiceal abscess. See **appendicular abscess**.

appendicectomy /əpen'disek'tomē/, 1. See **appendectomy**. 2. the surgical removal of an appendage.

appendices. See **appendix**.

appendices epiploicae. See **appendix epiploica**.

appendicular. See **appendix**.

appendicitis /əpen'diſt'is/ [L, *appendere* + Gk, *itis*], an inflammation of the vermiform appendix, usually acute, that, if undiagnosed, leads rapidly to perforation and peritonitis. The inflammation is caused by an obstruction such as a hard mass of feces or a foreign body in the lumen of the appendix, lymphoid hyperplasia, fibrous disease of the intestinal wall, an adhesion, or a parasitic infestation. Appendicitis is most likely to occur in teenagers and young adults and is more prevalent in male patients. One kind of appendicitis is **chronic appendicitis**.

■ **OBSERVATIONS:** The most common symptom is constant pain in the right lower quadrant of the abdomen around McBurney's point, which the patient describes as having begun as intermittent pain in midabdomen. Rebound tenderness occurs at McBurney's point as well. Pain may also occur on the left side. Extreme tenderness occurs over the right rectus abdominis muscle. To decrease the pain, the patient keeps the knees bent to prevent tension of the abdominal muscles. Appendicitis is characterized by vomiting, a low-grade fever of 99° to 102° F, an elevated white blood cell count, rebound tenderness, a rigid abdomen, and decreased or absent bowel sounds. Other indications of peritonitis include increasing abdominal distension, acute abdomen, tachycardia, rapid and shallow breathing, and restlessness. If peritonitis is suspected, IV antibiotic therapy, fluids, and electrolytes are given.

■ **NURSING CONSIDERATIONS:** The nurse is alert to the signs and symptoms of rupture and peritonitis and provides education about the diagnosis, treatment, and recovery.

■ **INTERVENTIONS:** Treatment is appendectomy within 24 to 48 hours of the first symptoms because delay usually results in rupture and peritonitis as fecal matter is released into the peritoneal cavity. The fever rises sharply once peritonitis begins. The patient may have sudden relief from pain immediately after rupture, followed by increased, diffuse pain.



Appendicitis: laparoscopic view (Zitelli and Davis, 2007)

appendicitis pain [L, *appendere*, to hang upon, *poena*, penalty], severe general abdominal pain that develops rapidly and usually becomes localized in the lower right abdominal quadrant. It is accompanied by extreme tenderness over the right rectus abdominis muscle with rebound pain at McBurney's point. Occasionally, the pain is on the left side.

appendicular. See **appendix**.

appendicular abscess, 1. an abscess on a limb. 2. an abscess of the veriform appendix. Also called **appendiceal abscess**.

appendicular artery, one of the four branches of the ileocolic artery, supplying the mesoappendix and the appendix.

appendicular skeleton, the bones of the limbs and their girdles, attached to the axial skeleton. Compare **axial skeleton**.

appendix /əp'endiks/, pl. **appendices**, **appendixes**, 1. an accessory part attached to a main structure. Also called **appendage**. 2. See **vermiform appendix**. —**appendical**, **appendiceal**, **appendicular**, **appendicular**, adj.

appendix dyspepsia [L, *appendere* + Gk, *dys*, difficult, *peptein*, to digest], an abnormal condition characterized by impaired digestive function associated with chronic appendicitis. See also **dyspepsia**.

appendix epididymidis. See **epididymal appendix**.

appendixes. See **appendix**.

appendix vermicularis. See **vermiform appendix**.

apperception /ap'ərsep'shən/ [L, *ad*, toward, *percipere*, to perceive], 1. mental perception or recognition. 2. (in psychology) a conscious process of understanding or perceiving in terms of a person's previous knowledge, experiences, emotions, and memories. —**appceptive**, adj.

appetat /ap'əstat/, the center in the hypothalamus of the brain that controls the appetite.

appetite¹ /ap'ətīt/ [L, *appetere*, to long for], a natural or instinctive desire, such as for food.

appetite², a nursing outcome from the Nursing Outcomes Classification (NOC) defined as desire to eat when ill or receiving treatment. See also **Nursing Outcomes Classification**.

apple picker's disease, an allergic reaction with respiratory complaints, associated with the handling of apples that have been treated with a fungicide.

apple sorter's disease, a form of contact dermatitis caused by chemicals used in washing apples.

appliance /əplī'əns/ [L, *applicare*, to apply], 1. a device used to perform a specific medical function or to have a

specific therapeutic effect. 2. (in dentistry) generally a device to correct a malocclusion, to correct an oral habit, or to stabilize an occlusion.

application /ap'lɪkā'shən/, a computer program used to process a particular type of data, such as payroll, inventory, data about patients, scheduling of procedures and activities, pharmacy requisition and control, recording of nursing notes, care planning, word processing, and spreadsheets.

applicator /ap'lɪkā'tōr/, a rodlike instrument with a piece of cotton on the end, used for the local application of medication or probing of wound pockets or crevices. Also called **cotton swab**.

applied anatomy /əplīd'ē/, the study of the structure of the organs of the body as it relates to the diagnosis and treatment of disease. Also called **practical anatomy**. Compare **comparative anatomy**. See also **pathological anatomy**, **radiological anatomy**, **surgical anatomy**.

applied chemistry, the application of the study of chemical elements and compounds to industry and the arts.

applied kinesiology, a form of treatment using nutrition, physical manipulation, acupuncture, vitamins, diet, and exercise to restore and energize the body. Weak muscles are proposed to be a source of dysfunctional health.

applied psychology, 1. the interpretation of historical, literary, medical, or other data according to psychological principles. 2. any branch of psychology that emphasizes practical rather than theoretic approaches and objectives, such as **child psychology**, **clinical psychology**, **educational psychology**, and **industrial psychology**.

applied science. See **science**.

AP portable chest radiograph, a radiographic examination of the chest performed with a portable x-ray machine in the room of an immobilized patient. The film holder is placed behind the patient and the x-ray tube in front. The patient is positioned as upright as possible to allow for visualization of fluid levels in the lungs. Use of this method may result in an enlarged cardiac shadow, as compared with a posterior-to-anterior chest x-ray. Also called **AP mobile projection**.

apposition /ap'əshən/ [L, *apponere*, to put to], the placement of objects in proximity, as in the layering of tissue cells or juxtaposition of facing surfaces side-by-side.

appositional growth, an increase in size by the addition of new tissue or similar material at the periphery of a particular part or structure, as in the addition of new layers in bone and tooth formation. Compare **interstitial growth**.

apposition suture, a suture that holds the margins of an incision close together.

approach, the steps in a particular surgical procedure from division of the most superficial parts of the anatomy through exposure of the operation site.

approach-approach conflict [L, *ad* + *propiare*, to draw near], a conflict resulting from the simultaneous presence of two or more incompatible impulses, desires, or goals, each of which is desirable. Also called **double-approach conflict**. See also **conflict**.

approach-avoidance conflict, a conflict resulting from the presence of a single goal or desire that is both desirable and undesirable. See also **conflict**.

appropriate for gestational age (AGA) infant /əprō'prē-it/ [L, *ad*, toward, *proprius*, ownership], a newborn whose size, growth, and maturation are normal for gestational age, whether delivered prematurely, at term, or later than term. Such infants, if born at term, fall within the average range of size and weight on intrauterine growth curves, measuring from 48 to 53 cm in length and weighing between 2700 and

4000 g. Compare **large for gestational age infant, small for gestational age infant**.

approximal /əprōk'siməl/ [L, *approximare*, to approach], close, or very near.

approximate /əprōk'simāt/ [L, *ad + proximare*, to come near], 1. to draw two tissue surfaces close together as in the repair of a wound or to draw the bones of a joint together as in physical therapy. 2. almost correct.

approximator /əprōk'səmātər/, a medical instrument used to draw together the edges of divided tissues, as in closing a wound or in repairing a fractured rib.

apraxia /əprak'sē-ə/ [Gk, *a + pressein*, not to act], an impairment in the ability to perform purposeful acts or to manipulate objects without any loss of strength, sensation, or coordination. **Apraxia of speech** is an inability to program the position of speech muscles and the sequence of muscle movements necessary to produce understandable speech, although understanding of speech remains intact. See also **amnestic apraxia, ideational apraxia, and motor apraxia**.

—*apraxic, adj.*

aprepitant, an antiemetic agent.

■ **INDICATIONS:** This drug is used to prevent nausea and vomiting associated with cancer chemotherapy (including high-dose cisplatin). It is used in combination with other antiemetics.

■ **CONTRAINDICATIONS:** Known hypersensitivity to this drug prohibits its use.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include insomnia, anxiety, depression, confusion, peripheral neuropathy, bradycardia, deep vein thrombosis, hypertension, abdominal pain, anorexia, gastritis, vomiting, heartburn, serum creatine, proteinuria, dysuria, anemia, asthenia, fatigue, dehydration, fever, hiccups, tinnitus, and increased aspartate aminotransferase, alanine aminotransferase, and blood urea nitrogen. Life-threatening side effects include thrombocytopenia and neutropenia. Common side effects include headache, dizziness, diarrhea, constipation, and nausea.

Apresoline, a trademark for a nonnitrate arteriolar vasodilator antihypertensive (**hydrALAZINE hydrochloride**).

aprosody /ə'prosōdē/ [Gk, *a + prosodia*, not modulated voice], a speech disorder characterized by the absence of the normal variations in pitch, loudness, intonation, and rhythm of word formation.

aprosopia /ə'prəsō-pē-ə/ [Gk, *aprosopos*, faceless], a congenital absence of part or all of the facial structures. The condition is usually associated with other malformations.

aprotinin /ap'rō-ti'nin/, an inhibitor of proteolytic enzymes, used as an antihemorrhagic to reduce perioperative blood loss in patients undergoing cardiopulmonary bypass during coronary artery bypass graft; administered intravenously.

APTA, abbreviation for *American Physical Therapy Association*.

aptitude /ap'titydōod/ [L, *aptitudo*, ability], a natural ability, tendency, talent, or capability to learn, understand, or acquire a particular skill; mental alertness.

aptitude test, any of a variety of standardized tests for measuring an individual's ability to learn certain skills. Compare **achievement test, intelligence test, personality test, psychological test**.

Aptivus, a trademark for **tipranavir**.

Apt test, a test for blood in the stool of a newborn. The test differentiates between maternal and newborn blood. The presence of newborn blood indicates active GI bleeding or necrotizing enterocolitis.

apyretic. 1. See **afebrile**. 2. the absence or abatement of fever.

apyrexia /ā'pīrek'sē-ə/ [Gk, *a + pyrexis*, without fever], an absence or remission of fever.

aq. See **aqua**.

AQ, abbreviation for **achievement quotient**.

aqua (aq) /ā'kwā/, the Latin word for water.

aqua amnii. See **amniotic fluid**.

AquaMEPHYTON, a trademark for a vitamin K compound (**phytonadione**).

aquaphobia /ā'kwəfō'bē-ə/ [L, *aqua*, water; Gk, *phobos*, fear], an irrational fear of water.

aquaporin /ak'wah-po'rɪn/, any of a family of proteins found in plasma membranes and forming a functional component of water channels.

aquupuncture /-pungk'chör/ [L, *aqua*, water, *punctura*, puncture], the injection of water under the skin or spraying of a fine jet of water onto the skin surface to relieve mild irritation.

aquatherapy. See **underwater exercise**.

aquathermia pad /-thrū'mē-ə/, a waterproof plastic or rubber pad that can be applied to areas of muscle sprain, edema, or mild inflammation. The pad contains channels through which heated or cooled water flows. The device is connected by hoses to a bedside control unit that contains a temperature regulator, a motor for circulating the water, and a reservoir of distilled water. Although generally safer than a conventional heating pad, the aquathermia pad should be checked periodically to avoid the risk of accidental burns. Also called **water flow pad**.



Aquathermia pad (Potter et al, 2011)

aquatic exercise. See **underwater exercise**.

aqueduct /-dukt/ [L, *aqua*, water, *ductus*, act of leading], any canal, channel, or passage through or between body parts, such as the cerebral aqueduct.

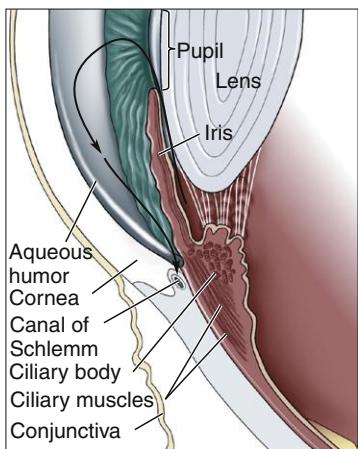
aqueduct of Sylvius. See **cerebral aqueduct**.

aqueous /ā'kwē-əs, ak'wē-əs/ [L, *aqua*], 1. watery or waterlike. 2. a medication prepared with water. 3. a solution containing water.

aqueous chamber [L, *aqua*, water; Gk, *kamara*, something with an arched cover], either the anterior or the posterior chamber of the eye. The aqueous chambers contain the aqueous humor.

aqueous extract, a water-based preparation of a plant or an animal substance containing the biologically active portion of the plant or substance without its cellular residue.

aqueous humor, the clear, watery fluid circulating in the anterior and posterior chambers of the eye. It is produced by the ciliary body and is reabsorbed into the venous system primarily at the iridocorneal angle by means of the canal of Schlemm.



Flow of aqueous humor (Herlihy, 2011)

aqueous phase, a fluid stage of a substance that is based on water in a liquid state, such as a solution of a substance in water.

aqueous solution [L, *aqua*, water + *solutus*, dissolved], a homogenous liquid preparation of any substance dissolved in water.

Ar. 1. symbol for the element argon. 2. abbreviation for an aromatic group such as phenyl.

AR, abbreviation for assisted respiration.

arabinosylcytosine. See cytarabine.

arachidonic acid /ar'ēkōdō'nik/ [L, *arachos*, a legume], a long-chain polyunsaturated fatty acid that is a component of lecithin and serves as a starting material in the biosynthesis of prostaglandins and leukotrienes. In mammals, arachidonic acid is synthesized from linoleic acid.

arachnid [Gk, *arachne*, spider], a member of the phylum Arthropoda, class Arachnida, which includes spiders, scorpions, mites, and ticks.

arachnidism. See arachnoidism.

arachnitis /ar'ēknīt̄is/, an inflammation of the arachnoid membrane. Also called arachnoiditis.

arachno-, arachn-, combining forms meaning ‘arachnoid membrane’ or ‘spider’: *arachnoidal*, *arachnoidism*.

arachnodactyly /är'ēnōdak'tilē/ [Gk, *arachne*, spider, *dactylos*, finger], a congenital anomaly in which the fingers and toes are long, thin, and spiderlike. It is seen in Marfan’s syndrome.

Arachnodactyly in Marfan's syndrome
(Zitelli and Davis, 2007)

arachnoid /ärak'noid/ [Gk, *arachne*, spider, *eidos*, form], resembling a cobweb or spiderweb, such as the arachnoid membrane. —*arachnoidal*, adj.

arachnoid cyst, a fluid-filled cyst between the layers of the leptomeninges, lined with arachnoid membrane, most commonly occurring in the sylvian fissure. Also called leptomeningeal cyst.

arachnoid granulations, clumps of arachnoid villi that project into the superior sagittal sinus.

arachnoidism /ärak'noidiz'əm/ [Gk, *arachne*, spider, *eidos*, form], the condition produced by the bite of a venomous spider. Also called **arachnidism** /ärak'nīdiz'əm/.

arachnoiditis. See arachnitis.

arachnoid membrane, a thin, delicate membrane enclosing the brain and the spinal cord, interposed between the pia mater and the dura mater. The subarachnoid space lies between the arachnoid membrane and the pia mater, and the subdural space lies between the arachnoid membrane and the dura mater. Also called arachnoid sheath.

arachnoid trabeculae, fine filaments that pass from the arachnoid to the pia mater. They are embryological remnants.

arachnoid villi, pl. [Gk, *arachne*, spider, *villus*, shaggy hair], one of the many projections of fibrous tissue from the arachnoid membrane.

arachnophobia /ärak'nōfō'bē-ə/, a morbid fear of spiders.

Aramine, a trademark for a mixed-adrenergic agonist (metaraminol bitartrate).

Aran-Duchenne muscular atrophy /aran'dōshēn/ [François A. Aran, French physician, 1817–1861; Guillaume B.A. Duchenne, French neurologist, 1806–1875], a form of amyotrophic lateral sclerosis affecting the hands, arms, shoulders, and legs at the onset before becoming more generalized.

arbitrary inference /är'bitrē īn'fərəns/, a form of cognitive distortion in which a judgment based on insufficient evidence leads to an erroneous conclusion.

arbitrator /är'bətrā'tor/ [L, *arbiter*, umpire], an impartial person appointed to resolve a dispute between parties. The arbitrator listens to the evidence presented by the parties in an informal hearing and attempts to arrive at a resolution acceptable to both parties. —*arbitration*, n.

arborization test. See ferning test.

arbovirus /är'bōvī'rōs/, any one of more than 300 viruses transmitted by the saliva of insects. The majority of human infections are asymptomatic, but symptomatic infections can be characterized by fever, rash, and bleeding into the viscera or skin. Some lead to encephalitis with fatality or permanent neurological damage. Vertebrate infection occurs when a contaminated arthropod takes a blood meal. Dengue, yellow fever, and equine encephalitis are three common arboviral infections. Treatment is symptomatic for all arbovirus infections. Vaccines have been developed to prevent infection from some arboviruses. Also called arthropod-borne virus. —*arboviral*, adj.

arbutamine /ahr-bu'tah-mēn/, a synthetic catecholamine used as a diagnostic aid in cardiac stress testing in patients unable to exercise sufficiently for the test; it is administered as the hydrochloride salt.

arc [L, *arcus*, bow], a part of the circumference of a circle.

ARC, abbreviation for AIDS-related complex.

arcade [L, *arcus*, bow], an arch or series of arches.

arch, any anatomical structure that is curved or has a bow-like appearance. Also called arcus.

arch-. See archi-.

arch bar, any one of various types of wires, bars, or splints that conform to the arch of the teeth and are used in the treatment of fractures of the jaws and their supporting structures and in the stabilization of injured teeth.

arche-. See **archi-**.

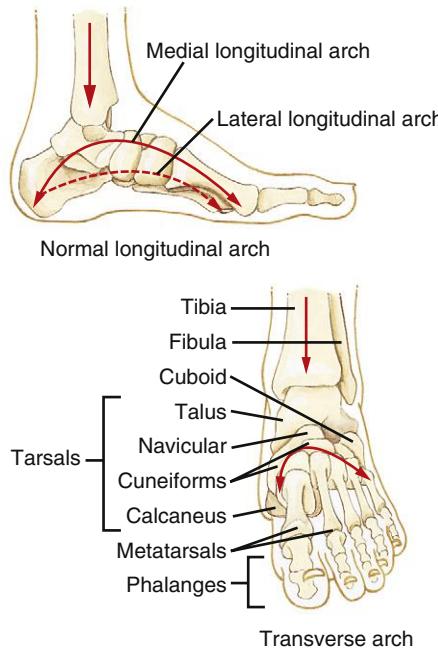
-arche, a suffix meaning ‘beginning’: *menarche*.

archenteric canal. See **neureneric canal**.

archenteron /ärkən'tərōn/ pl. **archentera** [Gk, *arche*, beginning, *enteron*, intestine], the primitive digestive cavity formed by invagination into the gastrula, which is lined with endoderm during the embryonic development of many animals. It corresponds to the tubular cavity in the vertebrates that connects the amniotic cavity with the yolk sac. Also called **archigaster**, **coelenteron**, **gastrocoele**, **primitive gut**. See also **gastrula**. —**archenteric**, adj.

archeocortex. See **olfactory cortex**.

arches of the foot [L, *arcus*, bow; AS, *fol*], the bony curves of the instep, including the longitudinal (anteroposterior) and the transverse arches.



Arches of the foot (Patton and Thibodeau, 2010)

archetype /är'kətīp/ [Gk, *arche* + *typos*, type], 1. an original model or pattern from which a thing or group of things is made or evolves. 2. (in analytic psychology) an inherited primordial idea or mode of thought derived from the experiences of the human race and present in the subconscious of the individual in the form of drives, moods, and concepts. See also **anima**. —**archetypal**, **archetypic**, **archetypal**, adj.

archi-, arch-, arche-, prefixes meaning ‘first, beginning, or original’: *archiblastoma*, *archetype*.

archiblastoma /är'kiblastō'ma/ pl. **archiblastomas**, **archiblastomata** [Gk, *arche* + *blastos*, germ, *oma*], a tumor composed of cells derived from the layer of tissue surrounding the germinal vesicle.

archigaster. See **archenteron**.

archinephric canal, **archinephric duct**. See **pronephric duct**.

archinephron. See **pronephros**.

archistome. See **blastopore**.

architectural barrier /är'kōtek'chərl/, any architectural feature of a home or a public building that limits the access and mobility of disabled persons. Wheelchair access, for example, requires ramped entryways, a minimum of

32-inch-wide doorways, a space of at least 60 × 60 inches for wheelchair turns, and counters no more than 26½ inches above floor level.

architecture /är'kitek'chər/ [Gk, *architekton*, master builder], the basic structure of a computer, including the memory, central processing unit, and input/output devices.

architis /ärkīt'is/ [Gk, *archos*, anus, *itis*, inflammation], an inflammation of the anus. Also called **proctitis**.

arch length /ärch/, the distance from the distal point of the most posterior tooth on one side of the upper or lower jaw to the same point on the other side, usually measured through the points of contact between adjoining teeth. See also **available arch length**.

arch length deficiency, the difference in any dental arch between the length required to accommodate all the natural teeth and the actual length. The deficiency is determined by subtracting the sum of the widths of the teeth in millimeters from the existing arch length in millimeters. The negative value is the arch length deficiency.

arch of the aorta, the proximal one of the four portions of the aorta, giving rise to three arterial branches called the innominate (brachiocephalic), left common carotid, and left subclavian arteries. The arch rises at the level of the border of the second sternocostal articulation of the right side, passes to the left in front of the trachea, bends dorsally, and becomes the descending aorta. Also called **aortic arch**.

arch width, the distance between the left and right opposite in the upper or lower jaw, usually expressed in millimeters. The intercanine, inter premolar, or intermolar distance may be cited as the arch width.

arch wire, an orthodontic wire fastened to two or more teeth through fixed attachments, used to cause or guide tooth movement. See also **full-arch wire**, **sectional arch wire**.

arcing spring contraceptive diaphragm /är'king/, a kind of contraceptive diaphragm in which the flexible metal spring that forms the rim is a combination of a flexible coil spring and a flat band spring made of stainless steel. The latex or silicone rubber dome is approximately 4 cm deep, and the diameter of the rubber-covered rim is between 55 and 100 mm. Seven sizes, in increments of 0.5 cm, allow the clinician to fit the diaphragm to a particular woman. The kind of spring and the size of the rim in millimeters are stamped on the rim (e.g., 75 mm arcing spring). This kind of diaphragm is prescribed for a woman whose vaginal musculature is relaxed and does not afford strong support, as in first-degree cystocele, rectocele, or uterine prolapse. Compare **coil spring contraceptive diaphragm**, **flat spring contraceptive diaphragm**. See also **contraceptive diaphragm fitting**.

ARC-ST, Abbreviation for **Accreditation Review Committee on Education in Surgical Technology**.

arcuation. See **stenosis**.

arcuate /är'kyūō'at/ [L, *arcuatus*, bowed], an arch or bow shape.

arcuate artery of the foot, a branch of the dorsalis pedis artery. Also called **metatarsal artery**.

arcuate ligament of the diaphragm, one of the three arc-shaped ligaments of the diaphragm that attach to the vertebral column.

arcuate scotoma [L, *arcuatus* bowed; Gk, *skotoma*, darkness], an arc-shaped blind area that may develop in the field of vision of a person with glaucoma. It is caused by damage to nerve fibers in the retina.

arcus. See **arch**.

arcus senilis /senē'lis/ [L, bow, aged], an opaque ring, gray to white in color, that surrounds the periphery of the cornea. It is caused by deposits of cholesterol in the cornea or

hyaline degeneration and occurs primarily in older persons. See also **gerontotoxin**.



Arcus senilis (Spalton, Hitchings, and Hunter, 2005)

ardeparin, an anticoagulant.

- **INDICATION:** This drug is used to prevent deep vein thrombosis after knee replacement surgery.
- **CONTRAINDICATIONS:** The following conditions prohibit the use of this drug: known hypersensitivity to this drug, pork products, heparin, or other anticoagulants; hemophilia; leukemia with bleeding; thrombocytopenic purpura; cerebrovascular hemorrhage; cerebral aneurysm; severe hypertension; and other severe cardiac disease.
- **ADVERSE EFFECTS:** Life-threatening consequences include intracranial bleeding, hemorrhage, anaphylaxis, and thrombocytopenia. Other adverse effects include fever, hypersensitivity, anemia, pruritus, superficial wound infection, ecchymosis, and rash.

ARDS, abbreviation for adult respiratory distress syndrome.

area /erē-ə/ [L, space], (in anatomy) a limited anatomical space that contains a specific structure of the body or within which certain physiological functions predominate, such as the aortic area and the association areas of the cerebral cortex.

area restriction, a nursing intervention from the Nursing Interventions Classification (NIC) defined as use of least restrictive limitation of patient mobility to a specified area for purposes of safety or behavior management. See also **Nursing Interventions Classification**.

Areas of Occupation, daily activities in which people engage, including activities of daily living (ADLs), instrumental activities of daily living (IADLs), education, work, play, leisure, and social participation.

areata /erē-ātə/, occurring in patches or circumscribed areas, such as hair loss in **alopecia areata**.

area under the concentration curve (AUC), a method of measurement of the bioavailability of a drug based on a plot of blood concentrations sampled at frequent intervals. It is directly proportional to the total amount of unaltered drug in the patient's blood.

areflexia /ärēflek'sē-ə/, the absence of the reflexes.

Arenavirus /er'inavī'rəs/, a genus of viruses usually transmitted to humans by contact with or inhalation of aerosolized excreta of wild rodents. Individual arenaviruses are identified with specific geographic areas, such as **Bolivian hemorrhagic fever** in one river valley in Bolivia; **Lassa fever** in Nigeria, Liberia, and Sierra Leone; and **Argentine hemorrhagic fever** in two agricultural provinces in

Argentina. Arenavirus infections are characterized by a slow onset of fever, sweats, malaise, headache, retro-orbital pain, muscle pain, rash, petechiae, hemorrhage, delirium, hypotension, and ulcers of the mouth. In rare cases in health care and family settings, some arenaviruses are associated with secondary person-to-person infection. Treatment is supportive, such as fluid and electrolyte balance, rest, and adequate nutrition. Preventative measures include rodent control. An effective live attenuated vaccine has been used in Argentina. Further trials with other vaccines are underway.

areola pl. *areolae*, /erē'ōlə/,

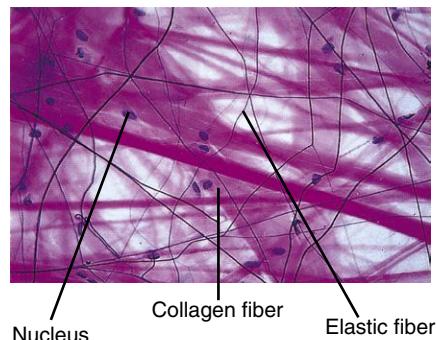
- 1. a small space or a cavity within a tissue.
- 2. a circular area of a different color surrounding a central feature, such as the discoloration about a pustule or vesicle.
- 3. the part of the iris around the pupil.

areola of breast, the pigmented, circular area surrounding the nipple of each breast. Also called **areola mammae**, **areola papillaris**.

areolar /erē'ōlər/ [L, *areola*, little space], pertaining to an areola.

areolar gland, one of the large modified sebaceous glands in the areolae encircling the nipples of the breasts of women. The areolar glands secrete a lipoid fluid that lubricates and protects the nipple during nursing and contain smooth muscle bundles that cause the nipples to become erect when stimulated. Also called **gland of Montgomery**.

areolar tissue, a kind of connective tissue having little tensile strength and consisting of loosely woven fibers and areolae. It occupies the interspaces of the body. Also called **fibroareolar tissue**. Compare **fibrous tissue**.



Areolar tissue (© Ed Reschke; used with permission)

areolitis /erē'ōlītɪs/, an inflammation of the areolae of the breasts.

ARF, 1. abbreviation for **acute respiratory failure**.
2. abbreviation for **acute renal failure**.

arformoterol, a long-acting adrenergic beta₂-agonist, sympathomimetic, and bronchodilator.

■ **INDICATIONS:** This drug is used to treat chronic obstructive pulmonary disease, including chronic bronchitis and emphysema.

■ **CONTRAINDICATIONS:** Tachydysrhythmias, severe cardiac disease, heart block, actively deteriorating chronic obstructive pulmonary disease, and known hypersensitivity to this drug, sympathomimetics, or racemic formoterol prohibit its use.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include insomnia, headache, dizziness, stimulation, hallucinations, flushing, irritability, palpitations, tachycardia, hypertension, angina, hypotension, dysrhythmias, dry nose, irritation of nose and throat, heartburn, nausea, vomiting, flushing,

sweating, anorexia, bad taste/smell changes, hypokalemia, muscle cramps, cough, wheezing, dyspnea, and dry throat. Life-threatening side effects include anaphylaxis and bronchospasm. Common side effects include tremors, anxiety, and restlessness.

Arg, abbreviation for the amino acid **arginine**.

argatroban /ahr-gat'ro-ban/, an anticoagulant that binds to the thrombin active site and inhibits various thrombin-catalyzed reactions. It is used in the prophylaxis and treatment of thrombocytopenia resulting from treatment with heparin; administered intravenously.

argentaffin cell /är'jentaf'in/ [L, *argentum*, gleaming, *affinitas*, affinity], a cell containing granules that stain readily with silver and chromium. Such cells occur in most regions of the GI tract and are especially abundant in the crypts of Lieberkühn. Also called **enterochromaffin cell**, **Kulchitsky's cell**. See also **carcinoid**, **carcinoid syndrome**.

argentaffinoma pl. *argentaffinomas*, *argentaffinomata*, /är'jentaf'inō'ma/, a tumor that secretes large amounts of the hormone serotonin. It usually arises in the GI tract anywhere between the stomach and rectum and can metastasize to the liver. In the liver the tumor produces and releases large quantities of serotonin into the systemic bloodstream, resulting in carcinoid syndrome, which is characterized by flushing, swelling of the face, flat angioma on the skin, diarrhea, bronchial spasm, rapid pulse, low blood pressure, and tricuspid and pulmonary stenosis, often with regurgitation. Treatment is with surgery, radiation therapy, chemotherapy, or biotherapy. Carcinoid tumors are considered a type of endocrine tumor.

argentaffinoma syndrome. See **carcinoid syndrome**.

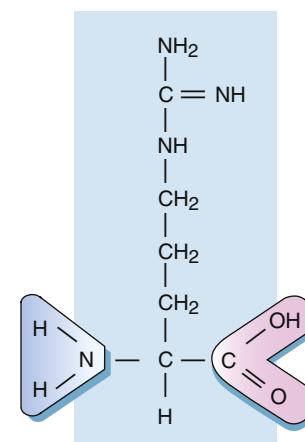
argentaffinomata. See **argentaffinoma**.

Argentine hemorrhagic fever, an acute febrile viral illness caused by an arenavirus transmitted to humans by contact with or inhalation of aerosolized excreta of infected rodents. Initially, it is characterized by chills, fever, headache, myalgia, anorexia, nausea, vomiting, and a general feeling of malaise. As the disease progresses, the victim may develop a high fever, dehydration, hypotension, flushed skin, abnormally slow heartbeat, bleeding from the gums and internal tissues, hematuria, and hematemesis. There may be involvement of the central nervous system, shock, and pulmonary edema. There is no specific treatment for the disease other than hydration, rest, warmth, and adequate nutrition. Rarely, IV fluids and dialysis are necessary. Usually, the prognosis is complete recovery. See also **Arenavirus**, **Bolivian hemorrhagic fever**, **Lassa fever**.

arginase /är'jinās/, an enzyme that catalyzes the hydrolysis of arginine during the urea cycle, producing urea and ornithine. The enzyme is found primarily in the liver but also occurs in the mammary gland, testes, and kidney.

arginase deficiency, an autosomal-recessive aminoacidopathy involving the biosynthesis of urea; arginine is elevated in blood and urine and may cause secondary cystinuria; orotic aciduria is common, but hyperammonemia is rare. Clinical signs include psychomotor retardation, hepatomegaly, and scalp discoloration. Also called **argininemia**.

arginine (Arg) /är'jinīn/, an amino acid formed during the urea cycle by the transfer of a nitrogen atom from aspartate to citrulline. It can also be prepared synthetically. Certain compounds made from arginine, especially arginine glutamate and arginine hydrochloride, are used intravenously in the management of conditions in which there is an excess of ammonia in the blood caused by liver dysfunction. See also **urea cycle**.



Chemical structure of arginine

argininemia /är'jinēmē'ə/, arginase deficiency.

arginine vasopressin, vasopressin containing arginine, as that from humans and most other mammals; for medicinal uses. Also called **argipressin**.

argininosuccinic acidemia /är'jinō'suksin'ik/, an inherited amino acid metabolism disorder in which the lack of an enzyme, argininosuccinase, results in an excess of argininosuccinic acid in the blood. The condition is characterized by seizures and mental retardation. Treatment mainly involves a low-protein diet containing essential amino acids or amino acid analogs.

argipressin /ahr'gi-pres'in/, arginine vasopressin.

argon (Ar) /är'gon/ [Gk, *argos*, inactive], a colorless, odorless, chemically inactive gas, making up approximately 1% of the atmosphere. Its atomic mass is 39.95; its atomic number is 18. It forms no known compounds.

Argyll Robertson pupil [Douglas M.C.L. Argyll Robertson, Scottish ophthalmologist, 1837–1909], a pupil that constricts on accommodation but not in response to light. It is most often seen with miosis and in advanced neurosyphilis.

argyria /ärjī'rēə/ [Gk, *argyros*, silver], a permanent dull blue or gray to bronze discoloration of the skin, conjunctiva, and internal organs caused by excessive oral intake of silver salts.



Argyria (Callen et al, 2000)

argyrophil /ärjī'rēfil/ [Gk, *argyros*, silver, *philein*, to love], a cell or other object that is easily stained or impregnated with silver.

arrhythmia. See **arrhythmia**.

ariboflavinosis /äri'böflä'veinō'sis/ [Gk, *a*, not, *ribose*; L, *flavus*, yellow; Gk, *osis*], a condition caused by deficiency

of riboflavin (vitamin B₂) in the diet. It is characterized by bilateral lesions at the corners of the mouth, on the lips, and around the nose and eyes; by seborrheic dermatitis; and by various visual disorders. See also **riboflavin**.

Arica therapy, an alternative mental health treatment introduced by Oscar Ichazo that focuses on altered states of consciousness with a goal of increasing the powers of the mind. It requires a 40-day training program of physical exercise and meditation, climaxed by a mild form of sensory deprivation during which the patient practices self-observation.

aril, a botanical term used to denote an accessory seed coating that may form a fleshy, cuplike structure around the immature seed (ovule), as in yew and nutmeg. The aril is often brightly colored and edible.

Arimidex, a trademark for an aromatase inhibitor (**anastrozole**) used for treating estrogen-receptor-positive breast cancer, primarily in postmenopausal women.

ariPIPRAZOLE, an antipsychotic agent used to treat schizophrenia.

Aristocort, a trademark for a glucocorticoid (**triamcinolone**).

-arit, combining form designating an antirheumatic drug.

arithmetic mean. See **mean**.

Arkansas stone /är'kənso/ , a fine-grained stone of novaculite used to sharpen surgical instruments.

Arlidin, a trademark for a beta-adrenergic agonist peripheral vasodilator (nylidrin hydrochloride).

arm [L, *amus*], 1. the portion of the upper limb of the body between the shoulder and the elbow. The bone of the arm is the humerus. The muscles of the arm are the coracobrachialis, the biceps brachii, the brachialis, and the triceps brachii. 2. nontechnical, the arm and the forearm. See also **shoulder joint**.

ARM, abbreviation for *artificial rupture of (fetal) membranes*. See **amniotomy**.

armamentarium /är'məmĕntärēəm/ [L, *armamentum*, implement], the total therapeutic assets of a physician or medical facility, including medicines and equipment.

arm board, 1. a board used to position the affected arm of a person with hemiplegia and of others with arm disabilities. The arm board fastens to the armrest of a wheelchair, supporting the flaccid arm in the correct position to prevent or decrease subluxation of the shoulder joint, and to prevent edema. 2. a board used to keep the arm still to permit the drawing of blood or starting of an IV needle.

arm bone. See **humerus**.

arm cylinder cast, an orthopedic device of plaster of paris or fiberglass, used for immobilizing the upper limb from the wrist to the upper arm. It is most often applied to aid the healing of a dislocated elbow, for postoperative immobilization or positioning of the elbow, or in the correction of an elbow deformity, and treatment of forearm and humerus fractures.

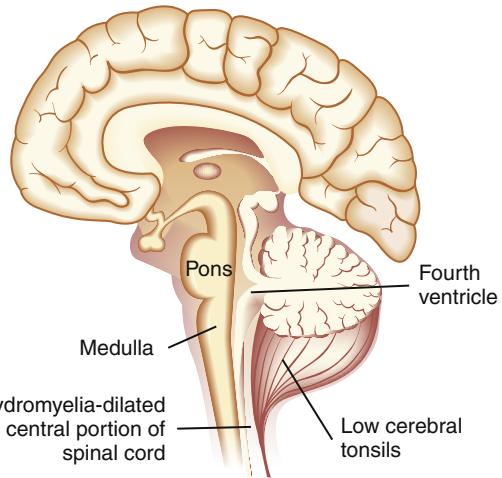
armpit. See **axilla**.

Army Nurse Corps (ANC), a branch of the U.S. Army, founded February 2, 1901, with headquarters in Falls Church, Virginia.

Arneth's classification of neutrophils [Joseph Arneth, German physician, 1873–1953], a system, no longer used in the United States, expressed in chart form in which neutrophils are divided into five classes according to the number of segments of their nuclei and are further subdivided according to the shape of the nuclei. Immature neutrophils with a single-lobed nucleus are placed on the far left side of the chart; those with multilobed nuclei are placed on the far right side.

Arnold-Chiari malformation /är'nôldkē-är'ē/ [Julius Arnold, German pathologist, 1835–1915; Hans Chiari, French pathologist, 1851–1916], a congenital herniation of the

brainstem and lower cerebellum through the foramen magnum into the cervical vertebral canal. It is often associated with meningocele and spina bifida. See also **neural tube defect**.



Arnold-Chiari malformation (Huether and McCance, 2008)

Arnold, Friedrich [German anatomist, 1803–1890], an investigator of structures and functions of the brain and nervous system, including the nerve center of the cough reflex.

-arol, combining form designating a dicoumarol-type anti-coagulant.

AROM, 1. abbreviation for **active range of motion**. 2. abbreviation for *artificial rupture of (fetal) membranes*.

aroma [Gk, spice], any agreeable odor or pleasing fragrance, especially of food, drink, spices, or medication.

aromatase /ah-ro'mah-tās/ , an enzyme activity occurring in the endoplasmic reticulum and catalyzing the conversion of testosterone to the aromatic compound estradiol.

aromatase inhibitors, a class of drugs that inhibit aromatase activity and thus block production of estrogens. They are used to treat breast cancer and endometriosis.

aromatherapy¹, a form of herbal medicine that uses various oils from plants. The route of administration can be absorption through the skin or through inhalation. The action of antiviral and antibacterial agents is proposed to aid healing. The aromatic biochemical structures of certain herbs are thought to act in areas of the brain related to past experiences and emotions (e.g., limbic system).

aromatherapy², a nursing intervention from the Nursing Interventions Classification (NIC) defined as administration of essential oils through massage, topical ointments or lotions, baths, inhalation, douches, or compresses (hot or cold) to calm and soothe, provide pain relief, or enhance relaxation and comfort. See also **Nursing Interventions Classification**.

aromatic /er'ōmat'ik/ [Gk, *aroma*, spice], 1. pertaining to a strong but agreeable odor such as a pleasant spicy odor. 2. a stimulant or spicy medicine. 3. pertaining to organic chemical structures including a 6-carbon ring such as benzol.

aromatic alcohol, a fatty alcohol in which one or more of the hydrogen atoms of the hydrocarbon portion of the alcohol is replaced by an aromatic ring.

aromatic ammonia spirit [Gk, *aroma*, Ammon temple, ancient source of ammonium chloride salt, *spiritus*, breath], a strongly fragrant solution of ammonium carbonate in dilute liquid ammonia, oils, alcohol, and water. It is used as a reflex stimulus, an antacid, and a carminative to relieve flatulence. Also called **aromatic spirit of ammonia**.

aromatic bath, a medicated bath in which aromatic substances or essential oils are added to the water.

aromatic compounds, organic compounds that contain a benzene, naphthalene, or analogous ring. Many of these compounds have agreeable odors, which accounts for the use of this term for such compounds.

aromatic elixir [Gk, *aroma* + Ar, *al-iksir*, philosophers' stone], a pleasant smelling flavoring agent added to some medications.

aromatic hydrocarbon [Gk, *aroma*, spice; *hydrō*, water; L, *carbo*, coal], an organic compound that has a benzene or other aromatic ring, as distinguished from an open-chain aliphatic compound.

aromatic spirit of ammonia. See **aromatic ammonia spirit**.

arousal [OE, to rise], a state of responsiveness to sensory stimulation.

arousal level, the state of sensory stimulation needed to induce active wakefulness in a sleeping infant. Arousal levels range from deep sleep to drowsy state.

ARPKD, abbreviation for *autosomal-recessive polycystic kidney disease*.

Arranon, a trademark for **nelarabine**.

array [ME, *aray*, preparation], an arrangement or order of components or other objects, usually according to a predetermined system or plan.

arrector pili pl. *arrectores pilorum* /ä-rek'tor pī'lī/ [L, raisers of the hair], minute smooth muscles of the skin, attached to the connective tissue sheath of the hair follicles; when they contract they cause the hair to stand erect, producing the appearance called goose flesh.

arrest [L, *ad, restare*, to withstand], to inhibit, restrain, or stop, as to arrest the course of a disease. See also **cardiac arrest**.

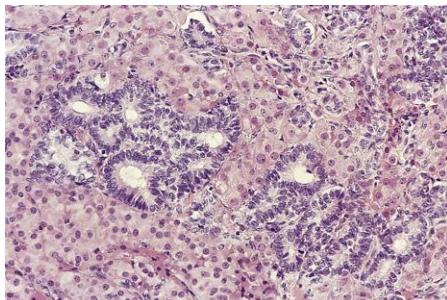
arrested dental caries, tooth decay in which the area of decay has stopped progressing and infection is not present, but in which the demineralized area in the tooth remains as a cavity.

arrested development, the cessation of one or more phases of the developmental process in utero before normal completion, resulting in congenital anomalies. Also called **developmental arrest**.

arrested labor [L, *ad + restare*, to withstand, *labor*, work], an interruption in the labor process that is associated with uterine contractions.

arrheno-, prefix meaning 'male': *arrhenoblastoma*, *arrhenogenic*.

arrhenoblastoma /ärē'nōblastō'mā/ [Gk, *arrhen*, male, *blastos*, germ, *oma*, tumor], an ovarian neoplasm whose cells mimic those in testicular tubules and secrete male sex hormone, causing virilization in females. Also called **andreioma**, **andreoblastoma**, **androma**, **arrhenoma**, **Sertoli-Leydig cell tumor**.



Arrhenoblastoma (Fletcher, 2007)

arrhenogenic /ärē'nōjen'ik/, producing only male offspring.

arrhenokaryon /ärē'nōker'ē-on/ [Gk, *arrhen*, male, *karyon*, nucleus], an organism that is produced from an egg that has only paternal chromosomes.

arrhenoma. See **arrhenoblastoma**.

arrhythmia /ärith'mē-ə/ [Gk, *a* + *rhythmos*, without rhythm], any deviation from the normal pattern of the heartbeat. Also spelled **arhythmia**. Compare **dysrhythmia**. —**arrhythmic**, **arrhythmical**, adj.

arrhythmic [Gk, *a*, *rhythmos*, without rhythm], pertaining to an absence or irregularity of normal rhythm in the heart's beating.

ARRT, abbreviation for **American Registry of Radiologic Technologists**.

arsenic (As) /är'sənik/ [Gk, *arsen*, strong], an element that occurs throughout the earth's crust in metal arsenides, arsenious sulfides, and arsenious oxides. Its atomic number is 33; its atomic mass is 74.92. The arsenic atom occurs in the elemental form and in trivalent and pentavalent oxidation states. This element has been used for centuries as a therapeutic agent and as a poison and continues to have limited use in some trypanocidal drugs such as melarsoprol and tryparsamide. The introduction of nonarsenic trypanocides with less dangerous side effects in the treatment of trypanosomiasis has greatly reduced its use. The average concentration in the human adult is about 20 mg, which is stored mainly in the liver, kidney, GI tract, and lungs. The mechanisms for the biotransformation of arsenics in humans are not well understood. Most arsenics are slowly excreted in the urine and feces, which accounts for the toxicity of the element. —*arsenic*, adj.

arsenic poisoning, toxic effect caused by the ingestion or inhalation of arsenic or a substance containing arsenic, an ingredient in some pesticides, herbicides, dyes, and medicinal solutions. Small amounts absorbed over a period of time may result in chronic poisoning, producing nausea, headache, coloration and scaling of the skin, hyperkeratoses, anorexia, and white lines across the fingernails. Ingestion of large amounts of arsenic results in severe GI pain, diarrhea, vomiting, and swelling of the extremities. Renal failure and shock may occur, and death may result. Determination of the presence of arsenic in the urine, hair, or fingernails is diagnostic.



Arsenic keratoses (Lawrence and Cox, 2002)

arsenic stomatitis [Gk, *arsen*, strong; *stoma*, mouth, *itis*, inflammation], an abnormal oral condition associated with arsenic poisoning, characterized by dry, red, painful oral mucosa; ulceration; bleeding beneath the mucosa; and

mobility of teeth. Compare **atabrine stomatitis, bismuth stomatitis**. See also **arsenic poisoning**.

arsenic trihydride. See **arsine**.

arsenic trioxide, an oxidized form of arsenic, used in weed killers and rodenticides. It is also administered intravenously as an antineoplastic in the treatment of acute promyelocytic leukemia.

arsenism /ahr'sē-nizm/, chronic arsenic poisoning.

arsine /ahr'sēn/, any of several colorless, volatile arsenical bases that are highly toxic and carcinogenic; the most common one is AsH₃, arsenous trihydride. Some of these compounds have been used in warfare, and a major industrial use is in the production of microelectronic components. Inhalation leads to massive red blood cell hemolysis with secondary renal failure and jaundice. A garliclike odor may be noted with high concentrations. Initial symptoms include headache, vertigo, and nausea.

ART, abbreviation for **active resistance training**.

Artane, a trademark for an anticholinergic (**trihexyphenidyl hydrochloride**).

artefact. See **artifact**.

arterectomy /är'tərek'tomē/, the surgical removal of a segment of an artery.

arteri-. See **arterio-**.

arteria alveolaris inferior. See **inferior alveolar artery**.

arterial (A) /ärt'ē-əl/ [Gk, *arteria*, airpipe], pertaining to an artery.

arterial bleeding. See **arterial hemorrhage**.

arterial blood gas (ABG), the oxygen and carbon dioxide content of arterial blood, measured by various methods to assess the adequacy of ventilation and oxygenation and the acid-base status of the body. Oxygen saturation of hemoglobin is normally 95% or higher. The partial pressure of arterial oxygen, normally 80 to 100 mm Hg, is increased in hyperventilation and decreased in cardiac decompensation, chronic obstructive pulmonary disease, and certain neuromuscular disorders. The partial pressure of carbon dioxide, normally 35 to 45 mm Hg, may be higher in emphysema, chronic obstructive pulmonary disease, and reduced respiratory center function; it may be lower in pregnancy and in the presence of pulmonary emboli and anxiety.

arterial blood gases (ABG) test, a blood test used to provide information that helps assess and manage a patient's respiratory (ventilation) and metabolic (renal) acid/base and electrolyte homeostasis, and to assess adequacy of oxygenation.

arterial blood pressure (ABP), the pressure of the blood in the arterial system, which depends on the heart's pumping pressure, the resistance of the arterial walls, elasticity of vessels, the blood volume, and its viscosity.

Arterial blood gases

Parameter	Measurement	Value
Acid-base balance	pH: hydrogen ion concentration	Normal: 7.35-7.45 Alkallemia: 7.45 Acidemia: 7.35
Oxygenation	Pao ₂ : partial pressure of dissolved O ₂ in blood	Normal: 80-100 mm Hg Hyperoxia: 100 mm Hg Hypoxemia: 80 mm Hg, 95%-98%
Ventilation	Sao ₂ : percentage of O ₂ bound to hemoglobin Paco ₂ : partial pressure of CO ₂ dissolved in blood	Normal: 35-45 mm Hg Hypercapnia: 45 mm Hg Hypocapnia: 35 mm Hg

arterial capillaries, microscopic blood vessels (capillaries) extending beyond the terminal ends of arterioles.

arterial catheter [Gk, *arteria*, airpipe, *katheter*, a thing lowered into], a tubular instrument that can be inserted into an artery either to draw blood or to measure blood pressure directly. More commonly referred to as an arterial line.

arterial circle of Willis. See **circle of Willis**.

arterial circulation [Gk, *arteria* + L, *circulare*, to go around], the movement of blood through the arteries directed away from the heart to the tissues, as opposed to venous circulation away from the tissues to the heart.

arterial hemorrhage, the loss of blood from an artery, often associated with vessel trauma or the removal of a large-bore arterial catheter. Also called **arterial bleeding**.

arterial insufficiency, inadequate blood flow in arteries. It may be caused by occlusive atherosclerotic plaques or emboli; damaged, diseased, or intrinsically weak vessels; arteriovenous fistulas; aneurysms; hypercoagulability states; or heavy use of tobacco. Signs of arterial insufficiency include pale, cyanotic, or mottled skin over the affected area, absent or decreased sensations, tingling, diminished sense of temperature, muscle pains, reduced or absent peripheral pulses, and, in advanced disease, arterial ulcers and atrophy of muscles in the involved extremity. Diagnosis includes checking and comparing peripheral pulses in contralateral extremities, angiography, ultrasound using a Doppler device, and skin temperature tests. Treatment may include a diet low in saturated fats, moderate exercise, sleeping on a firm mattress, use of a vasodilator, and, if indicated, surgical repair of an aneurysm or arteriovenous fistula. Use of tobacco products, prolonged standing, and sitting with the knees bent are discouraged.



Ulcers in a patient with arterial insufficiency

(Graham-Brown and Bourke, 2007)

arterial insufficiency of lower extremities, a condition characterized by hardening, thickening, and loss of elasticity of the walls of arteries in the legs. It causes decreased

circulation, sensation, and function. Symptoms include sharp, cramping pain during exercise or rest at night; numbness; skin changes ranging from pallor to ulceration; thickened toenails; and loss of hair on the legs. Dorsalis pedis, posterior tibial, and popliteal pulses may be diminished or absent. The ankle-brachial index is used as the initial screening test, and laboratory studies usually show elevated plasma lipid levels. See also **claudication**.

arterialized flap, a flap whose blood supply in the new site is maintained by a vein that is grafted to an artery.

arterial ligament, a small, nonfunctional ligament attached to the superior surface of the pulmonary trunk and the inferior surface of the aortic arch. It is a vestige of the ductus arteriosus.

arterial line (A-line, Art-line), an arterial blood monitoring system consisting of a catheter inserted into an artery and connected to pressure tubing, a transducer, and a monitor. The device permits continuous direct blood pressure readings as well as access to the arterial blood supply when samples are needed for analysis.

arterial murmur, a sound produced by blood moving through a narrowed artery.

arterial nephrosclerosis [Gk, *arteria*, airpipe, *nephros*, kidney, *sklera*, hard, *osis*, condition], patchy atrophic scarring of the kidneys caused by arteriosclerotic narrowing of the lumens of the large branches of the renal artery, occurring in elderly or hypertensive persons and occasionally causing hypertension.

arterial network [Gk, *arteria* + L, *rete*, net], an anastomotic network of small arteries at a point before they branch into arterioles and capillaries. Also called **rete arteriosum**.

arterial palpitation [Gk, *arteria*, airpipe; L, *palpitare*, to flutter], a pulsation felt in an artery.

arterial pH, the hydrogen ion concentration of arterial blood. Normal range is 7.35 to 7.45.

arterial plethysmography, a manometric test that is usually performed to rule out occlusive disease of the lower extremities. It can also be used to identify arteriosclerotic disease in the upper extremity.

arterial port, the opening at the arterial end of a synthetic arteriovenous access device.

arterial pressure, the stress exerted by circulating blood on the artery walls. It is the product of the cardiac output and the systemic vascular resistance. A number of extrinsic and intrinsic factors regulate and maintain a reasonably constant arterial pressure. Extrinsic factors include neurological stimulation and hormones such as catecholamines and prostaglandins. Intrinsic factors include chemoreceptors and baroreceptors in the arterial walls that cause vasoconstriction or vasodilation. Arterial pressure is commonly measured with a sphygmomanometer and a stethoscope. Stress, hypervolemia, hypovolemia, and various drugs may alter the arterial pressure. Also called **arterial tension**. See also **blood pressure**.

arterial rete /rē'tē/ [Gk, *arteria*, airpipe; L, *rete*, net], a network of arteries and arterioles.

arterial sclerosis [Gk, *arteria*, airpipe, *sklerosis*, hardening], a thickening and hardening of the arteries caused by fibrosis or calcium deposition. See also **arteriosclerosis**, **atherosclerosis**.

arterial tension. See **arterial pressure**.

arterial thrill, a vibration that can be felt over an artery. It is usually associated with turbulent blood flow within the artery.

arterial wall, the fibrous and muscular wall of vessels that carry oxygenated blood from the heart to structures throughout the body, and of the pulmonary arteries that carry

deoxygenated blood from the heart to the lungs. The wall of an artery has three layers: the **tunica intima**, the inner coat; the **tunica media**, the middle coat; and the **tunica adventitia**, the outer coat. Nerves from the sympathetic system constrict the vessel and thus control the flow of blood into the areas served by the artery. The middle layer in smaller arteries is almost entirely muscular and in larger arteries is more elastic. The thickness of the outer layer varies with the location of the artery. In protected areas, such as the abdominal and cranial cavities, the outer layer of associated arteries is very thin, but in more exposed locations, as in the limbs, it is much thicker.

arteria radicularis magna, artery of Adamkiewicz.

arterectomy /är-tir'ē-ek'tōmē/ [Gk, *arteria* + *ektome*, excision], the surgical removal of a portion of an artery.

arteries. See **blood vessel**.

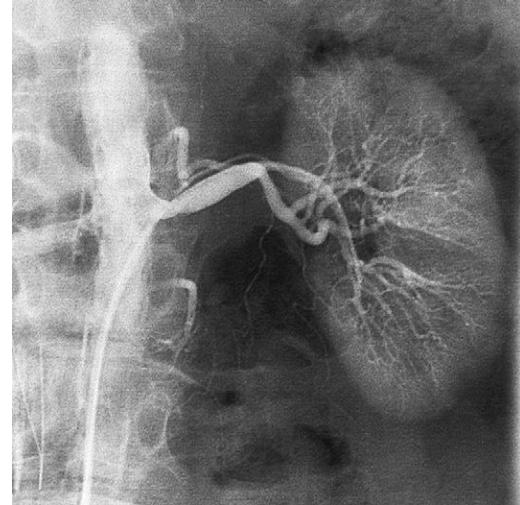
arterio-, **arteri-**, prefix meaning ‘artery’: *arteriosclerosis*, *arteritis*.

arteriocapillary /är-tir'ē-ō-kap'i-lar'ē/ [Gk, *arteria* + L, *capillaris*, hairlike], pertaining to the arteries and the capillaries.

arteriofibrosis /är-tir'ē-ōfibrō'sis/, an inflammatory, fibrous thickening of the walls of the arteries and arterioles, resulting in a narrowing of the lumen of the vessels.

arteriogenic impotence, vasculogenic impotence caused by a disorder in the arteries supplying the penis, such as arteriosclerosis or stenosis.

arteriogram /är-tir'ē-ōgram/, an x-ray film of an artery injected with a radiopaque contrast medium. See also **arteriography**.



Renal arteriogram (Frank, Long, and Smith, 2012)

arteriography /är-tir'ē-og'rāfē/ [Gk, *arteria*, airpipe, *graphein*, to record], a method of radiological visualization of arteries performed after a radiopaque contrast medium is introduced into the bloodstream or into a specific vessel by injection or through a catheter. See also **angiography**, **—angiographic, adj.**

arteriole /är-tir'ē-ōl/ [L, *arteriola*, little artery], the smallest of the arteries. Blood flowing from the heart is pumped through the arteries, to the arterioles, to the capillaries, into the veins, and returned to the heart. The muscular walls of the arterioles constrict and dilate in response to both local factors and neurochemical stimuli; thus, arterioles play a significant role in peripheral vascular resistance and in regulation of blood pressure. Also called **arteriola**. See also **artery**. —*arteriolar, adj.*

arteriolosclerosis /är'tirē-ō'lōsklōrō'sis/, pathological thickening, hardening, and loss of elasticity of arteriolar walls.

arteriopathy /är'tirē-ōp'āthē/ [Gk, *arteria* + *pathos*, suffering], a disease of an artery.

arterioplasty /är'tirē-ōplas'tē/ [Gk, *arteria* + *plassein*, to mold], surgical repair or reconstruction of an artery. The procedure is often performed to correct an aneurysm.

arteriosclerosis /är'tirē-ō'sklōrō'sis/ [Gk, *arteria* + *sclerosis*, hardening], a common disorder characterized by thickening, loss of elasticity, and calcification of arterial walls. It results in a decreased blood supply, especially to the cerebrum and lower extremities. The condition often develops with aging and in hypertension, nephrosclerosis, scleroderma, diabetes, and hyperlipidemia. Typical signs and symptoms include intermittent claudication, changes in skin temperature and color, altered peripheral pulses, bruises over an involved artery, headache, dizziness, and memory defects. Vasodilators and exercise may relieve symptoms, but there is no specific treatment. Preventive measures include therapy for predisposing diseases, adequate rest and exercise, avoidance of stress, and discontinuation of tobacco use. Kinds of arteriosclerosis include **atherosclerosis** and **Mönckeberg's arteriosclerosis**. Also called **arterial sclerosis, hardening of the arteries**. —**arteriosclerotic, adj.**

arteriosclerosis obliterans [Gk, *arteria* + *skleros* + L, *oblitterare*, efface], a gradual narrowing of the arteries with thrombosis and degeneration of the intima. The condition may lead to complete occlusion of an artery and subsequent gangrene.

arteriosclerotic /-sklōrōt'ik/ [Gk, *arteria* + *skleros*, hard], pertaining to a thickening, hardening, and calcification of the arterial wall.

arteriosclerotic aneurysm, an aneurysm arising in a large artery, most commonly the abdominal aorta, as a result of weakening of the wall in severe atherosclerosis. Also called **atherosclerotic aneurysm**.

arteriosclerotic heart disease (ASHD), a thickening and hardening of the walls of the coronary arteries.

arteriosclerotic retinopathy [Gk, *arteria*, + airpipe, *sklerosis*, hardening; L, *rete*, net; Gk, *pathos*, disease], a disorder of the retina associated with hardening and thickening of the arteries supplying that part of the eye. It often accompanies hypertension.

arteriospasm /är'tirē-ōspaz'm/ [Gk, *arteria* + *spasmos*, spasm], a spasm of an artery.

arteriostenosis /-stōnō'sis/, a narrowing of an artery.

arteriotomy /är'tirē-ōtōmē/, a surgical incision in an artery.

arteriovenous (AV) /-vē'nōs/ [Gk, *arteria* + L, *vena*, vein], pertaining to arteries and veins.

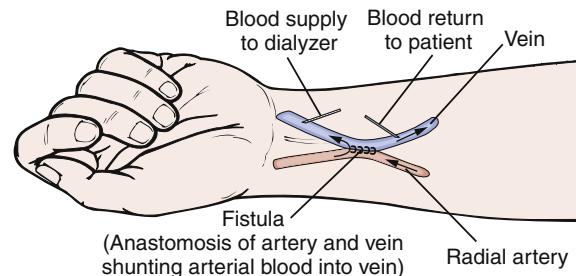
arteriovenous anastomosis [Gk, *arteria* + L, *vena*; Gk, *anastomoein*, to form a mouth], a communication between an artery and a vein, either as a congenital anomaly or as a surgically produced link between vessels.

arteriovenous aneurysm, a dilation affecting both an artery and a vein, often as an abnormal linkage of the two.

arteriovenous angioma of the brain, a congenital tumor consisting of a tangle of coiled, usually dilated arteries and veins, islets of sclerosed brain tissue, and, occasionally, cartilaginous cells. The lesion, which may be distinguished by an intracranial bruit, generally arises in the vascular system of the pia mater and may grow to project deeply into the brain, causing seizures and progressive hemiparesis.

arteriovenous fistula, an abnormal communication between an artery and vein. It may occur congenitally or result from trauma, infection, arterial aneurysm, or a malignancy. A continuous murmur and palpable thrill may be detected over the fistula and may be obliterated by compressing the feeding

artery; this maneuver may slow the heartbeat (Branham's sign). Chronic arteriovenous fistulas may cause varicosities, cutaneous ulcers, and cardiac enlargement resulting from high-output heart failure. A congenital fistula may result in a cavernous hemangioma. If an arteriovenous fistula is limited in size and is accessible, it can be treated by surgical excision. An arteriovenous fistula is often created surgically to provide vascular access for hemodialysis.



Arteriovenous fistula (Lewis et al, 2011)

arteriovenous oxygen (a-vo₂) difference, the arterial oxygen content minus the central venous oxygen content.

arteriovenous shunt (AV shunt), a passageway, artificial or natural, that allows blood to flow from an artery to a vein without going through a capillary network.

arteritis /är'tərī'tis/ [Gk, *arteria* + *itis*], inflammation of the inner layers or the outer coat of one or more arteries. It may occur as a clinical entity or accompany another disorder, such as rheumatoid arthritis, rheumatic fever, polymyositis, or systemic lupus erythematosus. Kinds of arteritis include **infantile, rheumatic, Takayasu's, and temporal arteritis**. See also **endarteritis, periarteritis**.

arteritis obliterans. See **endarteritis obliterans**.

arteritis umbilicalis, septic inflammation of the umbilical artery in newborns, usually caused by the bacterium *Clostridium tetani*.

artery /är'tərē/ [Gk, *arteria*, airpipe], one of the large blood vessels carrying blood in a direction away from the heart to the tissues. See also **arterial wall, arteriole**. Compare **vein**.

artery forceps, any forceps used for grasping, compressing, and holding the end of an artery during ligation. Generally self-locking, its handles are scissorlike. Also called **hemostatic forceps**.

arthral. See **articular**.

arthralgia /ärthal'jē/ [Gk, *arthron*, joint, *algos*, pain], joint pain. —**arthralgic, adj.**

-arthria, suffix meaning a '(specified) condition involving the ability to articulate': *anarthria, dysarthria*.

-arthritic, -arthritical, suffix meaning 'arthritis': *antiarthritic, postarthritic*.

arthritis /ärthrit'is/ [Gk, *arthron*, joint, *itis*], any inflammatory condition of the joints, characterized by pain, swelling, heat, redness, and limitation of movement. See also **osteoarthritis, rheumatoid arthritis**.

arthritis deformans. See **rheumatoid arthritis**.

arthro-, arthr-, combining form meaning 'joints, articulations': *arthralgia, arthrocentesis*.

arthrocentesis /är'thrōsintē'sis/ [Gk, *arthron* + *kentesis*, pricking], the puncture of a joint with a needle and the withdrawal of fluid, performed to obtain samples of synovial fluid for diagnostic purposes. It may also be used to instill medications and to remove fluid from joints to simply relieve pain. A local anesthetic is usually administered; surgical asepsis is observed in the procedure. Normal synovial fluid

is a clear, straw-colored, slightly viscous liquid that forms a white, viscous clot when mixed with glacial acetic acid; if inflammation is present, as in rheumatoid arthritis, the fluid is watery and turbid, and its mixture with glacial acetic acid results in a flocculent, easily broken clot. The number of leukocytes, especially polymorphonuclear cells, and the protein content are increased, and the glucose level is decreased if inflammation is present. Synovial fluid samples are also cultured and examined microscopically to diagnose a septic process, such as bacterial arthritis.



Arthrocentesis (Custalow, 2005)

arthrodesis, surgical fusion of a joint. See **ankylosis**.

arthrodia. See **gliding joint**.

arthrogram /är'thrəgrām/, 1. a radiographic record after introduction of opaque contrast material into a joint. 2. a nuclear medicine study used to detect the loosening of a prosthetic device.

arthrography [Gk, *arthron*, joint, *graphein*, to record], a method of radiographically visualizing the inside of a joint using a radiolucent or radiopaque contrast medium.

arthrogryposis multiplex congenita [Gk, *arthron* + *gryposis*, joint curve; L, *multiplex*, many, *plica*, fold, *congenitus*, born with], fibrous stiffness of one or more joints, present at birth. It is often associated with incomplete development of the muscles that move the involved joints and degenerative changes of the motor neurons that innervate those muscles. The cause of the condition, which is uncommon, is unknown, although possible causes are fetal crowding and maternal neuromuscular disease. Physiotherapy to loosen the joints is the only treatment. Also called **amyoplasia congenita** /ə'mi'ōplā'zhə/.

arthrokinematic /är'thrōkin'əmat'ik/, pertaining to the movement of bone surfaces within a joint.

arthron /är'thron/ [Gk], a joint or articulation, including its various components of bones, cartilaginous inserts, all soft tissue structures intervening between the rigid skeletal parts, and the adjacent muscular elements.

arthropathy /ärthrop'əthē/ [Gk, *arthron* + *pathos*, suffering], any disease or abnormal condition affecting a joint. —*arthropathic*, adj.

arthroplasty /är'thrōplast'ē/ [Gk, *arthron* + *plassein*, to mold], the surgical reconstruction or replacement of a painful, degenerated joint, to restore mobility in osteoarthritis or rheumatoid arthritis or to correct a congenital deformity. Either the bones of the joint are reshaped and soft tissue or a metal disk is placed between the reshaped ends, or all or part of the joint is replaced with a metal or plastic prosthesis. Preoperative care may include the typing and crossmatching of blood. After surgery the patient may be placed in traction to immobilize the affected limb. Physical therapy to increase muscle strength and range of motion is allowed in a slow, progressive schedule. When a lower extremity is involved, weight-bearing may or may not be allowed. Frequent checks of distal circulation are made and the nurse watches for

bleeding, thrombophlebitis, pulmonary embolism, or fat embolism. Antibiotics are usually given to prevent infection, which is the most common cause of failure of the surgery. Also called **joint replacement**. See also **osteoarthritis**.

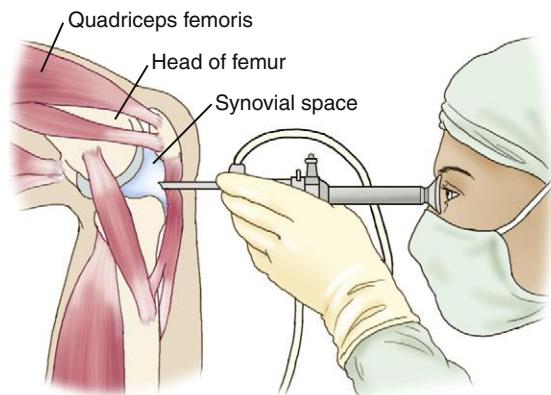
arthropod /är'thrōpōd/ [Gk, *arthron* + *pous*, foot], a member of the Arthropoda, a large phylum of animal life that includes crabs and lobsters as well as mites, ticks, spiders, and insects. Arthropods generally are distinguished by a jointed exoskeleton (shell) and paired, jointed legs. They bite, sting, cause allergic reactions, and may serve as vectors for viruses and other disease-causing agents.

arthropod-borne virus. See **arbovirus**.

arthroscope /-skōp/ [Gk, *arthron* + *skopein*, to watch], a type of endoscope used to examine joints.

arthoscopic anterior cruciate ligament reconstruction, reconstruction of the anterior cruciate ligament, performed on individuals whose activities are compromised by instability of the knee and who have failed to respond to non-surgical treatment options. Repair of the anterior cruciate ligament usually involves replacement of the ligament by either an autograft, allograft, or synthetic ligament. Autografts are the method of choice; synthetic devices may contribute to the development of chronic synovitis.

arthroscopy /är'thos'kōpē/ [Gk, *arthron* + *skopein*, to watch], the examination of the interior of a joint, performed by inserting a specially designed endoscope through a small incision. The procedure, used chiefly in knee problems, permits biopsy of cartilage or synovium, diagnosis of a torn meniscus, and, in some instances, removal of loose bodies in the joint space. —*arthroscopic*, adj.



Arthroscopy (Leonard, 2009)

arthrous /är'thrōs/ [Gk, *arthron*], 1. pertaining to joints or the articulation of bones. 2. pertaining to a disease of a joint.

Arthus reaction /är'toōs'/ [Nicholas M. Arthus, French physiologist, 1862–1945], a rare, severe, immediate non-atopic hypersensitivity reaction to the injection of a foreign substance, that usually is not irritating but in certain individuals is antigenic. The reaction is thought to involve the formation of an antigen-antibody complex that activates complement. Acute local inflammation, usually in the skin and marked by edema, hemorrhage, and necrosis, occurs at the site of injection. Also called **Arthus phenomenon**. See also **serum sickness**.

articul-, combining form meaning ‘joint, structure, and function’: *articular*, *articulatio*.

articular. See **articulate**.

articular capsule [L, *articulare*, to divide into joints], an envelope of tissue that surrounds a freely moving joint,

composed of an external layer of white fibrous tissue and an internal synovial membrane. See also **fibrous capsule**.

articular cartilage [L, *articulare* + *cartilago*], a type of hyaline connective tissue that covers the articulating surfaces of bones within synovial joints. See also **cartilage**.

articular disk, 1. a small oval plate between the condyle of the mandible and the mandibular fossa. Displacement of or injury to the plate may be a cause of temporomandibular joint (TMJ) pain. 2. the platelike cartilaginous end of certain bones in movable joints, sometimes closely associated with surrounding muscles or with cartilage.

articular fracture, a fracture involving the articulating surfaces of a joint.

articular head, a projection on a bone that forms a joint with another bone.

articular muscle, a muscle that is attached to the capsule of a joint.

articular process of vertebra, a bony outgrowth on a vertebra that forms a joint with an adjoining vertebra.

articulate /är'tik'yəlāt/ [L, *articulare*, to divide into joints], 1. to form a joint. 2. to configure the supraglottal airway to produce consonants and vowels, resulting in speech that is distinct and connected. —**articular**, adj, **articulation**, n.

articulated /är'tik'yəlātid/, united by a movable joint.

articulated partial denture. See **partial denture**.

articulatio cubiti. See **elbow joint**.

articulatio genus. See **knee joint**.

articulation. 1. the process by which the supraglottal airway is shaped to form consonants and vowels into meaningful, understandable speech. 2. See **joint**.

articulation of the pelvis /är'tik'yəlā'shən/, any one of the connections between the bones of the pelvis, involving four groups of ligaments. The first group connects the sacrum and the ilium; the second, the sacrum and the ischium; the third, the sacrum and the coccyx; and the fourth, the two pubic bones.

articulatio plana. See **gliding joint**.

articulatio sellaris. See **saddle joint**.

articulator /är'tik'yəlā'tər/ [L, *articulare*, to divide into joints], a mechanical device used in the fabrication and testing of dental prostheses. It simulates the temporomandibular joints and jaw members to which maxillary and mandibular plaster casts may be attached. Some articulators are adjustable, allowing movement of attached casts into various eccentric relationships.

articulus. See **joint**.

artifact /är'təfakt/ [L, *ars*, skill, *facere*, to make], anything artificially made; may be extraneous, irrelevant, or unwanted, such as a substance, structure, or piece of data or information. In radiological imaging, spurious electronic signals may appear as an artifact in an image with as much strength as the signals produced by the real objects, thereby confusing the radiologist and the results of any examination.

artifactual modification /är'təfak'chōō-əl/, a change in protein structure caused by in vitro manipulation.

artificial /är'tifish'əl/ [L, *artificium*, not natural], 1. made by human work as a substitute for something that is natural. 2. simulated, resulting from art in imitation of nature.

artificial abortion, an abortion that is produced deliberately.

artificial airway [L, *artificiosum*, skillfully made], a plastic or rubber device that can be inserted into the upper or lower respiratory tract to facilitate ventilation or the removal of secretions.

artificial airway management, a nursing intervention from the Nursing Interventions Classification (NIC) defined as maintenance of endotracheal and tracheostomy tubes and

prevention of complications associated with their use. See also **Nursing Interventions Classification**.

artificial ankylosis, a surgical procedure in which two or more parts of a joint are fixed so that the joint becomes immovable.

artificial anus, a surgical opening into the bowel, as in a colostomy.

artificial assists, any prosthetic devices or contrivances that may enable a physically challenged person to function. Examples include heart pacemakers, crutches, and artificial limbs.

artificial blood. See **perfluorocarbon**.

artificial classification of caries. See **classification of caries**.

artificial crown, a dental prosthesis that restores part or all of the crown of a natural tooth. Compare **anatomical crown**, **clinical crown**, **partial crown**.

artificial dentition. See **dentition**.

artificial eye, a prosthetic device resembling the anterior surface of a normal eyeball. It is fitted under the upper and lower eyelid of an eye that has been removed.

artificial genitourinary sphincter, an implantable prosthetic device for treating urinary incontinence caused by an incompetent or absent sphincter; an artificial sphincter is created with an inflatable cuff around the bladder neck or bulbar urethra.

artificial heart, a mechanical device of molded polyurethane, consisting of two ventricles implanted in the body and powered by an air compressor located outside the body, used to keep the patient alive until transplantation is possible. See also **Jarvik-7**.

artificial homologous insemination. See **artificial insemination—husband** (AIH).

artificial impregnation. See **artificial insemination—husband** (AIH).

artificial insemination (AI), the introduction of semen into the vagina or uterus by mechanical or instrumental means rather than by sexual intercourse. The procedure is planned to coincide with the expected time of ovulation so that fertilization can occur. Kinds of artificial insemination are **artificial insemination—donor** (AID) and **artificial insemination—husband** (AIH). Also called **artificial impregnation**. See also **menstrual cycle**.

artificial insemination—donor (AID), artificial insemination in which the semen specimen is provided by an anonymous donor. The procedure is used primarily in cases where the partner is unable to provide a viable sperm sample. Also called **heterologous insemination**. Compare **artificial insemination—husband**.

artificial insemination—husband (AIH), artificial insemination in which the semen specimen is provided by the husband. The procedure is used primarily in cases of impotency, low sperm count, or a vaginal disorder or when the husband is incapable of sexual intercourse because of some physical disability. Also called **artificial homologous insemination**. Compare **artificial insemination—donor**.

artificial intelligence (AI), a system that makes it possible for a machine to perform functions similar to those performed by human intelligence, such as learning, reasoning, self-correcting, and adapting. Computer technology produces many instruments and systems that mimic and surpass some human capabilities, such as speed of calculations, correlating, sensing, and deducing.

artificial kidney, a device used to remove the body waste, commonly excreted in urine, from circulating blood. It usually consists of a set of tubes or catheters that pass the blood through a dialysate solution where wastes are removed by osmosis and diffusion. Also called **dialyzer**, **hemodialyzer**, **kidney machine**. See also **hemodialysis**, **peritoneal dialysis**.

artificial labor [L, *artificiosum*, artificial, *labor*, work], induced labor, as when started with drugs or mechanical devices.

artificial limb. See **prosthesis**.

artificial lung. See **Drinker respirator**.

artificially acquired immunity. See **acquired immunity**.

artificial menopause [L, *artificiosus*, artificial, *men*, month; Gk, *pauein*, to cease], the termination of menstrual periods by surgery, radiation, or other methods. See also **menopause**.

artificial pacemaker. See **pacemaker**.

artificial pneumothorax. See **therapeutic pneumothorax**.

artificial respiration. See **artificial ventilation**.

artificial rupture of membranes. See **amniotomy**.

artificial saliva [L, *artificiosum*, artifice, *saliva*, spittle], a mixture of carboxymethylcellulose, sorbitol, sodium, and potassium chloride in an aqueous solution. It is available in a spray container for the treatment of xerostomia, or dry mouth.

artificial selection, the process by which the genotypes of successive plant and animal generations are determined through controlled breeding. Compare **natural selection**. See also **eugenics**.

artificial stone. See **dental stone**.

artificial tears, a pharmaceutical preparation of various polymers that can be instilled in the eyes of patients suffering from dry eye or keratoconjunctivitis sicca.

artificial ventilation, the process of supporting respiration by manual or mechanical means when normal breathing is inefficient or has stopped. If artificial ventilation is unsuccessful, the patient is repositioned and the airway is tested for the presence of an obstruction. Also called **artificial respiration**. See also **cardiopulmonary resuscitation**, **resuscitation**, **ventilator**.

Art-line. See **arterial line**.

art therapist, a human service professional who uses art media and images, the creative process, and client responses to artwork in order to assess, treat, and rehabilitate patients with mental, emotional, physical, or developmental disorders. Through art, the therapist attempts to help the client access and express memories, trauma, and psychic conflict often not easily reached with words.

art therapy¹, the use of art media to reconcile emotional conflicts, foster self-awareness, and express unspoken and frequently unconscious concerns. Art therapy is often used when traditional forms of verbal psychotherapy have failed or been rejected by an individual and when individuals have difficulty expressing feelings or use verbalization as a defense mechanism.

art therapy², a nursing intervention from the Nursing Interventions Classification (NIC) defined as facilitation of communication through drawings or other art forms. See also **Nursing Interventions Classification**.

aryepiglottic fold /er'ē-ep'iglot'ik/, a mucosal fold on each of the lateral borders of the larynx. Together the folds enclose the superior margins of the quadrangular membranes and adjacent soft tissues. They function as a sphincter during swallowing.

aryl-, prefix designating an alkyl monovalent radical derived from an aromatic hydrocarbon and used to denote aromatic groups.

aryl hydrocarbon hydroxylase (AHH), an enzyme that converts carcinogenic chemicals in tobacco smoke and in polluted air into active carcinogens within the lungs. Aryl hydrocarbon hydroxylase is the subject of numerous studies to determine why cancer develops in some smokers but not in others. Experimental blood tests indicate that the level of aryl hydrocarbon hydroxylase may be a factor in hereditary predisposition of a cigarette smoker to cancer.

arytenoid cartilage /är'it'noid kär'ti-lj/ [Gk, *arytaine*, laddle + *eidos*, form; L, *cartilago*], one of the paired, pitcher-shaped cartilages of the back of the larynx at the upper border of the cricoarytenoid cartilage with attachments to the vocal chords.

As, symbol for the element **arsenic**.

AS, abbreviation for **aortic stenosis**.

as-. See **ad-**.

a.s., abbreviation for **auris sinistra**.

5-ASA, 5-aminoosalicylic acid.

ASA, 1. abbreviation for *American Society of Anesthesiologists*. 2. abbreviation for **aspirin** (acetylsalicylic acid). 3. abbreviation for **antisperm antibody**.

ASAHP, 1. abbreviation for *American Society of Allied Health Professionals*. 2. abbreviation for *Association of Schools of Allied Health Professionals*.

ASAP, abbreviation for *as soon as possible*.

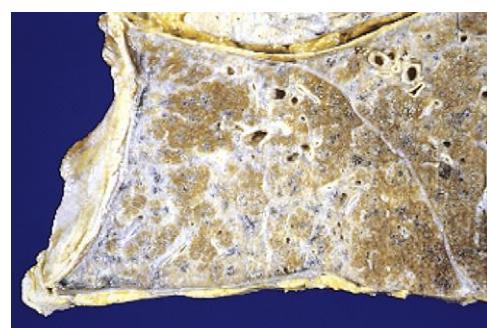
asbestos /as'bətəs/ [Gk, *asbestos*, unquenchable], a group of fibrous impure magnesium silicate minerals. Inhalation of the fibers can lead to pulmonary fibrosis if the fibers accumulate in terminal bronchioles. Continued exposure to asbestos fibers can result in lung cancer.

asbestos body, a structure found in the lungs of patients with asbestosis, consisting of an asbestos fiber engulfed by a macrophage or of a mass of asbestos spicules coated with calcium, iron salts, and other substances.



Asbestosis body (Silverberg et al, 2006)

asbestosis [Gk, *asbestos*, inextinguishable, *osis*, condition], a chronic lung disease caused by the inhalation of asbestos fibers that results in the development of alveolar, interstitial, and pleural fibrosis. Asbestos miners and workers are most frequently affected, but the disease sometimes occurs in other people who have been exposed to asbestos building materials. Chest x-ray films show the characteristic small linear opacities distributed throughout the lungs. The disease is progressive: Shortness of breath develops eventually into respiratory failure. Cigarette smoking and continuous exposure to asbestos aggravate the condition. Fatal mesothelial tumors sometimes occur. There is no treatment. See also **chronic obstructive pulmonary disease**, **inorganic dust**.



Asbestosis (Kumar et al, 2007)

Artificial hearts

Pump type	Pump method	Ventricular support	Power & controller
Extra-corporeal			
Biomedicus	Centrifugal device—impeller inside cone that creates vortex Can rotate to 5000 rpm Maximum pump flow rate 10L/min	Right ventricle/left ventricle/biventricular ECMO (extracorporeal membrane oxygenation)	External motor and power console Internal battery, 45 min
Abiomed's BVS 5000	A pneumatic drive console Can operate one or two blood pumps independently	Right ventricle/left ventricle/biventricular	External power and control console
Para-corporeal			
Thoratec VAD System	Blood flows to the VAD through an atrial or ventricular cannula Sensor detects the VAD is full of blood and ejects blood from pump into the aorta (left side) or pulmonary artery (right side)	Right ventricle/left ventricle/biventricular	<p><i>Dual Drive Console:</i> Two independent and identical modules that provide alternating pulses of air pressure and vacuum to provide pulsatile flow</p> <p><i>TLC-II Mobility Cart:</i> Single driver unit: Univentricular Biventricular 4 rechargeable batteries</p> <p><i>TLC Docking Station:</i> Serves as a home base for portable driver Downloads data Allows for pump parameters to be changed Battery charger</p>
Implantable			
Novacor, Heartmate	Passive filling of the pump Aortic valve does not open Pump output depends on flow from the right side Can track the natural heart rhythm	Left ventricular device only	<p>External microprocessor-based electronic controller powered by an AC external home unit as well as primary and secondary batteries</p> <p>Life-threatening alarm systems cannot be muted</p> <p>Can run in either auto or fixed rate mode</p> <p>Battery charger</p>

Courtesy Colleen Becker RN, MSN, CCRN, and Kathy Sue Rowland, RN, BS Educ, Barnes-Jewish Hospital.

ASC, abbreviation for **altered state of consciousness**.

ascariasis /as'kərī'əsɪs/ [Gk, *askaris*, intestinal worm, *osis*, condition], the most common parasitic infection in the world, caused by a parasitic worm, *Ascaris lumbricoides*, that migrates through the lungs in its larval stage. The eggs are passed in human feces, contaminating the soil and allowing transmission to the mouths of others through

hands, water, or food. After hatching in the small intestine, the larvae travel through the wall of the intestine and are carried by the lymphatics and blood to the lungs. Early respiratory symptoms of coughing, wheezing, hemoptysis, and fever are caused by the passage through the respiratory tract. The larvae are swallowed; they mature in the jejunum, where they release eggs; and the cycle is repeated.

Uses	Pump, console placement	Problems/issues
Cardiopulmonary bypass short term (≤ 5 days of circulatory support) Postcardiotomy cardiogenic shock Bridge to transplant	External	Can be used on newborns-adults Nonpulsatile blood flow (kidneys, brain, endocardium require pulsatility to remain viable) Anticoagulation Needs intensive bedside management—nursing/perfusion Emergency hand-crank pump No CPR; can defibrillate Patient on total bedrest Anticoagulation Infection control
Only FDA-approved device for all patients with potentially reversible heart failure ≤ 10 days Bridge to transplant Possible weaning from device as heart recovers	External	Pulsatile flow (kidneys, brain, endocardium require pulsatility to remain viable) Managed at bedside; requires bedside specialty nursing care Emergency foot pump CPR and defibrillation possible Bedrest, semi-Fowler's—surgeon preference Anticoagulation Infection control
Used to support total or partial circulatory assistance Possible wean from Thoratec to a less invasive device (i.e., IABP) Bridge to transplant	External	Pulsatile flow (kidneys, brain, endocardium require pulsatility to remain viable) Portable console Small, battery-powered unit allows mobility Patient can leave hospital for less acute facility near patient's home Non-critical care personnel and family can be trained to care for basic functions and troubleshooting Do not use povidone-iodine ointment for dressing Emergency hand pump Exposure to ketoacetones can destroy LVAD external housing—patient, family and health care personnel must be strongly cautioned against use (printed signs in room) Defibrillation possible Anticoagulation Infection control
Bridge to transplant Bridge to recovery Chronic or "end stage" alternative therapy	Pump inside body with percutaneous lead cable tunneled to exit site (usually above the right iliac crest)	Pulsatile flow (kidneys, brain, endocardium require pulsatility to remain viable) Patient size a consideration for type of device that can be implanted Must have good right-sided heart Heartmate: no CPR and defibrillation with restrictions Novacor: CPR and defibrillation can be performed Possible infection of the drive line site Patient can be mobile and at home but with 24-hr supervision with noncritical personnel Emergency hand pump Novacor external equipment somewhat heavier (approximately 10 lbs) than Heartmate Abdominal scarring/previous surgeries may prevent implantation MRI is contraindicated Anticoagulation Infection control

Intestinal infection may result in abdominal cramps and obstruction. In children infection may cause stunted growth; migration of the adult worms into a child's liver, gallbladder, or peritoneal cavity may cause death. The infective eggs are readily identified in the feces. Piperazine citrate, pyrantel pamoate, mebendazole, and albendazole are effective treatments. The disease can be prevented by

educating people, especially children, about good hygiene such as handwashing.

Ascaris /as'kərɪs/, a genus of nematode worms; large parasitic intestinal roundworms, such as *Ascaris lumbricoides*, a cause of ascariasis, found throughout temperate and tropic regions. They can infect the intestines of humans and swine. **ascaris**, a nematode of the genus *Ascaris*.

ascending aorta /əs'en'ding/ [L, *ascendere*, to climb], one of the four main sections of the aorta, giving rise to the right and left coronary arteries, continuing as the arch of the aorta. See also **arch of the aorta**.

ascending colon, the segment of the colon that extends up the cecum in the lower right side of the colic fissure to the abdomen to the transverse colon at the hepatic flexure on the right side.

ascending current. See **centripetal current**.

ascending neuritis [L, *ascendere*, to rise; Gk, *neuron*, nerve, *itis*, inflammation], a nerve inflammation that begins on the periphery and moves upward along a nerve trunk.

ascending neuropathy, a disease of the nervous system that begins at a lower place in the body and spreads upward.

ascending paralysis, a condition in which there is successive flaccid paralysis of the legs, then the trunk and arms, and finally the muscles of respiration. Causes include poliomyelitis, Guillain-Barré syndrome, and exposure to toxic chemicals, for example, botulinum toxin.

ascending pharyngeal artery, one of the smallest arteries that branch from the external carotid artery, deep in the neck. It supplies various organs and muscles of the head, such as the tympanic cavity, the longus capitis, and the longus colli. It divides into five branches: the pharyngeal, palatine, prevertebral, inferior tympanic, and posterior meningeal.

ascending poliomyelitis [L, *ascendere*, to rise; Gk, *polios*, gray, *myelos*, marrow, *itis*, inflammation], poliomyelitis that begins in the legs and spreads upward to involve the trunk and respiratory muscles. See also **ascending paralysis**.

ascending pyelonephritis, pyelonephritis caused by a urinary tract infection that has spread up the ureter into the kidney.

ascending testis, a previously documented scrotal testicle that later ascends into an extrascrotal position.

ascending tract. See **afferent tract**.

ascending urography. See **urography**.

asceticism /ə'set'isizm/ [Gk, *askein*, to exercise], (in psychiatry) a defense mechanism that involves repudiation of all instinctual impulses. The concept is derived from the religious doctrine that material things are evil and only spiritual things are good.

Ascher's syndrome /äsh'ərz/ [Karl Wolfgang Ascher, Czech-born American ophthalmologist, 1887–1971], relaxation of the skin of the eyelid and redundancy of the mucous membrane and submucous tissue of the upper lip in goiter.

Aschoff bodies [Karl A.L. Aschoff, German pathologist, 1866–1942; AS, *bodig*], tiny rounded or spindle-shaped nodules containing multinucleated giant cells, fibroblasts, and basophilic cells. They are found in joints, tendons, the pleura, and the cardiovascular system of rheumatic fever patients.



Ascites (Butcher, 2004)

ascites /əsītēz/ [Gk, *askos*, bag], an abnormal intraperitoneal accumulation of a fluid containing large amounts of protein and electrolytes. Ascites may be detectable when more than 500 mL of fluid has accumulated. The condition may be accompanied by general abdominal swelling, hemodilution, edema, or a decrease in urinary output. Identification of ascites is made through palpation, percussion, and auscultation. Ascites is a complication, for example, of cirrhosis, congestive heart failure, nephrosis, malignant neoplastic disease, peritonitis, or various fungal and parasitic diseases. It is treated with dietary therapy and diuretic drugs; abdominal paracentesis may be performed to relieve pain and improve respiratory and visceral function by relieving the pressure of the accumulated fluid. A peritoneovenous shunt may be surgically inserted to drain the ascites via a tube from the peritoneal cavity to the superior vena cava. See also **paracentesis**.

—**ascitic**, adj.

ascites adiposus. See **chylous ascites**.

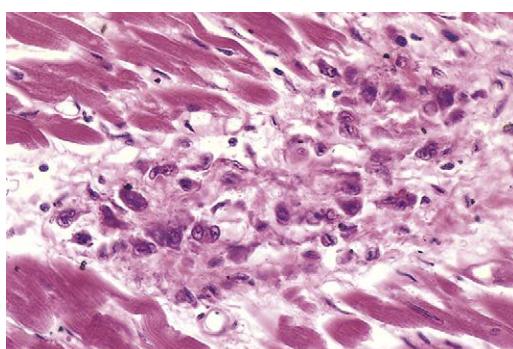
ascites praecox/prē'koks/ [Gk, *askos* + L, premature], an abnormal accumulation of fluid within the peritoneal cavity before the generalized edema associated with pericarditis. See also **ascites**.

ascitic fluid /əsīt'ik/ [Gk, *askos*, bag], a watery fluid containing albumin, glucose, and electrolytes that accumulates in the peritoneal cavity in association with certain diseases, such as liver disease or congestive heart failure. The fluid occurs as leakage from the veins and lymphatics into extra-vascular spaces.

ASCO, abbreviation for *American Society of Clinical Oncology*.

ascorbemia /as'kōrbē'mēə/ [Gk, *a*, not; AS, *scurf*, scurvy; Gk, *haima*, blood], the presence of ascorbic acid in the blood in amounts greater than normal, usually reflecting only an excess of ascorbic acid intake. The condition is usually due to the use of ascorbic acid (vitamin C) supplements.

ascorbic acid /əskōr'bik/ [Gk, *a*, not; AS, *scurf*, scurvy], a water-soluble, white crystalline vitamin present in citrus fruits, tomatoes, berries, potatoes, and fresh green and leafy vegetables, including broccoli, brussels sprouts, collards, turnip greens, parsley, sweet bell peppers, and cabbage. It is essential for the formation of collagen and fibrous tissue for normal intercellular matrices in teeth, bone, cartilage, connective tissue, and skin, and for the structural integrity of capillary walls. It also aids in fighting bacterial infections and interacts with other nutrients. Signs of deficiency are bleeding gums, tendency to bruise, swollen or painful



Aschoff bodies (Kumar et al., 2007)

joints, nosebleeds, anemia, lowered resistance to infections, and slow healing of wounds and fractures. Severe deficiency results in scurvy. A large excess of ascorbic acid may cause a burning sensation during urination, diarrhea, skin rash, and nausea and may disturb the absorption and metabolism of cyanocobalamin. Results of tests for glycosuria, uric acid, and iron may be inaccurate when the patient is receiving large amounts of the vitamin. Also called **antiscorbutic vitamin, vitamin C**. See also **ascorbemia, infantile scurvy, scurvy**.

ascorburia /as'kôrbyôr'ë-ə/ [Gk, *a*, not; AS, *scurf*, scurvy; Gk, *ouron*, urine], the presence of ascorbic acid in the urine in amounts greater than normal. It usually reflects only an excess ascorbic acid intake, generally caused by the use of ascorbic acid supplements.

ascribed role /əskribd'/, an assigned role in society, based on age, sex, or other factors about which the individual has no choice. See also **assumed role**.

ASD, abbreviation for **atrial septal defect**.

-ase, suffix used in naming enzymes; acts on the substance named in the word root (that precedes the suffix): *lipase, protease*.

Asendin, a trademark for a tricyclic antidepressant (**amoxapine**).

asepsis /āsep'sis/ [Gk, *a*, *sepsis*, not decay], 1. the absence of germs. 2. **medical asepsis**, procedures used to reduce the number of microorganisms and prevent their spread. Examples include handwashing and "no touch" dressing technique. 3. **surgical asepsis**, procedures used to eliminate any microorganisms; sterile technique. An example is sterilization of surgical instruments. —**aseptic**, adj.

aseptic. See also **asepsis**.

aseptic-antiseptic, both aseptic and antiseptic.

aseptic body image, an awareness by operating room personnel of body, hair, makeup, clothing, jewelry, and placement with regard for maintenance of a sterile environment. The body image also includes an awareness of changing proximities between sterile and contaminated areas as a field becomes progressively contaminated.

aseptic bone necrosis, a type of bone and joint damage that may occur in people who repeatedly breathe compressed air, as in diving or tunneling occupations. The condition apparently results from occlusion of small arteries in the bone by nitrogen bubbles, followed by infarction of bone tissue. It may also occur in patients taking corticosteroids. The condition may be asymptomatic or, if joint surfaces are involved, marked by severe pain and joint collapse. It may also be associated with an injury to the joint. It typically occurs in the femoral head. Also known as avascular necrosis (AVN). See also **coagulation necrosis**.

aseptic fever, a fever not associated with infection. Mechanical trauma, as in a crushing injury, can cause fever even when no pathogenic microorganism is present. Although the exact mechanism is not understood, fever in such cases is believed to result from the breakdown of leukocytes or the absorption of avascular tissue.

aseptic gauze, any gauze that is free of microorganisms (sterile).

aseptic meningitis, an inflammation of the meninges that is caused by one of a number of viruses, including coxsackie viruses and echoviruses (which account for about half the cases), nonparalytic polioviruses, and mumps, or may be drug induced, such as with high-dose IV immunoglobulin. Viral meningitis is especially common in children during the late summer and early fall. In about one third of the cases no pathogen can be demonstrated, but analysis of cerebrospinal fluid reveals increased numbers of white blood cells,

usually lymphocytes; normal glucose concentration; slightly elevated protein levels; and no bacteria. Symptoms vary, depending on the causative agent and may include fever, headache, stiff neck and back, nausea, and skin rash. No specific treatment is available. Supportive therapy is directed to maintaining hydration and controlling fever. Complete recovery, without complication or residual effect, is usual. See also **viral meningitis**.

aseptic necrosis [Gk, *a*, *sepsis*, without decay, *nekros*, dead, *osis*, condition], cystic and sclerotic degenerative changes in tissues. A condition in which poor blood supply to an area of bone leads to bone death. It may follow an injury in the absence of infection. See also **avascular necrosis, osteonecrosis**.

aseptic peritonitis [Gk, *a*, *sepsis*, without decay, *peri*, near, *teinein*, to stretch, *itis*, inflammation], peritonitis in which inflammation of the peritoneum is caused by chemicals, radiation, or injury, rather than by an infectious agent.

aseptic surgery [Gk, *a*, *sepsis*, without decay, *cheirourgos*, surgeon], the prevention of contamination during surgical procedures.

aseptic technique, any health care procedure in which added precautions, such as use of sterile gloves and instruments, are used to prevent contamination of a person, object, or area by microorganisms.

Asepto syringe, a trademark for a large bulb-fitted, blunt-tipped syringe used primarily for irrigating wounds.

asexual /āsek'shōō-əl/ [Gk, *a*, not; L, *sexus*, male or female], 1. not sexual. 2. pertaining to an organism that has no sexual organs. 3. pertaining to a process that is not sexual. —**asexuality**, n.

asexual dwarf, an adult dwarf whose genital organs are underdeveloped.

asexual generation. See **asexual reproduction**.

asexuality. See **asexual**.

asexualization /āsek'shōō-əlīzā'shōn/, the process of making one incapable of reproduction. Sterilization of an individual or animal by castration, vasectomy, removal of the ovaries, or use of chemicals.

asexual reproduction, any type of reproduction that occurs without the union of male and female gametes, such as fission, budding, sporulation, or parthenogenesis. Also called **asexual generation, direct generation, nonsexual generation**. Compare **sexual reproduction**.

ASHA, abbreviation for **American Speech, Language, and Hearing Association**.

ASHD, abbreviation for **arteriosclerotic heart disease**.

Asherman's syndrome, secondary amenorrhea in a hormonally normal woman, caused by obliteration of the endometrial cavity by adhesions that form as a result of curettage, infection, or uterine ablation.

asialorrhea. See **hyposalivation**.

Asian flu. See **influenza**.

asiderosis /ā'sidērō'sis/, an iron deficiency and a cause of anemia.

ASIP, abbreviation for **American Society for Investigative Pathology**.

-asis, suffix meaning an 'action, process, or result of': *metabasis, oxydasis*.

Ask-Upmark kidney, a hypoplastic kidney with fewer lobules than usual and fissures on its surface; most affected persons have severe hypertension, sometimes with hypertensive encephalopathy and retinopathy. The condition may be either congenital or a result of vesicoureteral reflux with pyelonephritis.

ASL, abbreviation for **American Sign Language**.

ASLT, abbreviation for **antistreptolysin-O test**.

ASMT, abbreviation for *American Society for Medical Technology*.

Asn., abbreviation for the amino acid **asparagine**.

ASO, abbreviation for **antistreptolysin-O test**.

asocial /āsō'shəl/ [Gk, *a*, without; L, *socius*, companion], withdrawn or disengaged from normal contacts with other individuals.

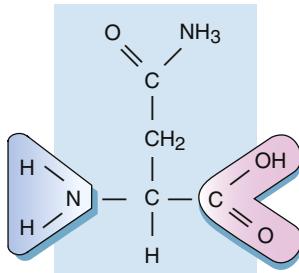
asoma /āsō'mə/ [Gk, *a*, not, *soma*, body], a fetus with an incomplete trunk and head.

ASOT, abbreviation for **antistreptolysin-O test**.

ASPN, abbreviation for *American Society of PeriAnesthesia Nurses*.

asparaginase /aspar'əjinās/ [Gk, *asparagos*, asparagus], an enzyme that catalyzes the hydrolysis of asparagine to asparaginic acid and ammonia. Asparaginase is used as a chemotherapeutic agent in the treatment of acute lymphoblastic leukemia and lymphosarcoma.

asparagine (Asn) /aspar'əjin/, a nonessential amino acid found in many food and body proteins. It is easily hydrolyzed to aspartic acid and has diuretic properties. See also **amino acid, protein**.



Chemical structure of asparagine

aspartame /aspär'tām, as'pōr-tām/, a white, almost odorless crystalline powder that is used as an artificial sweetener. It is formed by binding the amino acids of phenylalanine and aspartic acid. Approximately 180 times as sweet as sucrose, it is used mostly to sweeten cold or uncooked foods. Unprotected aspartame tends to lose its sweetness in the presence of heat, moisture, and alkaline media. Excessive use of this nonnutritive sweetener should be avoided by patients with phenylketonuria (PKU) because the substance hydrolyzes to form aspartate and phenylalanine.

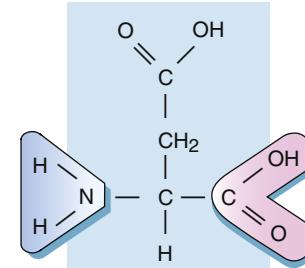
aspartate aminotransferase (AST) /aspär'tāt/, an enzyme normally present in body serum and in certain body tissues, especially those of the heart and liver. This enzyme affects the intermolecular transfer of an amino group from aspartic acid to alpha-ketoglutaric acid, forming glutamic acid and oxaloacetic acid. The reaction is reversible. The enzyme is released into the serum because of tissue injury and thus may increase as a result of myocardial infarction and liver damage. Normal findings for adults are 8 to 20 U/L or 5 to 40 IU/L. Previously called *glutamic-oxaloacetic transaminase*, **serum glutamic oxaloacetic transaminase (SGOT)**. Compare **alanine aminotransferase**.

aspartate aminotransferase (AST) test, a blood test used in the evaluation of suspected coronary occlusive heart disease or hepatocellular diseases. AST is one of several enzymes tested in the cardiac enzyme series to help diagnose myocardial infarction. Formerly called **glutamic oxaloacetic transaminase**.

aspartate kinase, an enzyme that catalyzes the transfer of a phosphate group from adenosine triphosphate to aspartate to produce phosphoaspartate.

aspartate transaminase. See **aspartate aminotransferase**.

aspartic acid (Asp) /aspär'tik/, a nonessential amino acid present in sugar cane, beet molasses, and breakdown products of many proteins. Pure aspartic acid is a water-soluble, colorless crystalline substance. Aspartic acid is interconvertible with oxaloacetic acid from the citric acid cycle. Aspartic acid is used in culture media, dietary supplements, detergents, fungicides, and germicides. Also called **aminosuccinic acid**. See also **amino acid, protein**.



Chemical structure of aspartic acid

aspastic /āspäst'ik/, not characterized by spasms.

aspect [L, *aspectus*, a look], the appearance, look, facing, or fronting of a person or object.

Asperger's syndrome /ās'pär-görz/ [Hans Asperger, Austrian psychiatrist, 20th century], a pervasive developmental disorder similar to autistic disorder, characterized by severe impairment of social interactions and by restricted interests and behaviors, but lacking the delays in development of language, cognitive function, and self-help skills that additionally define autistic disorder. It may be equivalent to a high-functioning form of autistic disorder.

aspergillie acid /as'pōrjil'ik/, an antibiotic substance derived from *Aspergillus flavus*, an aflatoxin-producing mold found on corn, grain, and peanuts. See also **aflatoxins**.

aspergillosis /as'pōrjilō'sis/ [L, *aspergere*, to sprinkle; Gk, *osis*, condition], a relatively uncommon infection, growth, or allergic response caused by inhalation of a fungus of the genus *Aspergillus* that can cause inflammatory, granulomatous lesions on or in any organ. There are several forms of aspergillosis. Pulmonary aspergillosis is divided into two types: allergic bronchopulmonary aspergillosis (an allergic reaction to the fungus that develops with asthma) and invasive aspergillosis (a serious infection with pneumonia, most often seen in immunosuppressed people already weakened by some other disorder). Topical fungicides can be used on the skin; amphotericin B is used to treat systemic aspergillosis, especially if it has spread to the lungs. Surgery may be required to remove an aspergilloma, a fungus ball that develops if bleeding occurs in an area of the lung previously diseased. The prognosis, as for most systemic fungal infections, is poor. Compare **allergic bronchopulmonary aspergillosis**.

Aspergillus /as'pōrjil'əs/ [L, *aspergere*, to sprinkle], a genus of fungi that is a common contaminant in the laboratory and a cause of nosocomial infection. The fungus has hyphae and spores, lives in the soil, is ubiquitous, and proliferates rapidly. Inhalation of the spores of the two pathogenic species, *A. fumigatus* and *A. flavus*, is common, but infection is rare. However, allergic reaction to the spores can also occur.

aspermatic /ā'spurmat'ik/, unable to secrete or ejaculate semen.

aspermatogenesis /āspur'matōjēn'əsɪs/, failure of the testes to produce spermatozoa.

aspermia /āspur'mē-ə/ [Gk, *a*, *sperma*, without seed], lack of formation or ejaculation of semen.

asphyxia /asfik'sē-ə/ [Gk, *a* + *sphyxis*, without pulse], severe hypoxia leading to hypoxemia and hypercapnia, loss of consciousness, and, if not corrected, death. Some of the more common causes of asphyxia are drowning, electrical shock, aspiration of vomitus, lodging of a foreign body in the respiratory tract, inhalation of toxic gas or smoke, and poisoning. Oxygen and artificial ventilation are promptly administered to prevent damage to the brain. The underlying cause is then treated. See also **artificial ventilation**.

—**asphyxiate**, *v.*; **asphyxiated**, *adj.*

asphyxia livida /liv'ēdə/, an abnormal condition in which a newborn's skin is cyanotic, the pulse is weak and slow, and the reflexes are slow or absent. Also called **blue asphyxia**.

asphyxia neonatorum, a condition in which a newborn does not breathe spontaneously. The asphyxia may develop before or during labor or immediately after delivery. The condition may involve placental or neonatal pulmonary dysfunction with underlying causes that can include abruptio placenta, umbilical compression, or uterine tetany. Other factors include congenital defects, such as a diaphragmatic hernia, or adverse effects of anesthetics or analgesics administered to the mother. Immediate resuscitation is required to prevent death or brain damage. Also called **perinatal asphyxia**. See also **asphyxia livida**, **asphyxia pallida**.

asphyxia pallida /pal'ēdə/, an abnormal condition in which a newborn appears pale and limp, shows signs of apnea, and suffers from bradycardia as marked by a heartbeat of 80 beats/min or less.

asphyxiate /asfik'sē-āt/ [Gk, *a* + *sphyxis*, without pulse], to induce an inability to breathe. Causes may include circulatory congestion, chemical poisoning, electrical shock, or physical suffocation.

asphyxiated. See **asphyxia**.

asphyxiating thoracic dysplasia. See **Jeune's syndrome**.

asphyxiation [Gk, *a* + *sphyxis*, without pulse], a state of asphyxia or inability to breathe.

aspirant /as'pirānt/, the fluid, gas, or solid particles that are withdrawn from the body by aspiration methods.

aspirant maneuver, a procedure used in making x-ray films of the laryngopharyngeal area. The patient exhales completely, then slowly inhales while making a harsh, high-pitched sound. The maneuver adducts the vocal cords so the ventricle of the larynx is clearly visible in the x-ray.

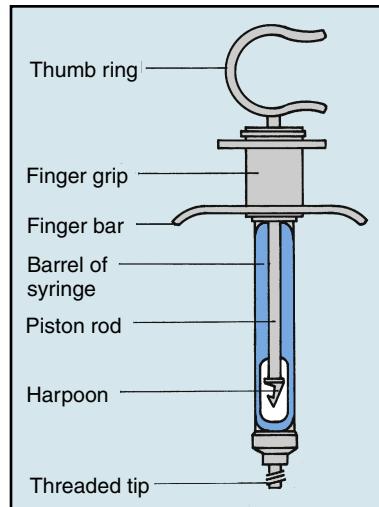
aspire /-rāt/ [L, *aspireare*, to breathe upon], 1. to withdraw fluid or air from a cavity. The process is usually aided by use of a syringe or a suction device. See **paracentesis**, **thoracentesis**. 2. when all or part of a food/liquid bolus enters the airway. 3. (in phonetics) a release of air.

aspirating needle /-rā'ting/, a long hollow needle used to remove fluid from a cavity, vessel, or structure of the body.

aspirating syringe, a hypodermic syringe used to inject local anesthetics, especially in dentistry. Before administration of a local anesthetic at the desired location, the operator applies negative pressure checking for blood in the syringe. This ensures that the anesthetic solution will not be deposited in a blood vessel.

aspiration /as'pirāshən/, 1. drawing in or out by suction. 2. the act of withdrawing a fluid, such as mucus or serum, from the body by a suction device. See also **aspiration pneumonia**. —**aspire**, *n.* 3. the misdirection of food or liquid into the trachea and airway during swallowing.

aspiration biopsy, the removal of living tissue, for microscopic examination, by suction through a fine needle attached to a syringe. The procedure is used primarily to obtain cells



Aspirating syringe (Bird and Robinson, 2005)

from a lesion containing fluid or when fluid is formed in a serous cavity. See also **cytology**, **needle biopsy**.

aspiration biopsy cytology (ABC), a microscopic examination of cells obtained directly from living body tissue by aspiration through a fine needle. It is used primarily as a diagnostic procedure, generally as a technique for detecting nuclear and cytoplasmic changes in cancerous tissue. Compare **exfoliative cytology**.

aspiration drug abuse, the inhalation of a liquid, solid, or gaseous chemical into the respiratory system for nontherapeutic purposes. Examples include glue and solvent sniffing and cocaine snorting.

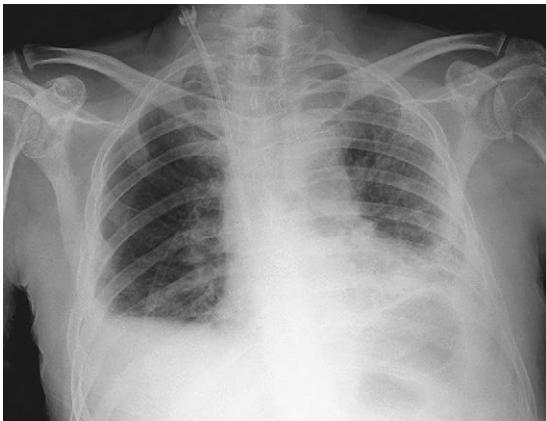
aspiration of vomitus, the inhalation of regurgitated gastric contents into the pulmonary system. See also **aspiration pneumonia**.

aspiration pneumonia, an inflammatory condition of the lungs and bronchi caused by inhaling foreign material or acidic vomitus. Compare **bronchopneumonia**. See also **pneumonia**.

■ **OBSERVATIONS:** Aspiration pneumonia may occur during anesthesia or recovery from anesthesia or during a seizure of acute alcoholic intoxication or other condition characterized by vomiting and a decreased level of consciousness. Patients receiving enteral feeding therapies may also be at risk.

■ **INTERVENTIONS:** Treatment consists of prompt suctioning of the bronchi and administration of 100% oxygen. Continued artificial ventilation may be required. As long as oxygen is administered, frequent analyses of blood gas levels may be indicated. Corticosteroids may be given to diminish inflammation. The sputum is cultured regularly, and any bacterial infection thus diagnosed is treated with an appropriate antibiotic.

■ **NURSING CONSIDERATIONS:** The pulse rate and quality of respirations, level of consciousness, and skin color are carefully monitored. An oral airway is left in place until the patient's condition improves, and secretions are removed by suction as necessary. Infection and respiratory failure are frequent complications. Aspiration pneumonia may be prevented by positioning unconscious patients with the head elevated 15 to 30 degrees and turned to the side and by paying careful attention to the maintenance of enteral feeding therapy and an adequate airway.



Aspiration pneumonia (Kowalczyk and Mace, 2009/Courtesy Ohio State University Medical Center)

aspiration precautions, a nursing intervention from the Nursing Interventions Classification (NIC) defined as prevention or minimization of risk factors in the patient at risk for aspiration. See also **Nursing Interventions Classification**.

aspiration prevention, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as personal actions to prevent the passage of fluid and solid particles into the lung. See also **Nursing Outcomes Classification**.

aspirator /as'pirātər/ [L, *aspirare*, to breathe upon], any instrument that removes a substance from a body cavity by suction, such as a bulb syringe, piston pump, or hypodermic syringe.

aspirin (ASA) /as'pirin/, an analgesic, antipyretic, and anti-inflammatory. Also called **acetylsalicylic acid**.

■ **INDICATIONS:** It is prescribed to reduce fever and relieve pain and inflammation.

■ **CONTRAINDICATIONS:** Bleeding disorders, peptic ulcer, pregnancy, concomitant use of anticoagulants, or known hypersensitivity to salicylates prohibit its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are ulcers, occult bleeding, clotting defects, renal toxicities, tinnitus, dyspepsia, and allergic reactions. Reye's syndrome has been associated with aspirin use in children.

aspirin poisoning. See **salicylate poisoning**.

asplenia /asplē'nē-ə/ [Gk, *a*, without, *spleen*], absence of a spleen. The condition may be congenital or result from surgical removal.

ASRT, abbreviation for *American Society of Radiologic Technologists*.

Assam fever. See **kala-azar**.

assault /əsōlt'/ [L, *assilirere*, to leap upon], 1. an unlawful act that places another person, without that person's consent, in fear of immediate bodily harm or battery. 2. the act of committing an assault. 3. to threaten a person with bodily harm or injury. See **battery**.

assay /asā', as'ā/ [Fr, *essayer*, to try], the analysis of the purity, effectiveness, or concentration of drugs and other biological substances, including laboratory and clinical observations.

assertion training. See **assertive training**.

assertiveness /əsur'tivnəs/, behavior directed toward claiming one's rights without denying those of others.

assertiveness training, a nursing intervention from the Nursing Interventions Classification (NIC) defined as assistance with the effective expression of feelings, needs, and ideas while respecting the rights of others. See also **Nursing Interventions Classification**.

assertive training /əsur'tiv/ [L, *asserere*, to join to oneself], a therapeutic technique to help individuals become more self-assertive and self-confident in interpersonal relationships. It focuses on the direct, honest statement of feelings and beliefs, both positive and negative. The technique is learned by role playing in a therapeutic setting, usually in a group, followed by practice in actual situations. Also called **assertion training**.

assess, to examine for the purpose of evaluation and/or quality improvement. See **assessment**.

assessing /əses'ing/ [L, *assidere*, to sit beside], (in five-step nursing process) a category of nursing behavior that includes the gathering, verifying, and communicating of information related to the client. The nurse collects information from verbal interactions with the patient, the patient's family, and significant others; examines standard data sources for information; systematically checks for symptoms and signs; determines the patient's ability to perform self-care activities; assesses the patient's environment; and identifies reactions of the staff (including the nurse who is performing the assessment) to the patient and to the patient's family and significant others. To verify the data, the nurse confirms the observations and perceptions by gathering additional information; discusses the decisions made by other members of the staff, when indicated; and personally evaluates and checks the patient's condition. The nurse reports the information that has been gathered and verified. Although assessing is the first of the five steps of the nursing process, preceding analyzing, in practice it is integral to effective nursing practice at all steps of the process. See also **analyzing, evaluating, implementing, nursing process, planning**.

assessment /əses'mənt/ [L, *assidere*, to sit beside], 1. (in medicine and nursing) an evaluation or appraisal of a condition. 2. the process of making such an evaluation. 3. (in a problem-oriented medical record) an examiner's evaluation of the disease or condition based on the patient's subjective report of the symptoms and course of the illness or condition and the examiner's objective findings, including data obtained through laboratory tests, physical examination, medical history, and information reported by family members and other health care team members. See also **nursing assessment, problem-oriented medical record**. —**assess**, v.

assessment of the aging patient, an evaluation of the changes characteristic of advancing years exhibited by an elderly person.

■ **METHOD:** The patient is measured, weighed, examined, observed, and questioned about physical, functional, and behavioral changes; height normally diminishes 1 to 2 inches with aging, and weight steadily decreases in men over 65 years of age but increases in women. The skin is examined for dryness, wrinkles, sagging, thinning over the back of the hands, areas of vitiligo, keratoses, warts, changes in appearance of freckles and moles, skin tags, and senile telangiectases, and the hair for depigmentation, lack of luster, and thinning or loss on the scalp and in the axillary and pubic areas. Observations are made of enlargement of the nose and ears relative to face size, dryness of the eyes, opacity of the lens, discoloration of the sclera and iris, an opaque ring near the edge of the cornea (arcus senilis), decreased pupil size, and diminished peripheral vision. Tests are performed to determine whether there is hearing loss, especially of high-frequency tones; decreased tidal volume; diminished peripheral perfusion; exertional dyspnea; or deviation of the trachea, especially if scoliosis is present. Examination may reveal gum recession, loss of teeth and taste perception, and diminished salivation. It may also find decreased resting heart rate and cardiac output, increased diastolic and

systolic blood pressure, and an easily palpable arterial pulse. The elderly patient may show decreased muscle mass, osteoarthritic joints, Heberden's or Bouchard's nodes at finger joints, contracture of lateral fingers, osteoporosis, a broad-based stance, and slow voluntary movements. The sense of position, of smell, and of touch and the sensitivity to heat and cold may be diminished, and deep tendon reflexes may be decreased. Signs of aging that may be found in women are pendulous, flaccid breasts; vaginal narrowing and shortening and diminished lubrication, causing painful coitus; and effects of long-term estrogen therapy. Signs of aging in men include decrease in the size and firmness of the testes and in the amount and viscosity of seminal fluid, increased diameter of the penis, and prostatic hypertrophy; libido and a sense of sexual satisfaction usually do not diminish.

■ **NURSING CONSIDERATIONS:** The health care provider faces the patient during the evaluation, establishes eye contact, repeats questions if necessary, avoids shouting, and addresses the person by name. If the patient's visual perception and tactile sense are diminished, the nurse uses color contrasts and items of marked textural differences in the assessment.

■ **OUTCOME CRITERIA:** Aging does not progress at a uniform rate, and its effects may vary widely from one individual to the next, but, in many cases, changes once considered normal in elderly patients are disease processes that may respond to treatment. A thorough physical assessment distinguishes the effects of pathological disorders from those of aging and elucidates the care needed by the patient.

assimilate /əsim'əlāt/ [L, *assimilare*, to make alike], **1.** to absorb nutritive substances from the digestive tract to the circulatory system and convert them into living tissues. **2.** to incorporate components of a new culture into existing values.

assimilation [L, *assimilare*, to make alike], **1.** the process of incorporating nutritive material into living tissue. The end stage of the nutrition process, after digestion and absorption or simultaneous with absorption. **2.** (in psychology) the incorporation of new experiences into a person's pattern of consciousness. Compare **appception**. **3.** (in sociology) the process in which a person or a group of people of a different ethnic background become absorbed into a new culture. —**assimilate**, v.

assist-control mode, a system of mechanical ventilation in which the patient is allowed to initiate breathing, although the ventilator delivers a set volume with each breath. The ventilator can also be programmed to initiate breathing if the patient's breathing slows beyond a certain point or stops altogether.

assisted breech [L, *assistere*, to stand by], an obstetric

operation in which a baby being born feet or buttocks first is permitted to deliver spontaneously as far as its umbilicus and is then extracted. Also called **partial breech extraction**.

Compare **breech extraction**.

assisted circulation [L, *assistere*, to stand, *circulare*, to go around], a method of treating patients with severe circulatory deficiencies by introducing a mechanical pumping system to aid the blood flow.

assisted conception, assisted reproductive technology.

assisted death, a form of euthanasia in which an individual expressing a wish to die prematurely is helped to accomplish that goal by another person, either by counseling and/or by providing a poison or other lethal instrument. The assisted death may be regarded as a homicide or suicide by local authorities, and the person giving assistance may be held responsible for the death. See also **assisted suicide**.

assisted embryo hatching/embryo hatching, a micro-manipulation technique.

assisted reproductive technology, the manipulation of egg and sperm in treating infertility. The processes include the

administration of drugs to induce ovulation, fertilization, gamete intrafallopian transfer, zygote intrafallopian transfer, and cryopreservation of gametes. See also **in vitro fertilization**.

assisted respiration, the use of mechanical devices to facilitate a normal breathing pattern.

assisted suicide, a form of euthanasia in which a person wishes to commit suicide but feels unable to perform the act alone because of a physical disability or lack of knowledge about the most effective means. An individual who assists a suicide victim in accomplishing that goal may or may not be held responsible for the death, depending on local laws. The participation of health professionals, especially physicians, in assisted suicide is controversial. See also **euthanasia, suicide**.

assisted ventilation, the use of mechanical or other devices to help maintain respiration, usually by delivering air or oxygen under positive pressure. See also **IPPB, respiration**.

assistive listening device (ALD), a device other than a hearing aid that provides auditory assistance to those with hearing impairment or a central auditory processing disorder. See also **hearing aid**.

assistive technology, a concept that facilitates the process by which an individual with disabilities acquires or sustains independence.

assistive technology device, equipment that assists individuals with disabilities in performing occupations or daily activities; used on a daily basis.

assistive technology service (AT service), any service that directly assists an individual with disabilities in the selection, acquisition, and/or use of an assistive technology device.

assistive technology team (AT team), a group of professionals who make recommendations and carry out the training of an individual with a disability using an assistive technology device.

associated antagonist, one of a pair of muscles or group of muscles that pull in opposite directions but whose combined action results in moving a part in one direction.

Associate Degree in Nursing (ADN) /əsō'shē-āt/ [L, *associare*, to unite], an academic degree awarded on satisfactory completion of a 2-year course of study, usually at a community or junior college. The recipient is eligible to take the national licensing examination to become a registered nurse. An associate degree in nursing is not available in Canada or countries in the European Union.

associated movement, a movement of parts that act together, as of the eyes. See also **contralateral reflexes, synkinesis**.

associate nurse, (in primary nursing, United States) a nurse who is responsible for implementing a primary nurse's care plans.

association /əsō'shē-ā'shēn/ [L, *associare*, to unite], **1.** a connection, union, joining, or combination of things. **2.** (in psychology) the connection of remembered feelings, emotions, sensations, thoughts, or perceptions with particular persons, things, or ideas. Kinds of association are **association of ideas, clang association, controlled association, dream association, and free association**.

association area, any part of the cerebral cortex involved in the integration of sensory information. Also called **association cortex**.

Association for Professionals in Infection Control and Epidemiology (APIC), a multidisciplinary, international professional organization of health care professionals working in the field of infection control.

Association for the Advancement of Medical Instrumentation (AAMI), a nonprofit organization involved in advancing understanding, safety, and efficacy of medical instrumentation and technology.

Association for the Education of Children with Medical Needs (AECMN), an interdisciplinary organization that provides professional support to individuals involved in the education of children with chronic illnesses and medical challenges.

associationist model of learning /əsə'shē-ə'shənist/, a theory that defines learning as behavioral change that is a result of reinforced practice. If the response has not been reinforced repeatedly, an alternative behavior may be substituted.

Association of Faculties of Medicine of Canada (AFMC), a Canadian organization of the deans and faculty members of the nation's 17 medical schools. It is concerned with all aspects of the education of physicians and acts as the liaison between the member schools and other professional organizations and governmental agencies. The official languages of the AFMC are English and French.

association of ideas, a mental connection established between similar or simultaneously occurring ideas, feelings, or perceptions.

Association of periOperative Registered Nurses (AORN), the professional organization of perioperative nurses, which supports registered nurses in achieving optimal outcomes for patients undergoing operative or other invasive procedures. Formerly called the **Association of Operating Room Nurses**, which accounts for the abbreviation.

Association of Surgical Technologists (AST), established in 1969 as the national professional organization for surgical technologists and surgical assistants. See also **Accreditation Review Committee on Education in Surgical Technology**.

Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN), an organization of nurses working in obstetrics and gynecology in the United States. Formerly called **Nurses Association of the American College of Obstetrics and Gynecology (NAACOG)**.

association paralysis, a motor neuron disease in which atrophy, weakness, and fasciculation of the tongue, facial muscles, pharynx, and larynx occur. Also called **progressive bulbar paralysis**.

association test, a technique used in psychiatric diagnosis and in educational and psychological evaluation in which a person is asked to respond to a stimulus word with the first word that comes to mind. The time taken to respond and the associations offered are compared with pretested responses and are classified and enumerated for diagnostic significance. Also called **word association test**. See also **free association**.

associative looseness /əsō'shativ/. See **loose association**.

associative play, a form of play in which a group of children participate in similar or identical activities without formal organization, group direction, group interaction, or a definite goal. The children may borrow or lend toys or pieces of play equipment, and they may imitate others in the group, but each child acts independently, as on a playground or among a group riding tricycles or bicycles. Compare **cooperative play**. See also **parallel play, solitary play**.

assortive mating, the matching of males and females for reproduction in a manner that avoids random selection.

assumed role /əsōōmd/, a role in life that an individual usually selects or achieves by choice, such as one's role in marriage or employment. See also **ascribed role**.

AST, 1. abbreviation for **aspartate aminotransferase**. 2. abbreviation for **angiotensin sensitivity test**. 3. abbreviation for **Association of Surgical Technologists**.

-ast, combining form designating an antiasthmatic or antiallergic drug not acting primarily as an antihistamine.

astasia /astā'zhə/ [Gk, *a, stasis*, not stand, *a, basis*, not step], a lack of motor coordination marked by an inability to stand or sit without assistance.

astasia-abasia, a form of ataxia in which the patient is unable to stand or walk because of lack of motor coordination but is able to carry out natural leg movements when sitting or lying down. This term is often used to describe psychogenic gait disturbances. Also called **abasia-astasia**.

astatine (At) [Gk, *astasis*, unsteady], a very unstable, radioactive element that occurs naturally in tiny amounts. Its atomic number is 85; the atomic mass of its longest lived isotope is 210.

asteatosis /as'tē-ətō'sis/ [Gk, *a, stear*, without tallow, *osis*, condition], a dry skin condition caused by a deficiency of sebaceous gland secretions. Scales and fissures may result from the dryness. The condition is treated with creams and ointments that replace the missing skin oils.



Asteatotic eczema (du Vivier, 1993)

-aster, suffix meaning 'star-shaped': *diaster, oleaster*.

astereognosis /əstirē-og-nō'sis/ [Gk, *a, stereos*, not solid, *gnosis*, knowledge], an inability to identify objects or shapes by touch.

asterixis /as'tōrik'sis/ [Gk, *a, sterixis*, not fixed position], a hand-flapping tremor, often accompanying metabolic disorders. The tremor is usually induced by extending the arm and dorsiflexing the wrist. Asterixis is seen frequently in hepatic encephalopathy. Also called **flapping tremor, liver flap**.

asteroid body [Gk, *aster*, star, *eidos*, form], an irregular star-shaped structure that develops in the giant cells in certain diseases, including sarcoidosis, actinomycosis, and nocardiosis. Asteroid bodies may be seen rarely in the cytoplasm of tumor giant cells, as well as in fibrin-rich exudates.

asthenia /asthē'nē-ə/ [Gk, *a + sthenos*, without strength], 1. the lack or loss of strength or energy; weakness; debility. 2. (in psychiatry) lack of dynamic force in the personality. Kinds of asthenia include **myalgic asthenia** and **neurocirculatory asthenia**. See also **adynamia**. —**asthenic**, adj.

-asthenia, suffix meaning '(condition of) debility, loss of strength and energy, depleted vitality': *neurasthenia, phlebosthenia*.

asthenic /asthēn'ik/ [Gk, *a + sthenos*, without strength], pertaining to a condition of weakness, feebleness, or loss of vitality.

asthenic fever. See **adynamic fever**.

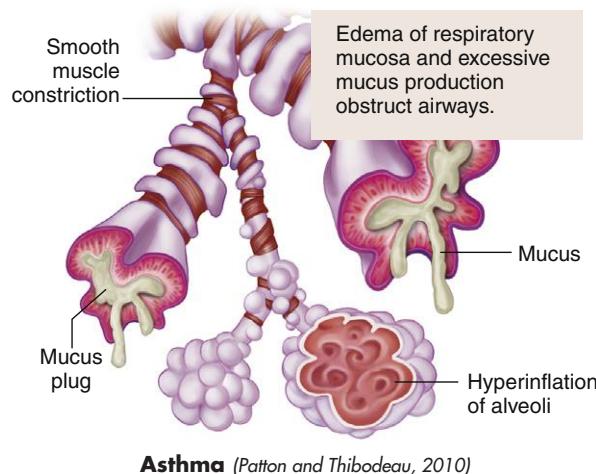
asthenic habitus [Gk, *a + sthenos*, without strength; L, *habere*, to have], a body structure characterized by a slender build with long limbs, an angular profile, and prominent muscles or bones. Compare **athletic habitus, pyknic**. See also **ectomorph**.

asthenic personality, a personality characterized by low energy, lack of enthusiasm, depressed emotions, and oversensitivity to physical and emotional strain. A person who

has this kind of personality may be easily fatigued and self-pitying and may place the burden of physical and emotional difficulties on others.

asthenopia /as'thēnō'pē-ə/ [Gk, *a*, *sthenos* + *ops*, eye], a condition in which the eyes tire easily because of weakness of the ocular or ciliary muscles. Symptoms include pain in or around the eyes, headache, dimness of vision, dizziness, and slight nausea.

asthma /az'mə/ [Gk, panting], a respiratory disorder characterized by recurring episodes of paroxysmal dyspnea, wheezing on expiration and/or inspiration caused by constriction of the bronchi, coughing, and viscous mucoid bronchial secretions. The episodes may be precipitated by inhalation of allergens or pollutants, infection, cold air, vigorous exercise, or emotional stress. Treatment may include elimination of the causative agent, hyposensitization, aerosol or oral bronchodilators, beta-adrenergic drugs, methylxanthines, cromolyn, leukotriene inhibitors, and short- or long-term use of corticosteroids. Sedatives and cough suppressants may be contraindicated. Also called **bronchial asthma**. See also **allergic asthma**, **asthma in children**, **exercise-induced asthma**, **intrinsic asthma**, **organic dust**, **status asthmaticus**.



Asthma (Patton and Thibodeau, 2010)

-asthma, suffix meaning '(condition of) labored breathing.'

asthma crystal. See **Charcot-Leyden crystal**.

asthma in children, a chronic inflammatory disorder of the airways in which many cells, including mast cells and eosinophils, play a part. The inflammation causes symptoms associated with obstructive airflow and characterized by recurring attacks of paroxysmal dyspnea, wheezing, prolonged expiration, and an irritative cough that is a common, chronic illness in childhood. Onset usually occurs between 3 and 8 years of age. Asthmatic attacks are caused by constriction of the large and small airways, resulting from bronchial smooth muscle spasm, edema or inflammation of the bronchial wall, or excessive production of mucus. It is a complex disorder involving biochemical, immunological, infectious, endocrinological, and psychological factors. Asthma attacks in the past were classified as either extrinsic or intrinsic. Most extrinsic attacks in children were associated with an allergic hypersensitivity to a foreign substance, such as airborne pollen, mold, house dust, certain foods, animal hair and skin, feathers, insects, smoke, and various chemicals or drugs. In infants, especially those with a family history of allergic reactions, food allergy is a common precipitating factor. Intrinsic attacks were associated with physical stress resulting from fatigue or exercise, exposure to cold air, or

psychological stress; this system of classification has been abandoned because many of the triggering factors overlap.

■ **OBSERVATIONS:** Asthma in children is often confused with acute middle and lower respiratory tract infections, congenital stridor, obstruction of the bronchi or trachea, bronchial or tracheal compression, and cystic fibrosis. The diagnosis is generally determined by observation during a physical examination, medical history, and familial allergic disease. Laboratory tests and x-ray studies may eliminate identification of other diseases. A diagnostic feature is the presence of large numbers of eosinophils and Charcot-Leyden crystals in the sputum. Pulmonary function tests are valuable for assessing the degree of airway obstruction and the volume of gas exchange. Asthmatic episodes vary greatly in frequency, duration, and degree of symptoms. They may range from occasional periods of wheezing, mild coughing, and slight dyspnea to severe attacks that can lead to total airway obstruction and respiratory tract failure (*status asthmaticus*). An attack may begin gradually or abruptly and is often preceded by an upper respiratory infection. Typically an attack begins with signs of air hunger; yawning; sighing; shortness of breath; paroxysms of wheezing; and a hacking, nonproductive cough. As secretions increase, the expiratory phase becomes prolonged. A large quantity of thick, tenacious mucoid sputum is produced as the attack subsides. The child appears apprehensive, speaks in a panting manner, and may assume a bent-over position to facilitate breathing. The prolonged expiratory phase is not as noticeable in infants and young children. In severe spasm or obstruction the respirations become shallow and irregular. A sudden increase in the rate of respiration, repeated hacking, and nonproductive coughing are indicative of lack of air movement with impending ventilatory failure and asphyxia.

■ **INTERVENTIONS:** Management of asthma in children is based on four stages of severity: intermittent, mild persistent, moderate persistent, and severe persistent. Clinical features of intermittent asthma include symptoms that occur less than once a week, brief exacerbations from a few hours to a few days, nighttime episodes that occur less than twice a month, and normal lung function between exacerbations. Mild persistent classification is characterized by symptoms that occur more than once a week but less than once a day and nighttime episodes that occur more often than twice a month. Moderate persistent severity is manifested by daily symptoms with exacerbations that affect daily activities and sleep. Severe persistent asthma is characterized by continuous symptoms that limit physical activities, frequent exacerbations, and nighttime symptoms. Medications are classified as relievers and controllers to relieve symptoms immediately. A reliever may be a short-acting medication, such as a beta₂ agonist that serves as symptomatic therapy. Controllers such as inhaled and systemic corticosteroids and sustained-release theophylline are prescribed on a regular basis to keep symptoms under control. In the long-term management of asthma in children, an effort is made to control the symptoms with the minimum amount of medication, increasing the number and frequency of medications as symptoms increase and reducing the level as symptoms are brought under control. The major drugs used to relieve bronchospasm are the beta-adrenergic agents, including the relievers isoproterenol, metaproterenol, terbutaline, and salbutamol; the methylxanthines, including theophylline and aminophylline; corticosteroids; expectorants; and antibiotics for cases in which infection is the triggering mechanism. Rarely an acute attack does not respond to any of these measures, resulting in *status asthmaticus*. Hospitalization is required. The child is usually in a state of dehydration and acidosis with hypoxia and hypercapnia. Management consists of administration of IV fluids; humidified oxygen given by mask

or cannula; administration of sodium bicarbonate or tromethamine to keep pH at acceptable levels; and use of bronchodilators to alleviate bronchospasm and of antibiotics to reduce risk of infection. Mild, intermittent episodes of asthma are treated with bronchodilators in aerosol sprays, which provide quick relief and are effective in controlling an attack; oral administration is preferred for younger children. Those with persistent chronic asthma receive daily oral doses of a bronchodilator, often theophylline, usually in combination with an expectorant and corticosteroids. Bronchospasm induced by exercise can be treated prophylactically with cromolyn sodium, a controller that inhibits the release of histamine in the lungs. Long-range management and treatment include physical training and exercises to induce physical and mental relaxation, improve posture, strengthen respiratory musculature, and develop better breathing patterns. Hyposensitization is recommended when an allergen is known and cannot be avoided. Prognosis varies considerably; many children lose their symptoms at puberty but the symptoms reappear in their 40s. The prognosis depends on the number and severity of symptoms, emotional factors, and the family history of allergy.

■ **NURSING CONSIDERATIONS:** The primary focus of nursing care for children with acute asthma is to relieve symptoms of respiratory distress by initiating IV infusion and oxygen therapy, correcting acidosis, and administering bronchodilators and corticosteroids. The nurse implements measures to promote physical comfort, induce rest, and reduce fatigue and anxiety. An especially important role is reassuring the child and parents about procedures, equipment, and prognosis. The nurse also plays a significant role in the long-term support of children with chronic asthma, primarily in teaching the child and parents about the disease and how to cope with the condition. Once an allergen is determined, the home environment must be modified to reduce or eliminate contact with possible causative agents, including presence of warm-blooded pets, tobacco smoke, cockroaches, dust mites, and fungi. The nurse teaches the child and parents how to use prescribed medications, especially nebulizers and aerosol devices, how to detect early signs of an attack so that it can be controlled with medication, how to determine any adverse effects of the drugs, especially the dangers of overuse, and how to implement physical exercise and play activities as therapeutic measures, especially those that promote proper breathing techniques. Further educational support for families of children with asthma may be obtained from organizations such as the Asthma and Allergy Foundation of America and the American Lung Association.

asthma management, a nursing intervention from the Nursing Interventions Classification (NIC) defined as identification, treatment, and prevention of reactions to inflammation/constriction in the airway passages. See also **Nursing Interventions Classification**.

asthma self-management, a nursing outcome from the Nursing Outcomes Classification (NOC) defined as personal actions to prevent or reverse an inflammatory condition resulting in bronchial constriction of the airways. See also **Nursing Outcomes Classification**.

-asthmatic, suffix meaning 'asthma, its symptoms, or its treatment': *antiasthmatic, postasthmatic*.

asthmatic breathing /azmat'ik/ [Gk, *asthma*, panting; AS, *braeth*], breathing marked by prolonged wheezing on exhalation caused by spasmodic contractions of the bronchi.

asthmatic bronchitis, inflammation and swelling of the mucous membrane of the bronchi in a patient with asthma.

asthmatic cough [Gk, *asthma* + AS, *cohetan*], a wheezing cough accompanied by signs of breathing difficulty.

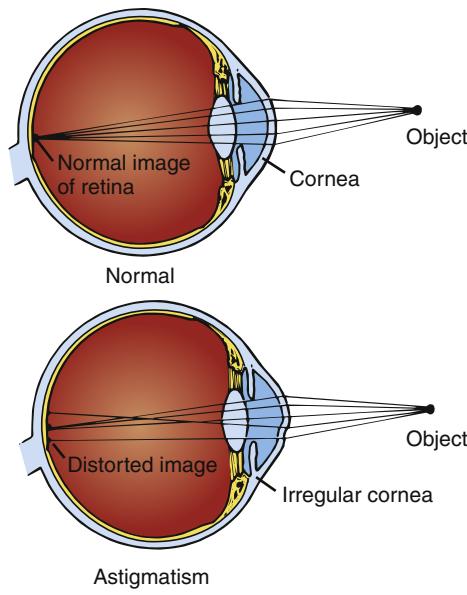
asthmatic eosinophilia, a form of eosinophilic pneumonia, characterized by allergic bronchospasm, cough, fever, and

expectoration of bronchial casts containing eosinophils and fungal mycelia. It is a result of hypersensitivity to the fungus *Aspergillus fumigatus* or *Candida albicans*. The condition usually occurs in the fourth or fifth decade of life and is twice as common in women as in men. Untreated, it may result in pleural effusion, pericarditis, ascites, encephalitis, hepatomegaly, and respiratory failure. Treatment is similar to that for asthma and includes administration of corticosteroids and antibiotics. Desensitization to the allergen is not usually effective. See also **allergic asthma, eosinophilic pneumonia**.

astigmatic /as'tigmat'ik/ [Gk, *a, stigma*, without point], pertaining to astigmatism, or an error of refraction in which a ray of light is not sharply focused on the retinal tissue but is spread over a more diffuse area. Astigmatism is due to differences in curvature in the various meridians of the cornea and lens of the eye.

astigmatic keratotomy, an operation in which the cornea is relaxed by a series of transverse incisions to flatten the meridian in which the incisions are made and increase the curvature in the meridian 90° away. It is done for the correction of astigmatism.

astigmatism /əstig'matiz'əm/ [Gk, *a, stigma*, without point], an abnormal condition of the eye in which the light rays cannot be focused clearly in a point on the retina because the spheric curve of the cornea or lens is not equal in all meridians. Vision is typically blurred; if uncorrected, it often results in visual discomfort or asthenopia. The person cannot accommodate to correct the problem. The condition usually may be corrected with contact lenses or with eyeglasses ground to neutralize the condition.



Astigmatism

-astine, combining form designating an antihistaminic.

Aston-Patterning, a bodywork technique to accommodate asymmetry and individual uniqueness of the human body to match human function to the environment. Appropriate alignment of the body provides the human structure with its most optimal support and adds the dynamic quality that facilitates motion. Alignment can be threatened by accidents, illnesses, or surgeries, and movement patterns are taught to include the asymmetric pattern rather than allowing a tension pattern to develop. This technique has been applied to fitness training and ergonomic product design.

astragalus¹, an herb that is grown throughout the world, most commonly in China, Japan, and Korea.

■ **USES:** This herb is used as an immune stimulant; for viral infections, HIV/AIDS, cancer, and vascular disorders; to improve circulation; and to lower blood pressure. In most instances, there is insufficient reliable information regarding its effectiveness.

■ **CONTRAINdications:** Astragalus should not be used during pregnancy and lactation, in children, or during acute infections.

astragalus². See **talus**.

astringent /ə'strɪŋjənt/ [Gk, *astrīngere*, to tighten], 1. a substance that causes contraction of tissues on application, usually used locally. 2. having the quality of an astringent. —*astringency*, n.

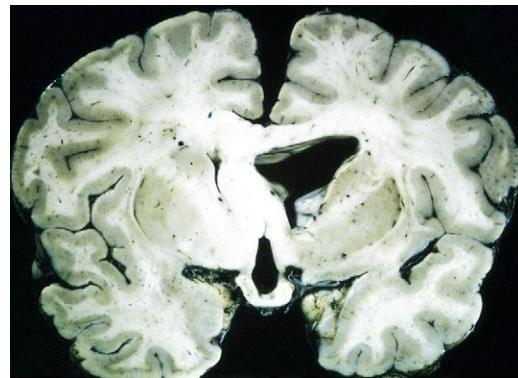
astringent bath, a bath in which alum, tannic acid, or another astringent is added to the water. An astringent contracts body tissue and, therefore, stops capillary bleeding or loosens secretions.

astringent douche, a cleansing stream containing substances such as alum that cause the mucous membrane of the vagina to constrict.

astro-, prefix meaning ‘star or star-shaped’: *astroblastoma*, *astrocytoma*.

astroblastoma pl. *astroblastomas*, *astroblastomata* /as'trōblastō'ma/ [Gk, *aster*, star, *blastos*, germ, *oma*, tumor], a malignant neoplasm of the brain and spinal cord. Cells of an astroblastoma lie around blood vessels or around connective tissue septa.

astrocyte /as'trōsīt/ [Gk, *aster* + *kytos*, cell], a large, star-shaped neuroglial cell with many branches, found in certain tissues of the nervous system.



Astrocytoma (Kumar et al, 2007)

abscesses, certain brain neoplasms, and encephalomalacia. Astrocytosis represents a reparative process and in some cases may be diffuse in a large region.

astrophobia. See **tonitrophobia**.

asymmetric /ə'simet'rik, as'ime'trik/ [Gk, *a* + *symmetria*, without proportion], 1. (of the body or parts of the body) unequal in size or shape. 2. different in placement or arrangement about an axis. Also called **asymmetrical**. Compare **symmetric**. —**asymmetry** /əsim'itrē, asim'/, n.

asymmetric tonic neck reflex. See **tonic neck reflex**.

asymmetry. See **asymmetric**.

asymphytous /ə'simfə-təs/ [Gk, *a*, *sympysis*, not a growing together], separate or distinct; not grown together.

asymptomatic /əsimptōmat'ik/ [Gk, *a*, without, *symptoma*, that which happens], without symptoms.

asymptomatic neurosyphilis [Gk, *a*, without, *symptoma*, *neuron*, nerve; Fr, *syphilitide*], a form of neurosyphilis characterized by pathological changes in the cerebrospinal fluid, although there are no symptoms of nervous system damage. Asymptomatic neurosyphilis may occur many years before actual nervous system damage is noticeable.

asynchronous /āsing'krōnəs/ [Gk, *a* + *synchronos*, not simultaneous], (of an event or device) a computer operation in one command performed in response to a signal that the previous command has been completed. One operation is completed before the next is initiated.

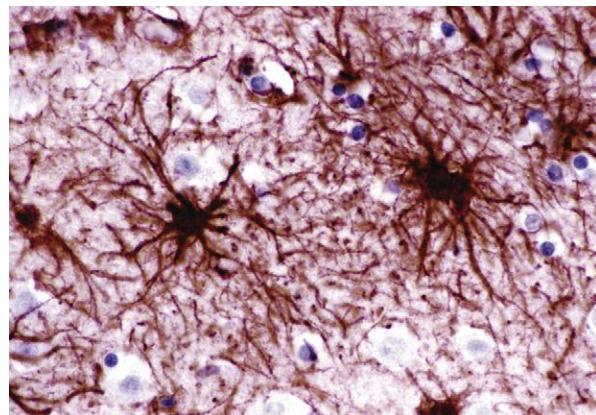
asynclitism /āsing'klitiz'əm/ [Gk, *a* + *syn*, not together, *kleisis*, to lean], presentation of a parietal aspect of the fetal head to the maternal pelvic inlet in labor. The sagittal suture is parallel to the transverse diameter of the pelvis but anterior or posterior to it. In normal labor, the fetal head usually engages with some degree of asynclitism. **Anterior asynclitism**, in which the anterior part presents, is called Nägele obliquity. **Posterior asynclitism** is called Litzmann obliquity. See also **cardinal movements of labor, engagement**.

asyndesis /əsin'dēsɪs/, a mental disorder marked by an inability to assemble related ideas or thoughts into one coherent concept.

asynergy /āsin'ərjē/ [Gk, *a* + *syn* + *ergein*, to work], 1. a condition characterized by faulty coordination among groups of organs or muscles that normally function harmoniously. 2. the state of muscle antagonism found in cerebellar disease. See also **ataxia, cerebellum**.

asyntaxis /ā'sintak'sēə/ [Gk, *a* + *syn* + *taxis*, arrangement], any interference with the orderly sequence of growth and differentiation of the fetus during embryonic development, resulting in one or more congenital anomalies. A kind of asyntaxis is **asyntaxis dorsalis**. See also **developmental anomaly**.

asyntaxis dorsalis, failure of the neural tube to close during embryonic development. See also **neural tube defect**.



Astrocyte (Kumar, Abbas, and Fausto, 2009/Courtesy Dr. J. Corbo, Brigham and Women's Hospital)

astrocytoma pl. *astrocytomas*, *astrocytomata* /as'trōsītō'ma/ [Gk, *aster* + *kytos* + *oma*], a primary tumor of the brain composed of astrocytes and characterized by slow growth, cyst formation, invasion of surrounding structures, and often development of a highly malignant glioblastoma, within the tumor mass. Complete surgical resection of an astrocytoma may be possible early in the development of the tumor. It may also be treated with radiation therapy postoperatively or if surgery is not possible. Also called **astrocytic glioma**.

astrocytosis /as'trōsītō'sis/ [Gk, *aster* + *kytos* + *osis*, condition], an increase in the number of neuroglial cells with fibrous or protoplasmic processes frequently observed in an irregular area adjacent to degenerative lesions, such as

asystole /ā'sis-tōlē/ [Gk, *a* + *systole*, not contraction], a life-threatening cardiac condition characterized by the absence of electrical and mechanical activity in the heart. Clinical signs include apnea and lack of pulse. Without cardiac monitoring, asystole cannot be distinguished from ventricular fibrillation.

—*asystolic*, adj.

asystolic cardiac rhythm /ā'sistōl'ik/, an electrocardiographic recording that appears as a flat line, indicating cardiac arrest.

At, symbol for the element **astatine**.

at-. See **ad-**.

atabrine stomatitis, an abnormal oral condition characterized by skin changes that resemble those of lichen planus. It may be associated with the use of atabrine hydrochloride (a preparation of the antimalarial drug quinacrine). Compare **arsenic stomatitis**, **bismuth stomatitis**.

ataractic /at'ärak'tik/ [Gk, *ataraktos*, quiet], pertaining to a drug or other agent that has a tranquilizing or sedating effect.

Atarax, trademark for an antianxiety, antiemetic, and anticholinergic (**hydrOXYzine hydrochloride**).

ataxia /at'ärak'sē-ə/ [Gk, *a*, not, *tarakos*, disturbed], a vague state of mental tranquility.

atavism /at'äviz'əm/ [L, *atavus*, ancestor], the appearance in an individual of traits or characteristics more like those of a grandparent or earlier ancestor than of the parents. Atavistic data may offer clues to an examining physician of genetic or familial health factors. —*atavistic*, adj.

atavistic [L, *atavus*, ancestor], pertaining to the tendency for a genetic trait of a remote ancestor to be expressed in an individual as a result of a chance recombination of genes.

ataxia /ätak'sē-ə/ [Gk, without order], an impaired ability to coordinate movement, often characterized by a staggering gait and postural imbalance. It can have many causes, including lesions in the spinal cord or cerebellum that may be the sequelae of birth trauma, congenital disorder, infection, degenerative disorder, neoplasm, toxic substance stroke, or head injury. See also **hereditary ataxia**. —*ataxial*, *ataxic*, adj.

ataxiaphasia /-fā'zhə/ [Gk, *ataxia*, without order], a state in which a person is unable to connect words properly as needed to form a sentence.

ataxia-telangiectasia syndrome /tə-lan'jē-ektā'zhə/ [Gk, *ataxia* + *telos*, end, *angeion*, vessel, *ektasis*, expansion], a rare genetic disorder involving deficits in immunoglobulin metabolism that is transmitted as an autosomal-recessive trait. It usually begins in infancy with impaired motor control (ataxia) and progresses slowly with increasing cerebellar degeneration to severe disability. Permanent dilation of superficial blood vessels (telangiectasias) are most prominent

on skin surfaces exposed to the sun: ears, face, and bulbar conjunctiva. Intellectual ability seems to stop at the level of 10 years of age in many cases. Affected individuals are susceptible to upper and lower respiratory infections and have an increased risk of malignancy, especially lymphoma. Also called **Louis-Bar syndrome**.

ataxic. See **ataxia**.

ataxic aphasia. See **motor aphasia**.

ataxic breathing, a type of breathing associated with a lesion in the medullary respiratory center and characterized by a series of inspirations and expirations. See also **Biot's respiration**.

ataxic dysarthria, abnormal speech characterized by slurring and discoordination of sounds because of neuromuscular dysfunction of the cerebellum. Timing range, force, and direction of speech motor movements are affected. See also **cerebellar speech**.

ataxic gait. See **cerebellar gait**.

ataxic speech. See **cerebellar speech**.

atazanavir, an antiretroviral agent.

■ **INDICATION:** This drug is used to treat HIV-1 infection in combination with other antiretroviral agents.

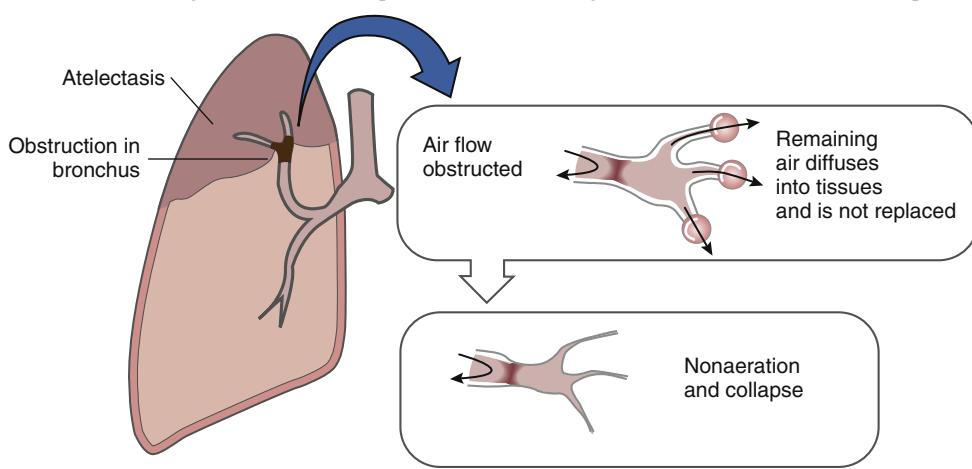
■ **CONTRAINDICATION:** Known hypersensitivity to this drug prohibits its use.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include headache, depression, dizziness, insomnia, peripheral neurological symptoms, fatigue, fever, arthralgia, back pain, cough, lipodystrophy, and pain. Life-threatening side effects include hepatotoxicity and Stevens-Johnson syndrome. Common side effects include diarrhea, abdominal pain, nausea, rash, and photosensitivity.

ATCC, abbreviation for **American Type Culture Collection**.

-ate, 1. suffix meaning ‘acted upon or being in a (specified) state’: *degenerate*, *enucleate*. 2. suffix meaning ‘possessing’: *caudate*, *longipedate*. 3. suffix meaning a ‘chemical compound derived from a (specified) source’: *silicate*, *opiate*. 4. suffix meaning an ‘acid compound’: *oxalate*, *phosphate*.

atelectasis /at'ilek'tōsis/ [Gk, *ateles*, incomplete, *ektasis*, expansion], an abnormal condition characterized by the collapse of alveoli, preventing the respiratory exchange of carbon dioxide and oxygen in a part of the lungs. Symptoms may include diminished breath sounds or respiratory crackles, a mediastinal shift toward the side of the collapse, fever, and increasing dyspnea. As the remaining portions of the lungs eventually hyperinflate, oxygen saturation of the blood is often nearly normal. The condition may be caused by obstruction of the major airways and bronchioles, by compression of the lung as a result of fluid or air in the pleural space, or by



Atelectasis (Gould, 2011)

pressure from a tumor outside the lung. Loss of functional lung tissue may secondarily cause increased heart rate, blood pressure, and respiratory rate. Secretions retained in the collapsed alveoli are rich in nutrients for bacterial growth, a condition often leading to stasis pneumonia in critically ill patients. See also **postoperative atelectasis, primary atelectasis**.

ateliosis /ətē'lē-ō'sis/ [Gk, *ateles*, incomplete, *osis*, condition], a form of dwarfism caused by the absence or destruction of eosinophil cells of the adenohypophysis. The person may appear childlike and have poorly developed muscles.

ateliotic dwarf /ətē'lē-ōt'ik/, a dwarf whose skeleton is incompletely formed as a result of the nonunion of the epiphyses and diaphyses during bone development.

atelo-, prefix meaning ‘imperfect or incomplete’: *ateloglossia, atelopodia*.

atelorachidia /ətē'lōr'ākīdē-ə/ [Gk, *ateles*, incomplete, *rhachis*, spine], a defective, incomplete formation of the spinal column. Also spelled *atelorhachidia*.

atenolol /ətēn'əlōl/, a beta₁ selective blocker.

■ **INDICATION:** It is prescribed for the treatment of hypertension.

■ **CONTRAINDICATIONS:** Sinus bradycardia, second- or third-degree atrioventricular block, cardiogenic shock, or cardiac failure prohibits its use.

■ **ADVERSE EFFECTS:** Among the more serious adverse reactions are bradycardia, dizziness, and nausea.

ATG, abbreviation for **antithymocyte globulin**.

athelia /əthē'lē-ə/ [Gk, *a*, not, *thele*, nipple], an absence of nipples.

atherectomy /əth'ērek'tōmē/, surgical removal of an atheroma (plaque) in a major artery.

atherectomy catheter, a specially designed catheter for cutting away atherosomatous plaque from the lining of an artery. A tiny metal cone at the tip of the catheter has cutting edges for loosening the plaque and has openings through which the plaque fragments can be aspirated. The catheter is positioned and monitored by fluoroscopy.

atheroembolic renal disease /əth'ērō-embol'ik/, a condition of gradual or rapid kidney failure resulting from obstruction of the renal arteries by atheromas and emboli. It is associated with atherosclerosis and hypertension and occurs most frequently in persons over 60 years of age. The patient is usually azotemic and also experiences emboli in other body areas.

atheroembolism /əth'ērō-em'bōliz'əm/, obstruction of a blood vessel by an atherosclerotic embolism originating from an atheroma in a major artery.

atherogenesis [Gk, *athere*, porridge, *oma*, tumor, *genein*, to produce], the formation of subintimal plaques in the lining of arteries. —*atherogenic, adj.*

atheroma pl. *atheromas, atheromata* /əth'ērō'mətə/ [Gk, *athere*, meal, *oma*, tumor], an abnormal mass of fat or lipids, as in a sebaceous cyst or in deposits in an arterial wall. —*atheromatous, adj.*

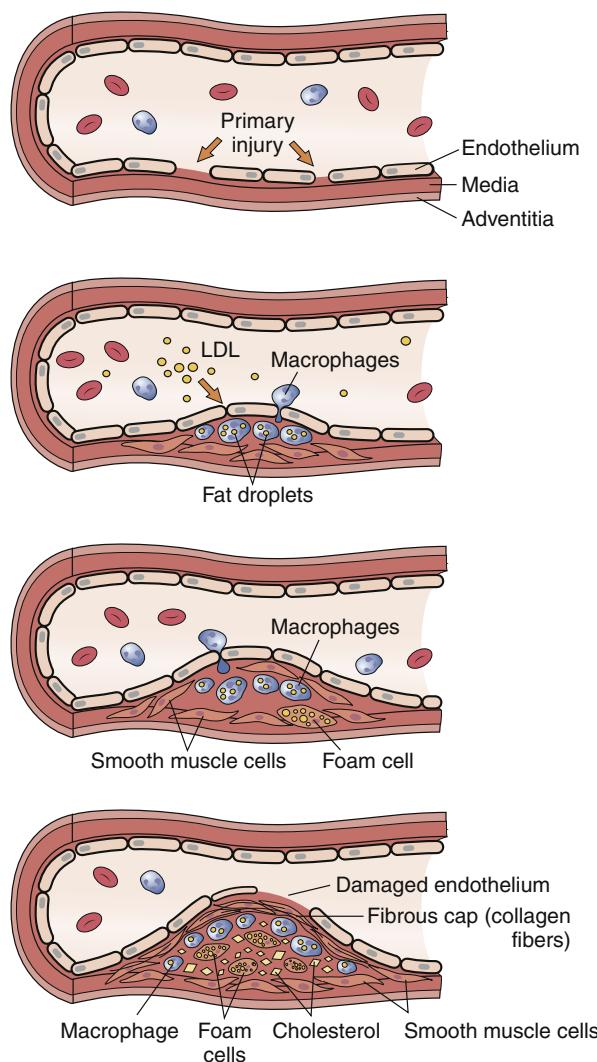
atheromatosis /əth'ērōmētō'sis/, the development of many atheromas.

atheromatous [Gk, *athere*, meal, *oma*, tumor], pertaining to atheroma.

atheromatous plaque, a yellowish raised area on the lining of an artery formed by fatty deposits indicative of atherosclerosis.

atherosclerosis /əth'ērō'sklērō'sis/ [Gk, *athere*, meal, *skeleosis*, hardening], a common disorder characterized by yellowish plaques of cholesterol, other lipids, and cellular debris in the inner layers of the walls of arteries. Atherosclerosis may be induced by injury to the arterial endothelium, proliferation of smooth muscle in vessel walls, or accumulation of lipids in hyperlipidemia. It usually occurs with aging

and is often associated with tobacco use, obesity, high homocysteine levels from eating red meat, hypertension, elevated low-density lipoprotein and depressed high-density lipoprotein levels, and diabetes mellitus. The condition begins as a fatty streak and gradually builds to a fibrous plaque or atherosomatous lesion. The vessel walls become thick, fibrotic, and calcified, and the lumen narrows, resulting in reduced blood flow to organs normally supplied by the artery. The plaque eventually creates a risk for thrombosis and is one of the major causes of coronary heart disease, angina pectoris, myocardial infarction, and other cardiac disorders. Plaque rupture is usually provoked by activation of the sympathetic nervous system, such as sudden awakening, heavy physical exertion, or anger. Antilipemic agents do not reverse atherosclerosis. Segments of arteries obstructed or severely damaged by atherosomatous lesions may be replaced by patch grafts or bypassed, as in coronary bypass surgery; the lesion may be removed from the vessel via endarterectomy; or obstructed arteries may be opened by balloon angioplasty or by the insertion of stents. A diet low in cholesterol, calories, and saturated fats, together with avoidance of smoking, stress, and a sedentary lifestyle, may help prevent the disorder. See also **arteriosclerosis**. —*atherosclerotic, adj.*



Pathogenesis of atherosclerosis (Damjanov, 2012)

atherosclerotic aneurysm /-ot'ik/ [Gk, *athere* + *skleros*, hard, *aneurysma*, an arterial widening]. See **arteriosclerotic aneurysm**.

atherothrombosis /ath'ərō'thrombō'sis/, a condition in which a thrombus originates in an atheromatous blood vessel. **athetoid** /ath'ətoid/, pertaining to athetosis, as in the involuntary, purposeless weaving motions of the body or its extremities.

athetosis /ath'ətō'sis/ [Gk, *athetos*, not fixed], slow, writhing, continuous, and involuntary movement of the extremities, as seen in some forms of cerebral palsy and in motor disorders resulting from lesions in the basal ganglia, tabes dorsalis, or other conditions.

athiaminosis /athī'minō'sis/, a condition resulting from lack of thiamine in the diet. See also **beriberi, thiamine**.

athlete's foot. See **tinea pedis**.

athlete's heart /ath'lēts/, an enlarged but otherwise normal heart of an athlete trained for endurance. It is characterized by a low heart rate, an increased pumping capacity, and a greater ability to deliver oxygen to skeletal muscles. It may sometimes be confused with left ventricular hypertrophy. Also called **athletic heart syndrome (AHS)**.

athletic habitus /athlet'ik/, a physique characterized by a well-proportioned, muscular body with broad shoulders, thick neck, deep chest, and flat abdomen. Compare **asthenic habitus, pyknic**. See also **mesomorph**.

athletic heart syndrome. See **athlete's heart**.

athletic trainer, an allied health professional who, with the consultation and supervision of attending physicians, is an integral part of the health care system associated with sports. Through both academic preparation and practical experience, the athletic trainer provides a variety of services, including injury prevention and recognition and immediate care, treatment, and rehabilitation of athletic trauma.

Ativan, a trademark for a benzodiazepine antianxiety agent (**lorazepam**).

atlantal /ətlan'təl/, pertaining to the atlas, the first cervical vertebra.

atlantoaxial /ətlan'tō-ak'sē-əl/ [Gk, *atlas*, to bear, *axis*, pivot], pertaining to the first two cervical vertebrae.

atlantooccipital joint /-oksip'i-tal/ [Gk, *atlas*, to bear; L, *ob*, against, *caput*, head], one of a pair of condyloid joints formed by the articulation of the atlas of the vertebral column with the occipital bone of the skull. It includes two articular capsules, two membranes, and two lateral ligaments. The atlantooccipital joint permits nodding and lateral movements of the head.

atlas [Gk, *atlas*, to bear; a mythical giant, compelled to uphold the world], the first cervical vertebra, articulating with the occipital bone and the axis.

ATLS, abbreviation for *advanced trauma life support*.

atm. 1. abbreviation for **atmosphere**. 2. abbreviation for **atmospheric**.

atman /āt'mān/, (in psychiatry) a concept derived from Eastern Indian philosophy that the highest value is knowledge of one's true self. The atman represents the most inward reality, the innermost spirit, and the highest controlling power of a person.

atmo-, prefix meaning 'steam or vapor': *atmolysis*, *atmotherapy*.

atmosphere (atm) /āt'mōsfir/ [Gk. *atmos*, vapor, *sphaira*, sphere], 1. the natural body of air covers the surface of the earth. It is composed of approximately 20% oxygen, 78% nitrogen, and 1% argon and other gases, including small amounts of carbon dioxide hydrogen, and ozone as well as traces of helium, krypton, neon, and xenon and varying amounts of water vapor. 2. an envelope of gas, which may or may not duplicate the natural atmosphere in chemical components. 3. a unit of gas pressure that is usually defined as

being equivalent to the average pressure of the earth's atmosphere at sea level, or about 14.7 pounds per square inch or 760 mm Hg. —**atmospheric, adj.**

atmospheric pressure /-fer'ik/, the pressure exerted by the weight of the atmosphere. The average atmospheric pressure at sea level is approximately 14.7 pounds per square inch. With increasing altitude the pressure decreases: at 30,000 feet, approximately the height of Mt. Everest, the air pressure is 4.3 pounds per square inch. Also called **barometric pressure**.

ATN, abbreviation for **acute tubular necrosis**.

atom /āt'əm/ [Gk, *atmos*, indivisible], 1. (in chemistry and physics) the smallest division of an element that exhibits all the properties and characteristics of the element. It comprises neutrons, electrons, and protons. The number of protons in the nucleus of every atom of any given element is the same and is called its atomic number. 2. nontechnical, the amount of any substance that is so small that further division is not possible. —**atomic, adj.**

atomic mass (A), the average mass, relative to an atom of carbon, of an atom of an element based on the natural isotopic mix of that element. Also called **atomic weight**. See also **atomic mass unit**.

atomic mass unit (amu) /ətōm'ik/, the mass of a neutral atom of an element, expressed as $1/12$ of the mass of the isotope carbon-12, which has a value of exactly 12. The energy equivalent of 1 amu is 931.2 MeV. The mass equivalent of 1 amu is 1.66 (10^{-24} g).

atomic number, the number of protons in the nucleus of an atom of a particular element. In a neutral atom, the atomic number equals the number of electrons. See also **atom, electron, proton**.

atomic theory [Gk, *atmos*, indivisible, *theoria*, speculation], the concept that all matter is composed of submicroscopic atoms that are in turn composed of protons, electrons, and neutrons. A chemical element is identified by the number of protons in its atoms.

atomic weight. See **atomic mass**.

atomize. See **nebulize**.

atomizer /āt'əmīzər/, a device used to reduce a liquid and eject it as a fine spray or vapor.

atomoxetine, a nonstimulant psychotherapeutic agent used to treat attention deficit hyperactivity disorder.

atonia /ātō'nē-ə/ [Gk, *a* + *tonos*, without tone], decreased or absent muscle tone. See also **atonic**.

atonic /ātōn'ik/, 1. weak. 2. lacking normal tone, as in the case of a muscle that is flaccid. 3. lacking vigor, such as an atomic ulcer, which heals slowly. —**atonyn** /āt'ōnē/, *n.*

atomic bladder. See **flaccid bladder**.

atonic constipation, constipation caused by failure of the colon to respond to the normal stimuli for evacuation, caused by loss of muscle tone. It may occur in elderly or bedridden patients or after prolonged dependence on laxatives. Also called **colon stasis, lazy colon**. See also **fecal impaction, fecalith, inactive colon, constipation**.

atonic impotence. See **impotence**.

atonicity. See **atonia**.

atony. See **atonic**.

atopic /ātōp'ik/ [Gk, *a* + *topos*, not place], pertaining to a hereditary tendency to experience immediate allergic reactions such as asthma or vasomotor rhinitis because of the presence of an antibody (atopic reagin) in the skin and sometimes the bloodstream. —**atopy** /āt'ōpē/, *n.*

atopic allergy [Gk, *a*, not, *topos*, place], a form of allergy that afflicts persons with a genetic predisposition to hypersensitivity to certain allergens. Examples include asthma, hay fever, and food allergies.

atopic asthma. See **allergic asthma**.

atopic dermatitis, an intensely pruritic, often excoriated inflammation commonly found on the face and antecubital and popliteal areas of allergy-prone (atopic) individuals. In infancy and early childhood it is called infantile eczema. Also called atopic eczema. Compare **contact dermatitis**. See also **atopic**.

■ **OBSERVATIONS:** There are no specific cutaneous signs of atopic dermatitis. The lesions seen are a result of scratching from intense itching. The constant and severe itching sets up an itch-scratch-rash-itch cycle that produces red, scaly papules, which coalesce into plaques that ooze and crust. Common sites include the hands, face, upper trunk, and flexural areas, such as bends in knees and elbows. Lesions tend to be symmetric on extremities. Evidence of recurrent conjunctivitis, herpes simplex infections, nipple dermatitis, eczema, ichthyosis, cheilitis, facial pallor or erythema, and wool or food intolerances may also be present. Diagnosis is made primarily through clinical evaluation and evidence of personal or family history. Immunofluorescence may show that elevated IgE levels and serum eosinophilia is present as cases worsen. Secondary infection is the most common complication. Chronic dermatitis, which appears on the hands or feet, can restrict function and become crippling.

■ **INTERVENTIONS:** Primary treatment for acute outbreaks includes emollient lotions to decrease dry skin; topical steroids or pimecrolimus cream (Elidel) or tacrolimus ointment to decrease inflammation; oral antihistamines or other anti-pruritics to control itching. Outbreak prevention is aimed at avoiding triggering factors, such as sudden temperature shifts, contact with irritants, foods that provoke exacerbations, stressful situations, allergens, or excessive hand washing.

■ **NURSING CONSIDERATIONS:** Nursing care is aimed at helping the individual break the itch-scratch cycle and reduce outbreaks. This includes proper use of topical medications, and instruction in ways to prevent or reduce outbreaks. Adequate rest can reduce the threshold for itching. Modest exercise in a controlled temperature environment can increase circulation. A balanced diet that avoids food triggers can strengthen skin protective functions. Hygiene is aimed at cleanliness, avoidance of drying, and maintenance of acidic pH on skin. Nails should be kept clipped to decrease abrasion from scratching. Affected individuals need to know that this is a genetically determined chronic disease with cycles of exacerbation and remission.



Atopic dermatitis (Callen et al, 2000)

atopic reagin, an antibody associated with atopy. A substance present in plasma and cerebrospinal fluid that induces flocculation in complement fixation and similar tests. See also **reagin**.

atopognosia /ātōp'əgnō'zha/ [Gk, *a*, *topos*, not place, *gnosis*, knowledge], a form of agnosia in which a person is unable to locate a tactile sensation correctly.

atopy. See **atopic**.

atorvastatin, an antihyperlipidemic.

■ **INDICATIONS:** This drug is used to lower the levels of both cholesterol and triglycerides in the plasma.

■ **CONTRAINDICATIONS:** Known hypersensitivity, pregnancy, lactation, and active liver disease prohibit the use of this drug.

■ **ADVERSE EFFECTS:** Liver dysfunction is a potentially life-threatening side effect of this drug. Other adverse effects include rash, pruritus, alopecia, dyspepsia, flatulence, pancreatitis, lens opacities, myalgia, and headache.

atoxaquone /ah-to'vah-kwōn/, an antibiotic used in treatment of mild to moderate *Pneumocystis* pneumonia and the prevention and treatment of falciparum malaria. It is administered orally.

atoxic. See **nontoxic**.

ATP, abbreviation for **adenosine triphosphate**.

ATPase, abbreviation for **adenosine triphosphatase**.

ATPD, abbreviation for **ambient temperature, ambient pressure**.

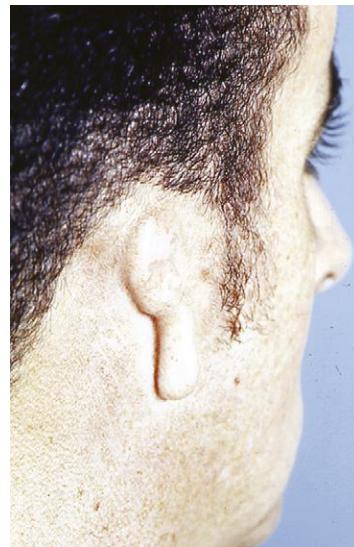
ATPS, abbreviation for **ambient temperature, ambient pressure**. See **volume ATPS**.

atracurium, an intermediate duration non-depolarizing skeletal muscle relaxant used as an adjunct to create an ideal surgical field.

atransferrinemic anemia /ā'trāfēr'īnē'mik/, an iron-transport deficiency disease characterized by a failure of iron to move from the liver or other storage sites to tissues in which erythrocytes develop. The condition may be caused by a molecular defect in transferrin, an iron-binding protein. In addition to anemia, the patient usually suffers from hemosiderosis.

atraumatic /ā'trōmat'ik/ [Gk, *a*, without, *trauma*], pertaining to therapies or therapeutic instruments and devices that are unlikely to cause tissue damage.

atresia /ātrē'zha/ [Gk, *a*, *tresis*, not perforation], the absence of a normal body opening, duct, or canal, such as of the anus, vagina, or external ear canal. —**atresic, atretic**, adj.



Atresia of the right external ear (Myers and Carrau, 2008)

-atresia, suffix meaning a ‘condition of abnormal occlusion’ or congenital absence of an opening: *gynatresia*, *urethratresia*.

atresic teratism /ət'resik/ [Gk, *a*, *tresis* + *terā*, monster], a congenital anomaly in which any of the normal openings of the body, such as the mouth, nares, anus, or vagina, fails to form.

atretic. See **atresia**.

atreto-, prefix meaning ‘closed, or lacking an opening’: *atretoblepharia*, *atretorrhinia*.

atria. See **atrium**.

atrial appendix. See **auricle**.

atrial complex, the P wave of the electrocardiogram, representing electrical activity of the atria.

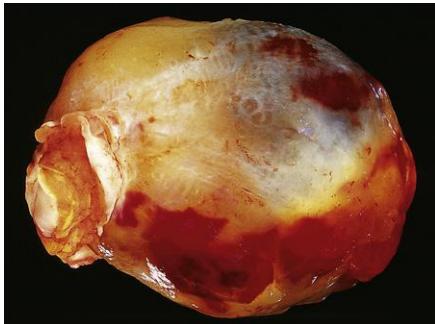
atrial extrasystole. See **premature atrial complex**.

atrial fibrillation (AF) /ə'trē-əl/, a cardiac arrhythmia characterized by disorganized electrical activity in the atria accompanied by an irregular ventricular response that is usually rapid. The atria quiver instead of pumping in an organized fashion, resulting in compromised ventricular filling and reduced stroke volume. Stasis of left atrial flow increases the risk of stroke as a result of clot formation. AF is associated with hypertension, diabetes, age, rheumatic heart disease (left atrial dilation), mitral stenosis, acute myocardial infarction, and heart surgery, or it may be idiopathic (lone AF). Treatment goals are to control the ventricular rate by creating atrioventricular block, to prevent stroke through the use of anticoagulants, and to convert to sinus rhythm. Treatment categories include paroxysmal, persistent, and chronic. AF is called controlled if ventricular response is less than 100. If ventricular response is 100 or more, it is called uncontrolled atrial fibrillation.

atrial flutter (AF), a type of atrial tachycardia characterized by contraction rates between 230/min and 380/min. Two kinds, typical and atypical, have been identified and are distinguished from each other by their rates and electrocardiographic (ECG) patterns. During typical atrial flutter the atrial rate is between 290/min and 310/min and produces “fence post” or “sawtooth” ECG waves. During atypical atrial flutter the atrial rate is higher, and the ECG waves lack the sawtooth appearance, and are often sinusoidal. For both types, ventricular contractions usually follow atrial contractions in a 1:2, 1:3, 1:4, or variable ratio. It may be cured with electrophysiological radiofrequency ablation. Compare **atrial fibrillation**.

atrial gallop. See **S₄**.

atrial myxoma, a benign, pedunculated, gelatinous tumor that originates in the interatrial septum of the heart. The tumor is characterized by palpitations, disseminated neuritis, nausea, weight loss, fatigue, dyspnea, fever, and occasional sudden loss of consciousness. It is treated by surgical removal of the tumor.



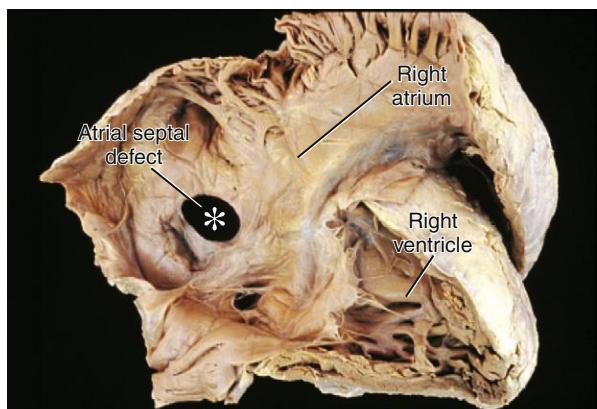
Left atrial myxoma (Fletcher, 2007)

atrial natriuretic peptide (ANP), a hormone involved in natriuresis and the regulation of renal and cardiovascular homeostasis. It is synthesized as a prohormone in the granules of the myocytes of the atrium and is released into the circulation in response to atrial dilation or increased intravascular fluid volume. It causes natriuresis, diuresis, and renal vasodilation; reduces circulating concentrations of renin, aldosterone, and antidiuretic hormone; and thereby normalizes circulating blood pressure and volume. Also called **atrial natriuretic factor**.

atrial pacing. See **pacing**.

atrial premature complex (APC). See **premature atrial complex**.

atrial septal defect (ASD), a congenital cardiac anomaly characterized by an abnormal opening between the atria. The severity of the condition depends on the size and location of the opening, which are related to the stage at which embryonic development of the septum was arrested. ASDs are classified as **ostium primum defect**, in which there is inadequate development of the endocardial cushions of the first septum of the fetal heart; **ostium secundum defect**, in which the aperture in the second septum of the fetal heart fails to close; and **sinus venosus defect**, in which the superior portion of the atrium fails to develop. ASDs increase the flow of oxygenated blood into the right side of the heart, which is usually well tolerated, since the blood is delivered under much lower pressure than in ventricular septal defect. Clinical manifestations include a characteristic harsh, scratchy systolic murmur and a fixed splitting of the second heart sound, which does not vary with respiration. X-ray films and electrocardiograms generally show right atrial and right ventricular enlargement, although definitive diagnosis is made by cardiac catheterization or echocardiogram. Closure is indicated in most cases but is usually postponed until later childhood, unless the defect is severe. Closure may be done surgically or via a percutaneous approach. See also **endocardial cushion defect**.



Atrial septal defect (Damjanov and Linder, 2000)

atrial septum [L, *atrium*, hall, *saeptum*, fence], a partition between the left and right atria of the heart.

atrial standstill, a condition of complete failure of the atria to contract. P waves are absent in all electrocardiogram surface leads, and A waves are absent in the jugular venous pulse and right atrial pressure tracings. Generally a junctional escape pacemaker maintains ventricular activity during atrial standstill.

atrial systole, the contraction of the atria of the heart, which precedes ventricular contraction by a fraction of a second.

atrial tachycardia [L, *atrium*, hall; Gk, *tachys*, quick, *kardia*, heart], rapid beating of the atria caused by abnormal automaticity, triggered activity, or intraatrial reentry. The atrial rate is usually less than 200/min; however, in cases of digitalis excess, the rate increases gradually to 130/min to 250/min as the digitalis is continued. When there is 2:1 conduction, the atrial rhythm is irregular in 50% of cases. The contour of the P waves is different from that of the sinus P wave except in cases of digitalis-induced atrial tachycardia, when the P wave is almost identical to the sinus P wave. Vagal maneuvers have no effect on atrial tachycardia, although they do cause atrioventricular block. Atrial tachycardia may be either nonparoxysmal (common) or paroxysmal (uncommon). Also called **auricular tachycardia**.

atrichia /ə'trik'ē-ə/ [Gk, *a*, not, *thrix*, hair], 1. pertaining to a group of bacteria that lack flagella. 2. the congenital or acquired absence of hair.

atrichosis /ə'trikō'sis/ [Gk, *a* + *trichia* without hair, *osis*, condition], a congenital or acquired absence of hair.

atrio-, prefix meaning “atrium of the heart” or entrance chamber: *atriocommissuropexy*, *atrionector*.

atrioventricular (AV) /ə'trē-ō'ventrik'yələr/ [L, *atrium*, hall, *ventriculus*], pertaining to a connecting conduction event or anatomical structure between the atria and ventricles.

atrioventricular block (AVB) [L, *atrium* + *ventriculus*, little belly], a disorder of cardiac impulse transmission that reflects prolonged, intermittent, or absent conduction of impulses between the atria and ventricles. It commonly occurs at the AV node or within the bundle branch system. Treatment depends on where the block is located and whether it is transient or permanent. Heart rate–supporting drugs or pacemaker insertion are common options. See also **heart block**, **intraatrial block**, **intraventricular block**, **sinoatrial (SA) block**.

atrioventricular (AV) bundle, a band of atypical cardiac muscle fibers with few contractile units. It arises from the distal portion of the AV node and extends across the AV groove to the top of the interventricular septum, where it divides into the bundle branches. Also called **bundle of His**.

atrioventricular (AV) dissociation, a breakdown in the normal conduction of excitation through the heart, allowing the atria and ventricles to beat independently under the control of their own pacemakers.

atrioventricular (AV) junction [L, *jungere*, to join], the region of the heart that separates the atria from the ventricles. It includes the AV bundle (bundle of His) and surrounds the AV node. See also **junctional extrasystole**.

atrioventricular (AV) node, an area of specialized cardiac muscle that receives the cardiac impulse from the sinoatrial (SA) node and conducts it to the bundle of His and thence to the Purkinje fibers and walls of the ventricles. The AV node is located in the septal wall between the left and right atria.

atrioventricular (AV) septum, a small portion of membrane that separates the atria from the ventricles of the heart.

atrioventricular (AV) valve, a valve in the heart through which blood flows from the atria to the ventricles. The valve between the left atrium and left ventricle is the mitral (bicuspid) valve; the right AV valve is the tricuspid valve.

at risk, the state of an individual or population being vulnerable to a particular disease or event. The factors determining risk may be environmental, psychosocial, psychological, or physiological. An example of an environmental factor is exposure to harmful substances or organisms. An example of a physiological factor is genetic predisposition to a disease.

atrium pl. atria /ə'trē-əm/ [L, hall], a chamber or cavity, such as the right and left atria of the heart or the nasal cavity.

atrium of the ear, the external part of the ear, including the auricle and the tubular portion of the external auditory meatus.

atrium of the heart, one of the two upper chambers of the heart. The right atrium receives deoxygenated blood from the superior vena cava, the inferior vena cava, and the coronary sinus. The left atrium receives oxygenated blood from the pulmonary veins. Blood is emptied into the ventricles from the atria during diastole.

atrium proper, the space anterior to the crista terminalis of the right atrium of the heart.

Atromid-S, a trademark for an antilipemic (**clofibrate**) used to lower plasma triglyceride (VLDL) levels.

-atrophia, 1. suffix meaning a ‘condition of nutrition and growth’: *metatrophia*, *pantatrophia*. 2. combining form meaning a ‘progressive decline of a body part’: *dermatophgia*, *neuratrophia*.

atrophic /ətrop'ik/ [Gk, *a*, without, *trophe*, nourishment], characterized by a wasting of tissues, usually associated with general malnutrition or a specific disease state. See also **dystrophic**.

atrophic acne, acne vulgaris in which, after the disappearance of small papular lesions, a stippling of tiny atrophic pits and scars remains.

atrophic arthritis. See **rheumatoid arthritis**.

atrophic catarrh [Gk, *a*, *trophe*, without nourishment, *kata*, down, *rhoia*, flow], an abnormal condition characterized by inflammation and discharge from the mucous membranes of the nose, accompanied by the loss of mucosal and submucosal tissue. Compare **hypertrophic catarrh**. See also **catarrh**.

atrophic cirrhosis [Gk, *a* + *trophe*, without nourishment, *kirrhos*, yellow-orange], a form of advanced portal cirrhosis with massive shrinking of the liver.

atrophic fracture, a spontaneous fracture caused by bone atrophy, as in the bones of a person with osteoporosis.

atrophic gastritis, a chronic inflammation of the stomach, associated with degeneration of the gastric mucosa. There are two types: a type associated with *Helicobacter pylori* and autoimmune, which is characterized by antiparietal and anti-intrinsic factor antibodies. Autoimmune atrophic gastritis is seen in elderly patients and in persons with pernicious anemia; it rarely causes epigastric pain. See also **pernicious anemia**.

atrophic glossitis, a pathological condition in which the various papillae are lost from the dorsum of the tongue, resulting in a very sore and highly sensitive surface that makes eating difficult. See also **glossitis**.

atrophic rhinitis [Gk, *a* + *trophe*, without nourishment, *rhis*, nose, *itis*, inflammation], a nasal condition, a form of chronic rhinitis, in which there is inflammation and atrophy of the mucous membrane of the nose, resulting in failure of the ciliary function and drying and crusting of the lining of the nasal passages. This may reduce the sense of smell. It commonly occurs as a result of viral infection such as the common cold but can also be caused by allergies.

atrophic vaginitis [Gk, *a* + *trophe*, without nourishment; L, *vagina*, sheath; Gk, *itis*, inflammation], degeneration of the vaginal mucous membrane after menopause due to decreased estrogen level thinning and dryness. See also **vaginitis**.

atrophied /ət'rōfid/ [Gk, *a* + *trophe*, without nourishment], decreased in size because of disuse or disease, as an organ, tissue, or body part.

atrophoderma /ət'rōfəd'ərmə/ [Gk, *a* + *trophe* + *derma*, skin], the wasting away or decrease in thickness of the skin. The atrophy may affect the entire body surface or only localized areas. The condition is often associated with aging and may occur as a primary or secondary symptom of various diseases.

atrophy /at'rofē/ [Gk, *a* + *trophe*, without nourishment], a wasting or decrease in size or physiological activity of a part of the body because of disease or other influences. A skeletal muscle may undergo atrophy as a result of lack of physical exercise or neurological or musculoskeletal disease. Cells of the brain and central nervous system may atrophy in old age because of restricted blood flow to those areas. See also **abiotrophy**, **aging**. —**atrophic**, adj., **atrophy**, v.

atrophy of aging, senile atrophy.

atrophy of disuse [Gk, *a*, *trophe* + L, *dis*, opposite of *usus*], a shrinkage of tissues resulting from immobility or lack of exercise.

atropine /at'rōpin/ [Gk, *Atropos*, one of the three Fates], an alkaloid from *Atropa belladonna* and *Datura stramonium* plants. It is related to other drugs, such as scopolamine and hyoscyamine, and has a similar action of blocking parasympathetic stimuli by raising the threshold of response of effector cells to acetylcholine.

atropine sulfate, an antispasmodic and anticholinergic.

■ **INDICATIONS:** It may be prescribed in the treatment of GI hypermotility to decrease the tone of the detrusor muscle of the urinary bladder in urinary tract disorders, for cycloplegic refraction and dilation of the pupil in inflammation of the iris or the uvea, cardiac arrhythmias, and certain kinds of poisoning and as an adjunct to anesthesia.

■ **CONTRAINdications:** GI obstruction, glaucoma, hepatitis, liver or kidney dysfunction, porphyria, or known hypersensitivity to this drug or other anticholinergics prohibits its use.

■ **ADVERSE EFFECTS:** Among the more serious adverse reactions are tachycardia, angina, loss of taste, nausea, diarrhea, skin rash, blurred vision, and eye pain. Dry mouth and constipation are common effects.

atropine sulfate poisoning [Gk, *Atropos*, fate; L, *sulphur* + *potio*, drink], toxic effects of an overdose of a drug sometimes used as an adjunct to general anesthesia and to treat bradycardia. Symptoms include tachycardia, hot and dry flushed skin, dry mouth with thirst, restlessness and excitement, urinary retention, constipation, and a burning pain in the throat.

attached epithelial cuff. See **junctional epithelium**.

attached gingiva, gum tissue that covers and is firmly attached to the alveolar process in the maxilla and mandible. Also called **alveolar gingiva**.

attachment [Fr, *attachement*], 1. the state or quality of being affixed or attached. 2. (in psychiatry) a mode of behavior in which one individual relates in an affiliative or dependent manner to another; a feeling of affection or loyalty that binds one person to another. See also **bonding**. 3. (in dentistry) any device, such as a retainer or artificial crown, used to secure a partial denture to a natural tooth in the mouth. 4. (in periodontology) the fixation of periodontal tissues to alveolar bone and tooth structure.

attachment apparatus, the various tissues that surround and support the teeth, including the cementum, the periodontal ligament, and the alveolar process. See also **masticatory system**.

attachment promotion, a nursing intervention from the Nursing Interventions Classification (NIC) defined as facilitation of the development of the parent-infant relationship. See also **Nursing Interventions Classification**.

attack, an episode in the course of an illness, usually characterized by acute and distressing symptoms.

attapulgite /at'ah-pul'jīt/, a clay mineral that contains aluminum silicate and is the main ingredient of Fuller's earth. Activated attapulgite is a heat-treated form that is administered orally in the treatment of diarrhea.

attending [L, *attendo*, to notice], (in psychology) pertaining to an enhanced readiness to perceive, with an adjustment of the brain and sense organs to focus on a situation.

attending physician [L, *attendere*, to stretch], the physician who is responsible for a particular patient. In a university hospital setting, an attending physician often also has teaching responsibilities, holds a faculty appointment, and supervises residents and medical students. Also called (*informal*) **attending**.

attention [L, *attendere*, to stretch], the element of cognitive functioning in which the mental focus is maintained on a specific issue, object, or activity.

attention deficit disorder (ADD), a syndrome affecting children, adolescents, and adults characterized by short attention span, hyperactivity, and poor concentration. The symptoms may be mild or severe and are associated with functional deviations of the central nervous system without signs of major neurological or psychiatric disturbance. The people affected are usually of normal or above average intelligence. Other symptoms include impairment in perception, conceptualization, language, memory, and motor skills; decreased attention span; increased impulsivity; and emotional lability. The condition is 10 times more prevalent in boys than in girls and may result from genetic factors, biochemical irregularities, perinatal or postnatal injury, or disease. There is no known cure, and symptoms often subside or disappear with time. Medication with methylphenidate, pemoline, or the dextroamphetamines is frequently prescribed for children with hyperactive symptoms, and some form of psychotherapeutic counseling is often recommended. Some treatments include abstinence from certain foods, such as those that contain caffeine, and food additives. Also called **hyperactivity**, **hyperkinesis**, **minimal brain dysfunction**. See also **learning disability**.

attention deficit hyperactivity disorder (ADHD), a childhood mental disorder with onset before 7 years of age and involving impaired or diminished attention, impulsivity, and hyperactivity. Also called **hyperactive child syndrome** in the twentieth century.

attenuated /əten'yōō-ā'tid/ [L, *attenuare*, to make thin], pertaining to the dilution of a solution or the reduction in virulence or toxicity of a microorganism or a drug by weakening it.

attenuated virus [L, *attenuare*, to make thin, *virus*, poison], a strain of virus whose virulence has been lowered by physical or chemical processes, or by repeated passage through the cells of another species. Vaccines made by attenuated strains are used to prevent smallpox, measles, mumps, rubella, polio, yellow fever, and other viruses.

attenuation /əten'yōō-ā'shan/ [L, *attenuare*, to make thin], the process of reduction, such as the attenuation of an x-ray beam by reducing its intensity, the weakening of the degree of virulence of a disease organism, or culturing under unfavorable conditions. Attenuated bacteria are often used as vaccine agents.

attenuation coefficient, in radiography or ultrasound, the difference between the energy that enters a body part and the energy that is not detected. The difference is caused by the absorption and scattering of energy within the body tissues.

attenuator /əten'yōō-ā'tor/ [L, *attenuare*, to make thin], an agent that weakens the toxicity of a poisonous substance or the virulence of a microorganism.

Attenuvax, a trademark for an active immunizing agent (live measles virus vaccine).

attic. See **epitympanic recess**.

ATT-III, abbreviation for **antithrombin III**.

attitude /at'ətyōōd, -tōōd/ [L, *aptitude*, fitness], 1. a body position or posture, particularly the fetal position in the uterus, as determined by the degree of flexion of the head

and extremities. 2. (in psychiatry) any of the major integrative forces in the development of personality that gives consistency to an individual's behavior. Attitudes are cognitive in nature, formed through interactions with the environment. They reflect the person's innermost convictions about situations good or bad, right or wrong, desirable or undesirable.

attitudinal isolation /ət'ətyoo'dənəl/ [L, *attitudo*, posture], a type of social isolation that results from a person's own cultural or personal values.

attitudinal reflex, any reflex initiated by a change in position of the head or by a change in position of the head with respect to the position of the body. Kinds of attitudinal reflexes include **tonic labyrinthine reflex** and **tonic neck reflex**. Also called **statotonic reflex**.

atto-, a prefix in the metric system indicating a value of one quintillionth, or 10^{-18} .

attraction [L, *attrahere*, to draw to], a tendency of the teeth or other maxillary or mandibular structures to become elevated above their normal position.

ATTR amyloidosis, the most common form of familial amyloidosis, in which any of numerous mutations of the gene encoding transthyretin cause systemic autosomal-dominant disorders characterized by polyneuropathies, cardiomyopathies, and variable organ involvement.

attrition /ətrish'ən/ [L, *atterere*, to wear away], 1. the process of wearing away or wearing down by friction. 2. the physiological wearing away of the teeth such as from normal mastication, grinding, bruxism, premature contacts, or abnormal tooth structures. See abrasion, abfraction, erosion. 3. individuals who withdraw or are dismissed from a study or program of study.

-ature, noun-forming combining form: *ligature*, *tubulature*.

at. wt., abbreviation for **atomic weight**.

atypia /ətip'ēə/ [Gk, *a + typos*, without type], a condition of being irregular or nonstandard.

atypical /ətip'ikəl/ [Gk, *a + typos*, without type], a condition or object that is not of a usual or standard type.

atypical measles syndrome (AMS), a form of measles (rubeola) reported in persons immunized with a killed measles vaccine used in the United States from 1962 to 1967 and in Canada until 1970. Immunization with inactivated measles virus does not provide immunity and can sensitize the patient to the virus, resulting in an alteration of the disease. Symptoms differ from those of typical measles, beginning with a sudden high fever, headache, abdominal pain, and coughing. The measles rash may appear only 1 or 2 days later, usually starting on the hands and feet, rather than the head and neck. The infection may be complicated by edema of the extremities and pneumonia.

atypical Mycobacterium [Gk, *a + typos*, without type, *mykes*, fungus, *bakterion*, small staff], a group of mycobacteria, including pathogenic and nonpathogenic forms, that are classified according to their ability to produce pigments, growth characteristics, and reactions to chemical tests. Mycobacteria, nontuberculosis (atypical) does not require isolation precautions.

atypical pneumonia [Gk, *a + typos*, without type, *pneumon*, lung, *ia*, condition], a group of relatively mild symptoms of chills, headache, muscular pains, moderate fever, and coughing, but without evidence of a bacterial infection. Chest x-ray film may show mottling at the bases of the lungs. Eaton agent, or *Mycoplasma pneumoniae*, may be the cause of the symptoms.

atypical polypoid adenomyoma, a rare and benign tumor that may be clinically and histologically mistaken for malignance.

atypical somatoform disorder, an abnormal condition marked by physical symptoms and complaints that appear

related to a preoccupation with an imagined defect in one's personal appearance or ability.

Au, symbol for the element **gold**.

audible /əd'bəl/ [L, *audire*, to hear], capable of being heard. Some animals are able to hear sounds of higher or lower frequencies and different intensities than those audible to most humans.

audio-, combining form meaning 'hearing': **audiology**.

audioanalgesia /əd'ēō-an'əljē'sēə/ [L, *audire*, to hear; Gk, *a*, *algos*, not pain], the use of music to enhance relaxation and to distract a patient's mind from pain, anxiety, or discomfort, as during dentistry, during labor and childbirth, or during procedures with sedation or regional anesthetic techniques.

audiogenic epilepsy. See **auditory epilepsy**.

audiogram /əd'ē-əgrām/ [Gk, *audire* + *gramma*, record], a chart showing the faintest level at which an individual is able to detect sounds of various frequencies, usually in octaves from 125 Hz to 8000 Hz. See also **audiometry**.

audiologist, a health professional with graduate education in normal hearing processes and hearing loss, who detects and evaluates hearing loss, and who determines how a client can best make use of remaining hearing. If a client can benefit from assistive listening devices such as hearing aids, the audiologist assists with the selection, fitting, and training in their use. See also **speech-language pathologist**.

audiology /əd'ē-əjē/ [L, *audire* + Gk, *logos*, science], a field of research and clinical practice devoted to the study of hearing disorders, assessment of hearing, hearing conservation, and aural rehabilitation. —*audiologic*, *audiological*, adj.

audiometer /əd'ē-əm'ətər/ [L, *audire* + Gk, *metron*, measure], an electronic device for testing hearing. Earphones are placed over the ears (air-conduction testing), or a bone vibrator is placed on the mastoid (bone conduction testing). Hearing is tested by using tones from very low to very high frequencies at various decibels of intensity. The patient signals when a tone is heard, and the lowest level at which the patient hears is noted on an audiogram.

audiometrist /əd'ē-əm'ətrist/, a technician who has received special training in the use of pure-tone audiometry equipment. An audiometrist conducts the hearing tests selected and interpreted by an audiologist, who supervises the process.

audiometry /əd'ē-əm'ətrē/, the testing of the sensitivity of the sense of hearing. Various audiometric tests determine the lowest intensity of sound at which an individual can perceive auditory stimuli (hearing threshold) and distinguish different speech sounds. Pure tone audiometry assesses the person's ability to hear frequencies, usually ranging from 125 to 8000 hertz (Hz), and can indicate whether a hearing loss is caused by an outer ear, a middle ear, an inner ear, or an acoustic nerve problem. Speech audiometry tests the ability to understand selected words. Impedance audiometry is an objective method of assessing the resistance or compliance of the conducting mechanism of the middle ear with a probe inserted into the ear canal. —*audiometric*, adj.

audiovisual /əd'ē-əvīzh'əl/, pertaining to communication that uses both sight and sound messages.

audit /ə'dit/, 1. a final statement of account. 2. a review and evaluation of health care procedures and documentation for the purpose of comparing the quality of care provided with accepted standards.

auditory /ə'datōrē/ [L, *auditorius*, hearing], pertaining to the sense of hearing and the hearing organs involved.

auditory amnesia [L, *auditorius*, hearing; Gk, *amnesia*, forgetfulness], a loss of memory for the meaning of sounds. Also called **word deafness**.

auditory area [L, *auditorium*, hearing], the sound perception area of the cerebral cortex. It is located in the floor of the lateral fissure and on the dorsal surface of the superior temporal gyrus.

auditory brainstem response (ABR), an electrophysiological test used to measure hearing sensitivity and evaluate the integrity of ear structures from the auditory nerve through the brainstem. It is also used to screen hearing of newborns.

auditory canal. See **auditory meatus**.

auditory cortex. See **acoustic center**.

auditory epilepsy, a reflex form of epilepsy provoked by sounds. Also called **audiogenic epilepsy**.

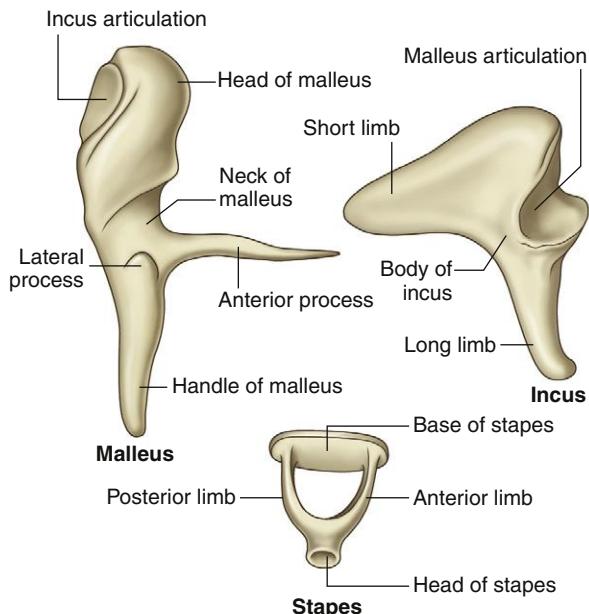
auditory hair [L, *audire*, to hear; AS, *haerl*], one of the cells with hairlike processes in the spiral organ of Corti. The hairs, or cilia, function as sensory receptors. Also called **acoustic hair cell, cell of Corti**.

auditory hallucination [L, *audire*, to hear, *alucinari*, a wandering mind], commonly seen in schizophrenia. It is a subjective experience of hearing voices or other sounds despite the absence of an actual reality-based external stimulus to account for the phenomenon.

auditory meatus [L, *audire*, to hear, *meatus*, passage], 1. the external auditory meatus, a tubelike channel of the external ear extending from the auricle to the tympanum of the middle ear. 2. the internal auditory meatus, a short channel extending from the petrous part of the temporal bone to the fundus near the vestibule. It contains the eighth cranial nerve. Also called **auditory canal**.

auditory nerve. See **vestibulocochlear nerve**.

auditory ossicles [L, *audire* + *ossculum*, little bone], the malleus, the incus, and the stapes, three small bones in the middle ear that articulate with each other. As the tympanic membrane vibrates, it transmits sound waves through the ossicles to the cochlea.



Auditory ossicles (Drake, Vogl, and Mitchell, 2010)

auditory system assessment, an evaluation of the patient's ears and hearing and an investigation of present and past diseases or conditions that may be responsible for an auditory impairment.

■ **METHOD:** The client is questioned in verbal or written form regarding previous ear problems, especially childhood problems of otitis media, perforations of the eardrum, and drainage, and history of measles, mumps, or scarlet fever. Information is obtained about past or present ototoxic medications, such as aspirin, chemotherapeutic drugs, NSAIDs, streptomycin, aminoglycosides, or diuretics. Previous ear surgeries as well as tonsillectomy and adenoidectomy or head injury are also documented. Use of a hearing aid and problems with compacted cerumen are noted. Symptoms of dizziness, ringing in the ears, and hearing loss are recorded. Information regarding allergies, prematurity, and family members with hearing loss is documented. Chronic medical conditions such as diabetes or cancer as well as occupational exposures to high-noise environments, with or without protection, are also important. Recreational ear hazards, such as swimming or chronic exposure to loud music, are noted. Physical examination includes inspection and palpation of the external ear including the mastoid area for tenderness, swelling, redness, nodules, or lesions. Otoscopic examination is then performed to assess the ear canal and tympanic membrane. Diagnostic procedures indicated by the history may include audiometry, a mastoid x-ray film, Rinne and Weber tuning-fork tests, and microbiological studies for potential pathogens in smears of ear drainage.

■ **NURSING CONSIDERATIONS:** The health care provider conducts the interview, makes the observations, and collects the pertinent background information and the results of the diagnostic procedures.

■ **OUTCOME CRITERIA:** A thorough assessment of the patient's auditory system is essential in establishing the diagnosis of an ear disorder.

auditory threshold [L, *audire*, to hear; AS, *threshcold*], the lowest intensity at which a sound may be heard. An audiologist typically determines a patient's threshold for pure tones and speech.

auditory tube. See **eustachian tube**.

auditory vertigo [L, *audire*, to hear, *vertigo*, dizziness], vertigo associated with ear disease. It is characterized by sensations of gyration and, when severe, with prostration and vomiting.

Auerbach's plexus [Leopold Auerbach, German anatomist, 1828–1897; L, *plexus*, plaited], the myenteric plexus, a group of autonomic nerve fibers and ganglia located in the muscle tissue of the intestinal tract.

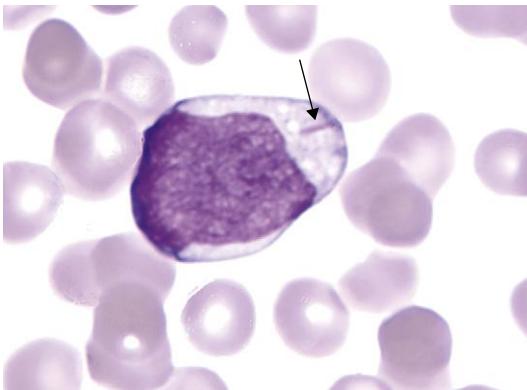
Auer rod /ou'ær/ [John Auer, American physiologist, 1875–1948], an abnormal, needle-shaped or round, pink-staining inclusion in the cytoplasm of myeloblasts and promyelocytes in acute myelogenous, promyelocytic, or myelomonocytic leukemia. These inclusions contain enzymes such as acid phosphatase, peroxidase, and esterase and may represent abnormal derivatives of cytoplasmic granules. The finding of Auer rods in stained blood smears helps to differentiate acute myelogenous leukemia from acute lymphoblastic leukemia. Also called **Auer body**.

augmentation /əg'məntā'shən/ [L, *augmentare*, to increase], 1. stimulation of an increased rate of biological activity, such as faster cell division or heartbeat. 2. breast enlargement through mammoplasty.

augmentation mammoplasty, a surgical procedure to enlarge the breasts.

aur-, auri-, prefix meaning 'ear': *auricle*, *aural*.

aura /ôr'ə/ [L, breath], 1. pl. *aurae* /ôr'ē/ a sensation, as of light, warmth, or emotion (such as fear) that may precede an attack of migraine or an epileptic seizure. 2. pl. *auras*, an emanation of light or color surrounding a person as seen in Kirlian photography and studied in current nursing research in healing techniques.



Auer rod (Carr and Rodak, 2008)

aural¹ /ôr'ôl/, pertaining to the ear or hearing. —aurally, adv.

aural², pertaining to an aura.

aural forceps, a dressing forceps with fine, bent tips used in surgery.

aurally. See **aural**.

aural rehabilitation, a form of therapy in which hearing-impaired individuals are taught to improve their ability to communicate. Methods taught include, but are not limited to, speech-reading, auditory training, use of hearing aids, and use of assistive listening devices such as telephone amplifiers.

auramine /ôr'ämîn/, a yellow aniline dye used in the manufacture of paints, textiles, and rubber products. The experimental carcinogen in animals has been identified as a cause of bladder cancer in humans. Also called **dimethylaniline**.

auramine O, a fluorescent, yellow aniline dye used as a stain for the tubercle bacillus and for deoxyribonucleic acid (DNA).

auramine-rhodamine stain, a fluorescent dye consisting of auramine O, rhodamine B, and phenol that is used in the fluorochrome acid-fast staining method. The dye binds to mycolic acids in the cell wall of bacteria and resists decolorization with acid alcohol.

auranofin /ôr'ənof'in/, an oral gold disease-modifying anti-rheumatoid drug.

■ **INDICATIONS:** It can be prescribed for the treatment of rheumatoid arthritis, but is generally not first line therapy.

■ **CONTRAINdications:** Auranofin is contraindicated for patients who have disorders that are caused by or aggravated by medicines containing gold or who have impaired kidney function.

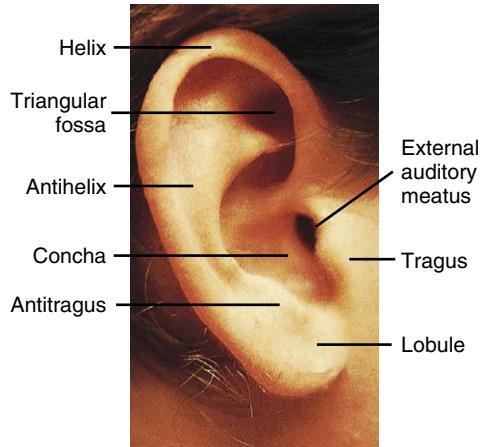
■ **ADVERSE EFFECTS:** Among the most severe adverse effects are diarrhea, loose stools, abdominal pain, nausea, vomiting, rash, pruritus, stomatitis, anemia, leukopenia, granulocytopenia, thrombocytopenia, eosinophilia, proteinemia, hematuria, and elevated liver enzyme levels.

aurantiasis cutis /ôr'äntî'sës/ [L, *aurantium*, orange; Gk, *osis*, condition; L, *cutis*, skin], a yellowish skin pigmentation that results from eating excessive amounts of foods containing carotene, such as carrots.

auras. See **aura**.

aurasis. See **chrysiasis**.

auricle /ôr'ikôl/ [L, *auricula*, little ear], 1. the external ear. Also called **ala auris**, **pinna**. 2. the left or right cardiac atrium, so named because of its earlike shape. Also called **atrial appendix**.



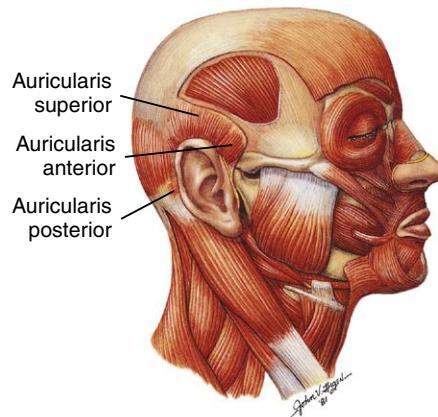
Auricle (Seidel et al, 2011)

auricular /ôrik'yôlər/, 1. pertaining to the auricle of the ear. 2. See **otic**.

auricular acupuncture, acupuncture performed using points on the ear that have been mapped to specific anatomical areas of the body.

auricular cervical nerve reflex. See **Snellen's reflex**.

auricularis anterior, one of three extrinsic muscles of the ear. It functions to move the auricula forward and upward. Some people can voluntarily contract the auricularis anterior to move the ears. Compare **auricularis posterior**, **auricularis superior**.



Auricularis anterior, auricularis posterior, and auricularis superior (Thibodeau and Patton, 2003)

auricularis posterior, one of three extrinsic muscles of the ear. It serves to draw the auricula backward. Compare **auricularis anterior**, **auricularis superior**.

auricularis superior, a thin, fan-shaped muscle that is one of three extrinsic muscles of the ear. It acts to draw the auricula upward. Compare **auricularis anterior**, **auricularis posterior**.

auricular line, a hypothetical line passing through the external auditory meatuses and perpendicular to the Frankfort horizontal plane.

auricular point, the center of the external auditory meatus.

auricular tachycardia. See **atrial tachycardia**.

auricular tubercle, a small projection sometimes found on the edge of the helix of the ear, conjectured by some to be a

relic of a simian ancestry. Also called **darwinian tubercle, Darwin's tubercle.**

auriculin /ōr'ik'yəlin/, a hormonelike substance with diuretic activity produced in the atria of the heart.

auriculocranial /-krā'nē-əl/, pertaining to the auricle of the ear and the cranium.

auriculotemporal /-tem'pərəl/, pertaining to the auricle of the ear and the temporal area of the skull.

auriculoventriculostomy /ōr'ik'yəlōventrik'yəlos'təmē/ [L, *auricula* + *ventriculus*, little belly; Gk, *stoma*, opening], a surgical procedure that directs cerebrospinal fluid into the general circulation in the treatment of hydrocephalus, usually in the newborn. In this procedure a polyethylene tube is passed from the lateral ventricle through a burr hole in the parietal skull area under the scalp and into the jugular vein or abdomen for the discharge of cerebrospinal fluid. The tube, which has valves, is inserted to prevent reflux of the blood into the ventricles and to maintain the draining of excess cerebrospinal fluid when ventricular pressure increases. This procedure is performed to correct the communicating and the obstructive forms of hydrocephalus. Also called **ventriculoatrial shunt, ventriculoatriostomy.**

auris dextra (a.d.), the Latin term for right ear.

auris sinistra (a.s.), the Latin term for left ear.

aurothioglucose /ōr'ōthī'ōglōō'kōs/, an organic gold compound used as a disease-modifying antirheumatoid drug.

■ **INDICATION:** It is prescribed for adjunctive treatment of adult and juvenile rheumatoid arthritis, but generally no longer considered first line therapy.

■ **CONTRAINdications:** Severe uncontrolled diabetes, renal or hepatic dysfunction, a history of infectious hepatitis, hypertension, heart failure, systemic lupus erythematosus, agranulocytosis, hemorrhagic diathesis, pregnancy, urticaria, eczema, colitis, or known hypersensitivity to this drug prohibit its use.

■ **ADVERSE EFFECTS:** Among the most serious adverse effects are kidney and liver damage and allergic reactions. Dermatitis and lesions of mucous membranes are common.

auscultate /ōs'kəltāt/ [L, *auscultare*, to listen], to practice auscultation, or to listen and interpret sounds produced within the body.

auscultation /ōs'kəltāshən/ [L, *auscultare*, to listen], the act of listening for sounds within the body to evaluate the condition of the heart, blood vessels, lungs, pleura, intestines, or other organs or to detect the fetal heart sound. Auscultation may be performed directly with the unaided ear, but most commonly a stethoscope is used to determine the frequency, intensity, duration, and quality of the sounds.

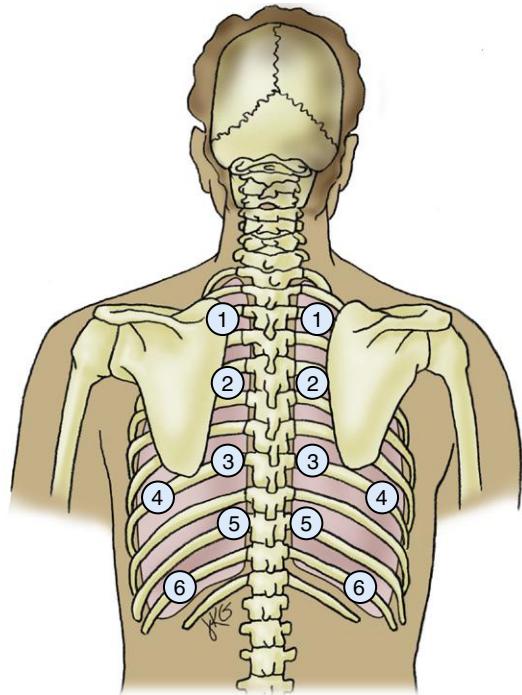
—**auscultate**, v., **auscultatory** /ōskul'tatōrē/, adj.

auscultatory gap, time in which sound is not heard in the auscultatory method of measuring blood pressure with a sphygmomanometer, occurring particularly in hypertension and in aortic stenosis.

Austin Flint murmur [Austin Flint, American physiologist, 1812–1886], a low-pitched sound characteristic of severe aortic regurgitation without mitral valve disease. It is typically heard during ventricular middiastole at the mitral valve area. It is caused by premature closure of the mitral valve by the jet of aortic regurgitation. Amyl nitrate may help differentiate this murmur from that of mitral valve stenosis.

Australia antigen, 1. an envelope antigen known as hepatitis B surface antigen (HBsAg), found in acute or chronic hepatitis B. See also **hepatitis**. 2. a serological marker on the surface of the hepatitis B virus.

Australian lift, a type of shoulder lift used to move a patient who is unable to assume a sitting position on a bed or other surface. The lift is executed by two persons, one on



Percuss each side, alternately, from top to bottom.

Sites for auscultation of lung sounds (Shade et al, 2007)

each side of the patient, who place their shoulders near the patient under the patient's axillae. At the same time, the two lifters grasp each other's hands under the patient's thighs and make coordinated movements needed to lift the patient onto or from a bed or wheelchair.

Australian Q fever, a variety of Q fever occurring in Australia. It is enzootic in Australian animals, especially bandicoots (large rats). See also **Q fever**.

autacoid /ō'takoid/, any one of the substances produced locally by one group of cells that exerts effects on other types of cells in the same region.

authenticity /ō'thəntis'itē/, (in psychiatry) emotional and behavioral openness; a quality of being genuine and trustworthy.

authoritarian personality, a group of behavioral traits characteristic of one who advocates obedience and strict adherence to rules.

authority /ōthōr'ētē/, a relationship between two or more persons or groups characterized by the influence one may exercise over the other through ideas, commands, suggestions, or instructions.

authority figure, a person who by virtue of status, strength, knowledge, or other recognized superiority exerts influence over others.

autism spectrum disorders, a group of disorders characterized by impairment of development in multiple areas, including the acquisition of reciprocal social interaction, verbal and nonverbal communication skills, and imaginative activity, and by stereotyped interests and behaviors. It includes autistic disorder, Rett syndrome, childhood disintegrative disorder, and Asperger syndrome. Also called **pervasive developmental disorders**.

autistic disorder /ōtis'tik/ [Gk, *autos*, self], a pervasive developmental disorder with onset in infancy or childhood,

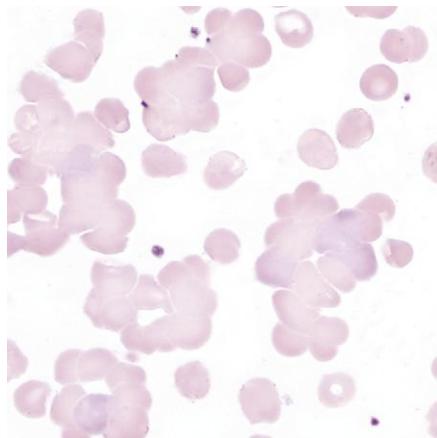
characterized by impaired social interaction, impaired communication, and a remarkably restricted repertoire of activities and interests. See also **infantile autism**. —*autistic, adj.*
autistic phase, a period of preoedipal development, according to Mahler's system of personality stages. It lasts from birth to around 1 month and is considered normal. Children then become aware that they cannot satisfy their body needs by themselves.

autistic thought, a form of thinking that is internally stimulated in which the ideas have a private meaning to the individual. Autistic thinking is a symptom in patients with schizophrenia. Fantasy life may be interpreted as reality.

auto-, aut-, prefix meaning 'self': *autocatharsis, autism*.

autoactivation /-ak'tivā'shən/ [Gk, *autos*, self, *aktivus*, active], self-activation, as when a gland is stimulated by its own secretions.

autoagglutination /-əglōō'tənā'shən/ [Gk, *autos*, self; L, *agglutinare*, to glue]. 1. also called **autohemagglutination**. The clumping of red blood cells caused by an individual's own serum. 2. the clumping of certain antigens or antigen-bearing cells, such as bacteria.



Autoagglutination (Carr and Rodak, 2008)

autoamputation /-amp'yōōtā'shən/, the spontaneous detachment of a body part, usually the fourth or fifth toe, as occurs among the males of some African peoples. A depression develops across the digitoplantar fold of the toe and gradually progresses until the toe falls off. The condition is usually painless and has no other symptoms. Also called **ainhum** /ān'hōōm, īnyoon'/.

autoantibody /ō'tō-an'tibodē/ [Gk, *autos* + *anti*, against; AS, *bodig*, body], an immunoglobulin produced by a person that recognizes an antigen on that person's own tissues. Several mechanisms may trigger the production of autoantibodies: an antigen, formed during fetal development and then sequestered, may be released as a result of infection, chemical exposure, or trauma, as occurs in autoimmune thyroiditis, sympathetic uveitis, and aspermia; there may be disorders of immune regulatory or surveillance function; antibodies produced against certain streptococcal antigens during infection may cross-react with myocardial tissue, causing rheumatic heart disease, or with glomerular basement membrane, causing glomerulonephritis; and normal body proteins may be converted to autoantigens by chemicals, infectious organisms, or therapeutic drugs. Some examples of autoantibodies are those found against gastric parietal cells in pernicious anemia, against platelets in autoimmune thrombocytopenia, and against antigens on the surface of erythrocytes in autoimmune hemolytic

anemia. There is growing evidence that genetic factors increase the incidence and severity of autoimmune diseases.

autoantigen /ō'tō-an'tijin/ [Gk, *autos* + *anti*, against, *genein*, to produce], an endogenous body constituent that stimulates the production of autoantibodies and an autoimmune reaction. An autoantigen associated with **Addison's disease** has been identified as the enzyme 17 α -hydroxylase. Also called **self-antigen**. See also **antibody-specific model, autoantibody, autoimmune disease**.

autoantitoxin /-an'titok'sin/, an antibody produced as protection against a toxin resulting from infection in the same individual, such as *Escherichia coli* endotoxin.

autoaugmentation /-ōg'məntā'shən/, a surgical procedure in which the detrusor muscle of the bladder is removed, leaving the bladder epithelium otherwise intact.

autoblast /ō'tōblast/, 1. a free-living unicellular microorganism. 2. an independent cell.

autocathereterization /-kath'ərizā'shən/, the insertion of a catheter by the patient, usually referring to urinary catheterization. See also **self-catheterization**.

autochthonous /ōtok'thōnəs/ [Gk, *autos*, self, *chthon*, earth], relating to a disease or other condition that appears to have originated in the part of the body in which it was discovered.

autochthonous idea [Gk, *autos* + *chthon*, earth], an idea that originates in the unconscious and arises spontaneously in the mind, independent of the conscious train of thought.

autoclassis /ōtok'lāsɪs/ [Gk, *autos*, self, *klassis*, breaking], the rupturing or breaking of a part of the body caused by a force or agent arising from within the body itself.

autoclave /ō'tōklāv/, an appliance used to sterilize medical instruments or other objects with steam under pressure.

autocrine /ō'tōkrin/, denoting the effect of a hormone on cells that produce it.

autodermic graft. See **autogenous graft**.

autodigestion, a condition in which gastric juices in the pancreas or stomach digest the organ's own tissues.

autodiploid /ō'tōdip'lōid/ [Gk, *autos* + *diploos*, double, *eidos*, form], 1. an individual, organism, strain, or cell containing two genetically identical or nearly identical chromosome sets that are derived from the same ancestral species and result from the duplication of the haploid set. 2. also **autodiploidic**, pertaining to such an individual, organism, strain, or cell. Compare **allodiploid**, **allopolyploid**, **autopolyploid**. —*autodiploidy, n.*

autoeroticism /-irōt'əsiz'əm/ [Gk, *autos* + *eros*, love], 1. sensual, sexual gratification of the self, usually obtained through the stimulus of one's own body without the participation of another person. It is derived from such acts as stroking, masturbation, and fantasy or from other oral, anal, or visual sources of stimulation. 2. sexual feeling or desire occurring without any external stimulus. 3. (in Freudian psychoanalytic theory) an early phase of psychosexual development, occurring in the oral and the anal stages. Also called **autoerotism**. Compare **heteroeroticism**. —*autoerotic, adj.*

autoerythrocyte sensitization /ō'tō-ərith'rəsīt/ [Gk, *autos* + *erythros*, red, *kytos*, cell], hypersensitivity to one's own red blood cells. It results in the spontaneous appearance of painful, hemorrhagic spots on the anterior aspects of the arms and legs. Autoimmune hemolytic anemia, an extreme example of the condition, may cause fulminant hemolysis, fever, abdominal pain, hyperbilirubinemia, thrombosis, and shock. Psycho-neurotic disorders also may be associated with the condition.

autoerythrocyte sensitization syndrome. See **Gardner-Diamond syndrome**.

autogenesis /ō'tōjēn'əsɪs/ [Gk, *autos* + *genein*, to produce], 1. abiogenesis. 2. a self-produced condition; a

condition originating from within the organism. Also called **autogeny** /ōtōj'ənē/. Compare **heterogenesis**, **homogenesis**.

—*autogenetic, autogenic, adj.*

autogenic therapy /ā-jen'ik/, a mental health therapy introduced by Wolfgang Luthe. It is based on the concept that natural forces in the brain are able to remove disturbing influences so that functional harmony can be restored in the mind and body. It was developed from research on sleep and hypnosis and involves biofeedback exercises.

autogenic training, a nursing intervention from the Nursing Interventions Classification (NIC) defined as assisting with self-suggestions about feelings of heaviness and warmth for the purpose of inducing relaxation. See also **Nursing Interventions Classification**.

autogenous /ōtōj'ənəs/, 1. self-generating. 2. originating from within the organism, as a toxin or vaccine.

autogenous graft [Gk, *autos*, self, *genein*, to produce, *graphion*, stylus], a skin graft transplanted from one site to another in the same individual.

autogenous vaccine [Gk, *autos*, self, *genein*, to produce; L, *vacca*, cow], a vaccine prepared from cultures of an infectious agent taken from the patient to be treated.

autogeny. See **autogenesis**.

autograft /ā-tōgraft/ [Gk, *autos* + *graphion*, stylus], surgical transplantation of any tissue from one part of the body to another location in the same individual. Autografts are used in several kinds of plastic surgery, most commonly to replace skin lost in severe burns. Compare **allograft**, **isograft**, **xenograft**. See also **graft**.



Autograft (Black and Hawks, 2009)

autographism, a skin condition characterized by wheals that develop from tracing on the skin with the fingernail or a blunted instrument. This condition makes the patient itch and may be associated with urticaria. Also called **dermatographia**, **Ebbecke's reaction**.

autohemagglutination. See **autoagglutination**.

autohemolysis /ā-hēmōl'īsɪs/ [Gk, *autos*, self, *haima*, blood, *lysein*, to loosen], the destruction of erythrocytes by hemolytic agents found in an individual's own blood.

autohexaploid, autohexaploidic. See **autopolyploid**.

autohypnosis [Gk, *autos*, *hypnos*, sleep], the self-induction of hypnosis by an individual who concentrates on one subject to attain an altered state of consciousness. It may also occur in a person who has become habituated to the process by undergoing hypnosis a number of times.

autoimmune /ā-myōōn/ [Gk, *autos* + L, *immunis*, exempt], pertaining to an immune response to one's own tissues. See also **autoimmune disease**.

autoimmune disease, one of a large group of diseases characterized by altered function of the immune system of the body, resulting in the production of antibodies against the body's own cells. Antigens normally present on the body's cells stimulate the development of autoantibodies, which, unable to distinguish those antigens from external antigens, act against the body's cells to cause localized and systemic reactions. These reactions can affect almost any cell or tissue and cause a variety of diseases, including systemic lupus erythematosus (SLE) and autoimmune thyroiditis. Some autoimmune disorders, such as Hashimoto's disease, are tissue specific, whereas others, such as SLE, affect multiple organs and systems. Both genetic and environmental triggers may contribute to autoimmune disease. About 5% to 8% of the U.S. population is affected by an autoimmune disease. Most autoimmune diseases occur in women.

■ **OBSERVATIONS:** The manifestations and clinical characteristics depend on the specific disease and on the organ or organ systems affected. See specific diseases.

■ **INTERVENTIONS:** Therapy includes corticosteroid, antiinflammatory, and immunosuppressive drugs. Symptoms are treated specifically.

■ **NURSING CONSIDERATIONS:** Many autoimmune diseases are characterized by periods of crisis interrupted by periods of remission. During a crisis, the patient may be hospitalized and require extensive nursing care, with relief from pain, applications of heat or cold, range of motion exercises, or assistance in movement and ambulation. It is important also to teach the patient and the family the side effects of the drugs being prescribed and how the drugs are to be taken. See also **autoantibody**, **autoantigen**.

autoimmune hypothesis, a concept that defects occur in the body's immune system as one ages. As a result of the defects, a person's antibody-producing cells can no longer distinguish between "self" and "nonself" tissues. The body's own cells are then misidentified as foreign and are attacked by antibodies. However, circumstantial evidence links autoimmune diseases to preceding infections.

autoimmune polyglandular syndromes. See **polyglandular autoimmune syndromes**.

autoimmune response. See **indirect anaphylaxis**.

autoimmune theory of aging, a programmed theory of aging that ascribes aging and cell death to preprogrammed decline in T cell function with age, which causes decreased self/nonself recognition and increased development of infections, tumors, and autoimmune disorders. See also **theories of aging**.

autoimmunity /ā-myōō-nitē/, an abnormal condition in which the body reacts against constituents of its own tissues. Autoimmunity may result in hypersensitivity and autoimmune disease. Also called **acute immune disease**. See also **antibody-specific model**, **autoantibody**, **autoantigen**, **autoimmune disease**.

autoimmunization /ā-myōō-nīzā'shōn/, the process whereby a person's immune system develops antibodies against one or more of the person's own tissues. See also **autoantibody**, **autoantigen**, **autoimmune disease**.

autoinfection, 1. an infection by disease organisms already present in the body but developing in a different body part. 2. a reinfection by microbes or parasitic organisms.

autoinfusion /ā-fīyōō'zhōn/, a technique for forcing blood from the extremities to the body core by applying bandages. It may be used to control bleeding and, in surgery, to create a relatively bloodless surgical field.

autoinoculation /-inok'yələ'shən/ [Gk, *autos* + L, *inoculare*, to graft], a secondary infection originating from a focus of infection already present in the body.

autointoxication /-intok'sikā'shən/ [Gk, *autos* + L, *in*; Gk, *toxikon*, poison], a condition of poisoning by substances generated by one's own body, as by toxins resulting from a metabolic disorder.

autokeratoplasty /-ker'ətōplas'tē/, the surgical transfer of corneal tissue from one eye of a patient to repair the cornea of the other.

autokinesia /-kinē'zhə/, voluntary movement.

autolesion /-lē'zhən/, a self-inflicted injury.

Autolet /ə'tōlet/, a trademark for a small, sharp instrument, as a lancet, that is used to obtain a capillary blood specimen.

autologous graft [Gk, *autos*, *logos*, *graphion*, stylus], the transfer of tissue from one site to another on the same body.

autologous stem cell transplantation (ASCT), a treatment for advanced or refractory solid tumors, such as neuroblastomas, lymphomas, and Ewing's sarcoma. Stem cells from the bone marrow or blood are withdrawn before high-dose irradiation or chemotherapy that destroys many of the remaining cells; afterwards the removed cells are reinfused to form a new population of blood cells.

autologous transfusion, a procedure in which blood is removed from a donor and stored for a variable period before it is returned to the donor's circulation.

autolysis /ə-tol'ī-sis/, the spontaneous destruction of tissues by intracellular enzymes. It generally occurs in the body after death.

automated external defibrillator (AED), a portable apparatus used to restart a heart that has stopped. It is programmed to analyze cardiac rhythms automatically and indicate to a health professional when to deliver a defibrillating shock after the health professional has determined that no one is in contact with the patient.

automated reagin test (ART), a modification of the rapid plasma reagin (RPR) test for use with automated analyzers. It is used in clinical chemistry.

automatic behavior. See **automatism**.

automatic bladder. See **spastic bladder**.

automatic external defibrillator (AED), a portable defibrillator designed to be automated such that it can be used by persons without substantial medical training who are responding to a cardiac emergency.

automatic implanted cardioverter defibrillator (AICD), a surgically implanted device that automatically detects and corrects potentially fatal arrhythmias.

automatic infiltration detector /ə-tōmat'ik/ [Gk, *automatismos*, self-action], a temperature-sensitive device that activates an alarm and automatically stops an IV infusion when the IV fluid passes into tissue. The device detects any cooling of the skin at the IV site, a common sign of infiltration. The detector is usually secured to the skin with tape and attaches by a small cable to the fluid-monitoring circuit of an IV pump.

automaticity /ə-tōmētis'itē/, a property of specialized excitable tissue that allows self-activation through spontaneous development of an action potential, as in the pacemaker cells of the heart.

automatic mallet condenser. See **mechanical condenser**.

automatic speech, speech composed of or containing words or phrases, such as numbers, the alphabet, or greetings, that are overlearned and spoken roately.

automation /ə-tōmā'shən/, use of a machine designed to follow a predetermined sequence of individual operations repeatedly and automatically.

automatism /ə-tōm'ətiz'əm/ [Gk, *automatismos*, self-action], 1. (in physiology) involuntary function of an

organ system independent of apparent external stimuli, such as the beating of the heart, or dependent on external stimuli but not consciously controlled, such as the dilation of the pupil of the eye. 2. (in philosophy) the theory that the body acts as a machine and that the mind, whose processes depend solely on brain activity, is a noncontrolling adjunct of the body. 3. (in psychology) mechanical, repetitive, and undirected behavior that is not consciously controlled, as seen in psychomotor epilepsy, hysterical states, and such acts as sleepwalking. Kinds of automatism include **ambulatory automatism**, **command automatism**, and **immediate post-traumatic automatism**. Also called **automatic behavior**.

automnesia /ə-tōmnē'zhə/, the recollection of a previous experience.

autonomic /ə-tōnōm'ik/ [Gk, *autos* + *nomos*, law], 1. having the ability to function independently without outside influence. 2. pertaining to the autonomic nervous system.

autonomic bronchodilators, a category of drugs with actions that dilate bronchiolar smooth muscle tissue by acting on the autonomic nervous system. Examples include adrenergic drugs, such as epINEPhrine, and anticholinergic products, such as atropine sulfate.

autonomic drug, any of a large group of drugs that mimic or modify the function of the autonomic nervous system.

autonomic dysreflexia, a syndrome affecting persons with a spinal cord lesion above the midthoracic level (tetraplegics and some paraplegics) that is characterized by hypertension, bradycardia, severe headaches, pallor below and flushing above the cord lesions, and convulsions. It is the result of impaired function of the autonomic nervous system caused by simultaneous sympathetic and parasympathetic activity, such as may occur with bowel or bladder distension pain or a pressure ulcer. It is usually a medical emergency requiring care in an intensive care unit. A cerebrovascular accident and death may occur during an attack. See also **autonomic hyperreflexia**.

autonomic epilepsy. See **vasomotor epilepsy**.

autonomic ganglion [Gk, *autos*, self, *nomos*, law, *ganglion*, knot], a physical grouping of autonomic neuron cell bodies. It can be near the target organ, as in the parasympathetic division, or more distant, as in the sympathetic division. See also **sympathetic ganglion**.

autonomic hyperreflexia, a neurological disorder characterized by a discharge of sympathetic nervous system impulses as a result of stimulation of the bladder, large intestine, or other visceral organs. It occurs in persons with certain spinal cord injuries. Symptoms may include bradycardia, profuse sweating, headache, and severe hypertension.

autonomic imbalance [Gk, *autos*, self, *nomos*, law; L, *in*, not, *bilanx*, having two scales], a disruption of a segment of the autonomic nervous system, as in autonomic ataxia.

autonomic nerve [Gk, *autos*, self, *nomos*, law, *neuron*, nerve], a nerve of the autonomic nervous system, which includes both the sympathetic and parasympathetic nervous systems. It possesses the ability to function independently and spontaneously as needed to maintain optimal status of body activities.

autonomic nervous system, the part of the nervous system that regulates involuntary body functions, including the activity of the cardiac muscle, smooth muscles, and glands. It has two divisions: The **sympathetic nervous system** accelerates heart rate, constricts blood vessels, and raises blood pressure; the **parasympathetic nervous system** slows heart rate, increases intestinal peristalsis and gland activity, and relaxes sphincters.

autonomic reflex, any of a large number of normal reflexes governing and regulating the functions of the viscera.

Autonomic reflexes control such activities of the body as blood pressure, heart rate, peristalsis, sweating, and urination. **autonomous** /ōtōn'əmēs/ [Gk, *autos*, self, *nomos*, law], being functionally independent.

autonomous bladder. See **flaccid bladder.**

autonomy /ōtōn'əmē/ [Gk, *autos* + *nomos*, law], the quality of having the ability or tendency to function independently. —**autonomous**, *adj.*

autonomy drive, a behavioral trait characterized by the attempt of an individual to master the environment and to impose his or her purposes on it.

auto-PEEP /aw'to-pēp/. See **intrinsic positive end-expiratory pressure.**

autopentaploid, autopentaploidic. See **autopolypliod.**

autophagia /-fājēə/, 1. a mental disorder characterized by the biting or eating of one's own flesh, as may occur in Lesch-Nyan syndrome. 2. the automatic consumption of one's own tissues by fasting or dieting. 3. the metabolic action of catabolism.

autoplastic maneuver /-plas'tik/, (in psychology) a process that is part of adaptation, involving an adjustment within the self. Compare **alloplastic maneuver**.

autoplasty /ōtōplas'tē/ [Gk, *autos* + *plassein*, to mold], a plastic surgery procedure in which autografts, or parts of the patient's own tissues, are used to replace or repair body areas damaged by disease or injury.

autopoloid /ōtōploid/, having homologous chromosome sets, or two or more copies of a single haploid set.

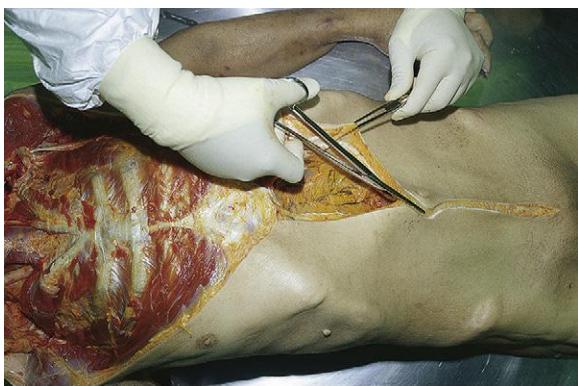
autopodium /-pōdē-əm/, the distal major subdivision of a hand or foot.

autopolymer resin. See **self-curing resin.**

autopolypliod /ōtōpol'iploid/ [Gk, *autos* + *polyplios*, many times, *eidos* form], 1. an individual, organism, strain, or cell that has more than two genetically identical or nearly identical sets of chromosomes that are derived from the same ancestral species. They result from the duplication of the haploid chromosome set and are referred to as autotriploid, autotetraploid, autopentaploid, autohexaploid, and so on, depending on the number of multiples of the haploid chromosomes they contain. Also called *autopolypliodic*. —**autopolypliody**, *n.* 2. pertaining to such an individual, organism, strain, or cell. Compare **allopolypliod**. See also **allodiploid**.

autopolypliody /ōtōpol'iplo'iđē/, the state or condition of having more than two identical or nearly identical sets of chromosomes. Compare **allopolypliod**.

autopsy /ōtōpsē/ [Gk, *autos* + *opsis*, view], a postmortem examination performed to confirm or determine the cause of death. Also called **necropsy** /nek'rōpsē/, **thanatopsy** /than'ētōp'sē/. —**autopsic**, *autopsical*, *adj.*; *autopstist*, *n.*



Autopsy (Finkbeiner, Ursell, and Davis, 2009)

autopsy pathology, the study of disease by the examination of the body after death by a pathologist. The organs and tissues are first described by their appearance at the time of dissection, then by their appearance in the microscopic examination or laboratory analysis of small representative samples of tissue taken for their diagnostic value.

autoregulation [Gk, *autos*, self; L, *regula*, rule], an intrinsic capacity of organs to regulate their own blood flow or metabolic activity. The former process results from the contraction or relaxation of self-excitatory smooth muscle, which causes the constriction or dilation of vessels. It allows organs to maintain constant blood flow and meet their metabolic needs despite variations in systemic arterial pressure.

autosensitization /-sen'satīzā'shōn/ [Gk, *autos*, self; L, *sentire*, to feel], the sensitization of an individual by humoral antibodies or by a delayed cellular reaction to substances in his or her own body tissues.

autosepticemia /-sep'tisē'mē-ə/, a systemic infection in which pathogens (microorganisms) are present in the circulating bloodstream, developing from an infection within the body and not introduced from without.

autoserous treatment /ōtōsir'əs/ [Gk, *autos* + L, *serum*, whey], therapy of an infectious disease by inoculating the patient with the patient's own serum.

autosite /ōtōsīt/ [Gk, *autos* + *sitos*, food], the larger, more normally formed member of unequal or asymmetric conjoined twins on whom the other smaller fetus depends for various physiological functions and for nutrition and growth. Compare **parasitic fetus**. —**autositic**, *adj.*

autosmia /ōtōz'mē-ə/ [Gk, *autos*, self, *osme*, smell], awareness of one's own body odor.

autosomal /ōtōsō'məl/ [Gk, *autos* + *soma*, body], 1. pertaining to or characteristic of an autosome. 2. pertaining to any condition transmitted by an autosome.

autosomal-dominant inheritance, a pattern of inheritance in which the transmission of a dominant allele on an autosome causes a trait to be expressed. Males and females are usually affected with equal frequency. If both parents are heterozygous (*Aa*), each of their children has a 50% chance of being heterozygous, a 25% chance of being homozygous for the dominant allele (*AA*), and a 25% chance of being homozygous for the recessive allele (*aa*). Children with either of the first two genotypes will express the trait of the dominant allele. If one parent is homozygous for the dominant allele, all of the children will express the trait. Achondroplasia, osteogenesis imperfecta, polydactyly, Marfan's syndrome, and some neuromuscular disorders are transmitted through autosomal-dominant inheritance. Compare **autosomal-recessive inheritance**. See also **dominance**.

autosomal inheritance, a pattern of inheritance in which the transmission of traits depends on the presence or absence of certain alleles on the autosomes. The pattern may be dominant or recessive, and males and females are usually affected with equal frequency. The majority of hereditary disorders are the result of a defective gene on an autosome. Kinds of autosomal inheritance are **autosomal-dominant inheritance** and **autosomal-recessive inheritance**. See also **inheritance**.

autosomal-recessive inheritance, a pattern of inheritance resulting from the transmission of a recessive allele on an autosome. Males and females are usually affected with equal frequency. If both parents are heterozygous (*Aa*), each of their children has a 25% chance of expressing the trait of the recessive allele. If both parents are homozygous recessive (*aa*), all of the children will express the trait. If one parent is homozygous recessive and the other is homozygous dominant (*AA*), none of the children will express the trait, but all will be carriers (*Aa*). There may be no family history

of the trait; it becomes manifest when two carriers have a child who is homozygous recessive. Cystic fibrosis, phenylketonuria, and galactosemia are examples of traits that result from autosomal-recessive inheritance. Compare **autosomal-dominant inheritance**. See also **recessive**.

autosomatognosis /-sō'matōgnō'sis/, a phantom sensation that an amputated part of the body is still attached.

autosome /ə'tōsōm/, any chromosome that is not a sex chromosome and that appears as a homologous pair in a somatic cell. Humans have 22 pairs of autosomes, which transmit all genetic traits and conditions other than those that are sex-linked. Also called **euchromosome** /yoo'krōmēsōm/. Compare **sex chromosome**. —**autosomal**, *adj.*

autosplenectomy /ə'tōsplinēk'tomē/ [Gk, *autos* + *splen*, spleen, *ektomē*, excision], a progressive shrinking of the spleen that may occur in sickle cell anemia. The spleen is replaced by fibrous tissue and becomes nonfunctional.

autosuggestion [Gk, *autos* + L, *suggerere*, to suggest], an idea, thought, attitude, or belief suggested to oneself, often as a formula or incantation, as a means of controlling one's behavior. Compare **suggestion**.

autotetraploid, autotetraploidic. See **autopolyploid**.

autotopagnosia /ə'tōtōp'āg-nōzha/ [Gk, *autos* + *topos*, place, *a* + *gnosis*, without knowledge], the inability to recognize or localize the various body parts because of organic brain damage. It is associated generally with lesions of the dominant hemisphere and may be an effect of some cases of cerebrovascular accident. It is also characterized by a loss of ability to distinguish left from right, manifested during a neurological examination when the patient is unable to perform a task such as touching the right ear with the left thumb. Retraining involves touching various parts of the patient's body and asking the patient to identify the area touched and by having the patient assemble human figure puzzles. Also called **body-image agnosia, body-scheme disorder**. See also **agnosia, proprioception**.

autotoxemia /-toksē'mē-ə/, a form of poisoning caused by substances generated within the body as a result of the pathological alteration of the person's own tissues.

autotoxic, pertaining to autotoxins.

autotransfusion¹ /-transfyōō'zhən/, the collection, anticoagulation, filtration, and reinfusion of blood from an active bleeding site. It may be used in cases of major trauma or in major surgery when blood can be collected from a sterile site. Collection devices can be attached to drains following orthopedic or chest procedures.

autotransfusion², a nursing intervention from the Nursing Interventions Classification (NIC) defined as collecting and reinfusing blood that has been lost intraoperatively or post-operatively from clean wounds. See also **Nursing Interventions Classification**.

autotransplantation. See **autograft, autoplasty**.

autotriploid, autotriploidic. See **autopolyploid**.

autovaccination, 1. The use of materials derived from an invading organism or the diseased tissue of an individual. 2. a second vaccination in which a virus from the first vaccine sore is used.

autozygous /-zī'gas/, pertaining to genes in a homozygote that are copies of the same ancestral gene as a result of a mating between related individuals.

autumn fever. See **leptospirosis, mud fever**.

aux-. See **auxo-**.

auxanology /əks'ənl'əjē/ [Gk, *auxein*, to grow, *logos*, science], the scientific study of growth and development. —**auxanological**, *adj.*

auxcardia [Gk, *auxein*, increase, *kardia*, heart], an enlarged heart.

auxesis, growth from increase in cell size without cell division. See also **hypertrophy**.

auxiliary /əksil'yərē/ [L, *auxilium*, aid], an individual or group serving in assistive, supporting, or complementary tasks in a clinical setting.

auxiliary enzyme [L, *auxilium*, assist], an enzyme that links the enzyme being measured with an indicator enzyme. It is a component of the coupled assay system.

auxiliary storage, a storage device for adding to the main storage of the computer, using such media as floppy disks, hard disks, compact disks, zip (a brand name by Iomega zipTM) disks, or tapes.

auxo-, aux-, prefix meaning 'growth, acceleration, or stimulation': *auxochrome, auxesis*.

auxotonic /ək'sōton'ik/, pertaining to muscle contractions that increase in force as the muscle shortens.

auxotox [Gk, *auxein*, increase, *toxikon*, poison], a chemical with a particular atomic grouping that, if added to a relatively benign substance, increases the toxic characteristics of the mixture.

AV, 1. abbreviation for **arteriovenous**. 2. abbreviation for **atrioventricular**.

available arch length /əvā'ləbəl/ [ME, *availen*, to be of use], the length or space in a dental arch that is available for all the natural teeth of an individual. See also **arch length, arch length deficiency, arch width**.

avalunar /əvalv'yələr/ [Gk, *a*, without; L, *valva*, valve], pertaining to an absence of one or more valves.

Avandia, a trademark for an oral antidiabetic (**rosiglitazone**).

avantin. See **isopropyl alcohol**.

avascular /əvas'kyələr/ [Gk, *a*, without; L, *vasculum*, vessel], 1. pertaining to a tissue area that is not receiving a sufficient supply of blood. The reduced supply may be the result of blockage by a blood clot or of the deliberate stoppage of flow during surgery or during control of a hemorrhage. 2. pertaining to a kind of tissue that does not have blood vessels.

avascular graft [Gk, *a*, without; L, *vasculum*, vessel; Gk, *graphion*, stylus], a tissue graft in which there is no infiltration of blood vessels.

avascularization [Gk, *a*, without; L, *vasculum*, vessel], a diversion of blood flow away from tissues.

avascular necrosis. See **coagulation necrosis**.

Avastin, a trademark for **bevacizumab**.

AVB, abbreviation for **atrioventricular block**.

average, (in mathematics) a value established by dividing the sum of a series by the number of its units.

aversian therapy /əvr'zhən/ [L, *aversus*, a turning away], a form of behavior therapy in which punishment or unpleasant or painful stimuli, such as electric shock or drugs that induce nausea, are used to suppress undesirable behavior. The procedure is used in treating such conditions as drug abuse, alcoholism, gambling, overeating, smoking, and various sexual deviations. Also called **aversive conditioning**. See also **behavior therapy**.

aversive stimulus /əvr'siv/, an undesirable stimulus, such as electric shock, that causes psychic or physical pain. See also **aversian therapy**.

avian influenza /a've-ən/, a highly contagious viral disease of birds caused by an influenza A virus; it occurs in both mild and severe forms. The severe form is highly pathogenic and can result in a mortality rate for birds that can reach 90% to 100% within 48 hours. It may be transmitted to humans through contact with bird droppings or surfaces contaminated by them or through intermediate hosts such as pigs. Person-to-person transmission appears to be rare. Symptoms of avian influenza in humans range from typical influenza-like symptoms to eye infections, pneumonia,

acute respiratory distress, and other severe and life-threatening complications. The only means of control when avian influenza has been observed in a flock of domestic fowl is destruction of infected birds and disinfection of the farm. Also called **avian flu, bird flu**.

avian tuberculosis, a strain of tuberculosis in birds, caused by *Mycobacterium avium*. Birds consistently shed large amounts of the bacteria into the environment via feces. The organism is also pathogenic in humans and is especially problematic in the immunocompromised, such as those with human immunodeficiency virus infection.

aviation medicine /av'ē-ä'shən/, a branch of medicine that is concerned with the health effects of travel by aircraft, including such aspects as jetlag, restricted body movement for long periods, and reaction to violent aircraft movement in turbulent weather. See also **aerospace medicine, aviation physiology**.

aviation physiology, a branch of physiology that is concerned with the effects on humans and animals exposed for long periods to pressurized cabins, radiation hazards at high altitudes, weightlessness, disturbances of biological rhythms, acceleration, and mental functions under stressful flying conditions.

avidin, a glycoprotein in raw egg white that interacts with biotin to make it unavailable to the body. Cooking destroys avidin.

avidity /avid'itē/ [L, *avidus*, eager], an inexact measure of the binding strength of antibodies to multiple antigenic determinants on natural antigens.

A-V interval [L, *intervallum*, space between ramparts], the time between an atrial polarization and the next ventricular polarization. In a surface electrocardiogram, the A-V interval is the time between the beginning of the P wave and the beginning of the QRS complex. A normal interval is less than 200 msec. In His bundle electrograms (HBEs), the A-V interval is the time between the A wave and the V deflection. The A wave is the first deflection on the HBE and represents low right atrial activation. The V deflection is the last deflection on the HBE and represents ventricular activation; it is concurrent with the QRS complex on a surface electrocardiogram. Prolongation of this interval is known as first-degree heart block.

avirulent /āvir'yələnt/ [Gk, *a*, not; L, *virus*, poison], not virulent; not pathogenic.

avitaminosis /āvītəmīnō'sis/ [Gk, *a*, not; L, *vita*, life, *amine*, *osis*, condition], a condition resulting from a deficiency of or lack of absorption or use of one or more dietary vitamins. Also called **hypovitaminosis**. Compare **hypervitaminosis**. See also specific vitamins.

AV nicking, a vascular abnormality in the retina of the eye, visible on ophthalmological examination, in which a vein is compressed by an arteriovenous crossing. The vein appears “nicked” as a result of constriction or spasm. It is a sign of hypertension, arteriosclerosis, or other vascular conditions.

avobenzone /av'o-ben'zōn/, a sunscreen that absorbs light in the UVA range.

Avogadro’s constant /av'ōgad'rōz/ [Amedeo Avogadro, Italian physicist, 1776–1856], Avogadro’s number.

Avogadro’s law, a law in physics stating that equal volumes of all gases at a given temperature and pressure contain the identical number of particles.

Avogadro’s number (NA), the number of atoms in exactly 12 g of the isotope of carbon ^{12}C , or 6.02×10^{23} . One mole of any monoatomic element contains this number of atoms and one mole of any polyatomic element or molecule contains this number of molecules.

avoidance [ME, *aviden*, to empty], (in psychiatry) a conscious or unconscious defense mechanism, physical or psychological, by which an individual tries to avoid or escape

from unpleasant stimuli, conflicts, or feelings, such as anxiety, fear, pain, or danger.

avoidance-avoidance conflict, a conflict resulting from the confrontation of two or more alternative goals or desires that are equally aversive and undesirable. Also called **doublé-avoidance conflict**. See also **conflict**.

avoidance conditioning, the establishment of certain patterns of behavior to avoid unpleasant or painful stimuli.

avoidant personality, a personality disorder characterized by hypersensitivity to rejection and a reluctance to start a relationship because of a fear of not being accepted uncritically. The person has a strong desire for affection and acceptance and may be distressed by an inability to relate comfortably with others.

avoirdupois weight /av'ōrdōpoiz/ [OF, *avoir de pois*, to have weight], the English system of weights in which there are 7000 grains, 256 drams, or 16 ounces to 1 pound. One ounce in this system equals 28.35 g, and 1 pound equals 453.59 g. Compare **apothecaries’ weight**. See also **metric system**.

Avonex, a trademark for an antiviral and immune system regulator (**interferon beta-1a**) useful for treating multiple sclerosis.

avulse. See **avulsion**.

avulsed tooth /əvulst/ [L, *avulsio*, a pulling away], a tooth that has been forcibly and traumatically displaced from its normal position, usually completely forced from its alveolar socket. In some cases, if attended to early, it can be surgically reimplanted. Also spelled **evulsed tooth**. See also **avulsion**.



Avulsed teeth (Adams, 2008)

avulsion /əvul'shən/ [L, *avulsio*, a pulling away], the separation, by tearing, of any part of the body from the whole. —**avulse**, v.

avulsion fracture, a fracture caused by the tearing away of a fragment of bone where a strong ligamentous or tendinous attachment forcibly pulls the fragment away from osseous tissue.

awake anesthesia [ME, *awakenen*], anesthetic procedure in which analgesia and anesthesia are accomplished without loss of consciousness. Dental procedures, surgery on a limb or an extremity, endoscopic examinations, and certain kinds of brain surgery are performed using awake anesthesia. Various combinations of sedatives, tranquilizers, and low concentrations of anesthetic gas may be used. Also called **conscious sedation, monitored anesthesia care**.

AWHONN, abbreviation for **Association of Women’s Health, Obstetric, and Neonatal Nurses**.

AWOL /ə'wōl/, abbreviation for **absent without leave**.

axenic culture, a pure culture of microorganisms, i.e., one free from contaminating microorganisms or, in the case of parasites, without the presence of the host.

axetil, contraction for *L-acetoxyethyl*.

axi-, axio-, axo-, prefix meaning ‘axis’: *axial, axolysis*.

axial (A) /ak'sé-əl/ [Gk. *axon*, axle], 1. pertaining to or situated on the axis of a body structure or part. 2. (in dentistry) relating to the long axis of a tooth.

axial current, the central part of the blood current.

axial gradient, 1. the variation in metabolic rate in different parts of the body. 2. the development toward the body axis or its parts in relation to the metabolic rate in the various parts.

axial illumination, light transmitted along the axis of a microscope. See also **illumination**.

axial neuritis. See **parenchymatous neuritis**.

axial resolution, the ability of an ultrasound system to separate two objects lying along the axis of an ultrasound beam.

axial skeleton [L, *axis*, axle; Gk, *skeletos*, dried up], the bones forming the axis of the skeleton, including the skull, vertebrae, ribs, and sternum. Compare **appendicular skeleton**.

axial spillway, a groove that crosses a cusp ridge or a marginal ridge and extends onto a long surface of a tooth. Compare **interdental spillway, occlusal spillway**.

Axit, a trademark for an antiulcerative H₂-receptor agent (nizatidine).

axifugal /aksif'yəgəl/ [L, *axis*, axle, *fugere*, to flee], extending away from an axis or axion. Also called **axofugal**. Compare **centrifugal**.

axilla pl. *axillae* /aksil'ə/ [L, wing], a pyramid-shaped space forming the underside of the shoulder between the upper arm and the side of the chest. Also called **armpit**.

—**axillary**, adj.

axillary abscess [L, *axilla*, wing, *abscedere*, to go away], an abscess in the armpit.

axillary artery [L, *axilla*, wing], one of a pair of continuations of the subclavian arteries that starts at the outer border of the first rib and ends at the distal border of the teres major, where it becomes the brachial artery. It has three parts and six branches, supplying various chest and arm muscles.

axillary block anesthesia. See **brachial plexus block**.

axillary dissection. See **axillary node dissection**.

axillary line, an imaginary vertical line on the body wall, passing through a point midway between the anterior and posterior folds of the axilla.

axillary nerve, one of the last two branches of the posterior cord of the brachial plexus before the posterior cord becomes the radial nerve. It divides into a posterior branch and an anterior branch. The posterior branch innervates the teres minor, part of the deltoideus, and part of the skin overlying the deltoideus; the anterior branch innervates the deltoideus. Some fibers of the nerve also supply the capsule of the shoulder joint.

axillary node, one of the lymph glands of the axilla that help fight infections in the chest, armpit, neck, and arm and drain lymph from those areas. The 20 to 30 axillary nodes are divided into the lateral group, the anterior group, the posterior group, the central group, and the medial group. See also **lymphatic system, lymph node**.

axillary node dissection, surgical removal of axillary lymph nodes, through an incision in the axilla or as part of modified radical mastectomy for women with invasive breast cancer. It may be done at the same time or after a lumpectomy. Also called **axillary dissection**.

axillary region, the area of the upper chest surrounding the axilla, lateral to the pectoral region.

axillary temperature [L, *axilla*, wing, *temperatura*], the body temperature as recorded by a thermometer placed in the armpit. The reading is generally 0.5° to 1° F less than the oral temperature.



Axillary temperature measurement

(Elkin, Perry, and Potter, 2007)

axillary vein, one of a pair of veins of the upper limb that becomes the subclavian vein at the outer border of the first rib. It receives deoxygenated blood from the venous tributaries. Compare **subclavian vein**.

axillary walls, the four walls of the axilla. The anterior wall is formed by the lateral part of the pectoralis major muscle, the pectoralis minor and subclavius muscles, and the clavipectoral fascia. The medial wall is formed by the upper thoracic wall and the serratus anterior muscle. The lateral wall is formed entirely by the intertubercular sulcus of the humerus. The posterior wall is formed by the costal surface of the scapula, the subscapularis muscle, the distal parts of the latissimus dorsi and teres major muscles, and the proximal part of the long head of the triceps brachii muscle.

axillofemoral bypass graft /ak'silofem'ərəl/, a synthetic artery that is surgically anastomosed to the axillary and common femoral arteries in cases of peripheral arterial insufficiency. The graft shunts blood between those arteries, increasing blood flow to the lower extremities.

axio-. See **axi-**.

axion /ak'sé-on/, 1. the brain and spinal cord. 2. the cerebrospinal axis.

axioplasm. See **axoplasm**.

axis pl. *axes* /ak'séz/ [Gk, *axon*, axle], 1. (in anatomy) a line that passes through the center of the body, or a part of the body, such as the frontal axis, binauricular axis, and basifacial axis. 2. the second cervical vertebra, about which the atlas rotates, allowing the head to be turned, extended, and flexed. Also called *epistrophus odontoid vertebra*.

axis artery, one of a pair of extensions of the subclavian arteries, running into and supplying the upper limb, continuing into the forearm as the palmar interosseous artery.

axis cylinder. See **axon**.

axis deviation, an electrocardiogram trace in which the QRS axis of the heart in the frontal plane lies outside the usual range of -30 to 110 degrees. It represents an abnormal direction of ventricular depolarization.

axis traction, 1. the process of pulling a baby’s head with obstetric forceps in a direction in line with the path of least resistance, following the curve of Carus through the mother’s birth canal. 2. (informal) any mechanical device attached to obstetric forceps to facilitate pulling in the proper direction.

axo-. See **axi-**.

axoaxonic synapse /ak'sō·akson'ik/ [Gk, *axon*, axle (to *axon*, axle)], a synapse in which the axon of one neuron comes in contact with the axon of another neuron.

axodendritic synapse /-dendrit'ik/ [Gk, *axon* + *dendron*, tree], a synapse in which the axon of one neuron comes in contact with the dendrites of another neuron.

axodendrosomatic synapse /-den'drōsōmat'ik/, a synapse in which the axon of one neuron comes in contact with both the dendrites and the cell body of another neuron.

axofugal. See **axifugal**.

axolysis /aksol'isis/, the degeneration of the axon of a nerve cell.

axon /ak'son/ [Gk, axle], an extension, usually long and slender, of a neuron capable of conducting action potentials or self-propagating nervous impulses. Axons can conduct impulses over great distances away from the cell body. Only ends of axons (terminals) can release neurotransmitters and stimulate other neurons/effectors. Also called **axone** /ak'-sōn/, **axis cylinder**. Compare **dendrite**. See also **action potential, neurotransmitter**.

axon flare, vasodilation, reddening, and increased sensitivity of the skin surrounding an injured area, caused by an axon reflex. It is considered part of a triple response in which injury or stroking of the skin results in local reddening, the release of histamine or a histamine-like substance, a surrounding flare, and wheal formation. A pinprick in the involved area causes more intense pain than a similar stimulus before injury.

axonography /ak'sənogrəfē/, the recording of electrical activity in the axon of a nerve cell. Also called **electroaxonography**.

axonotmesis /ak'sənotmē'sis/ [Gk, *axon* + *temnein*, to cut], an interruption of the axon from nerve injury, with subsequent wallerian degeneration of the distal nerve segment. Connective tissue of the nerve, including the Schwann cell basement membranes, may remain intact.

axon reflex [Gk, *axon*, axle], a neuron reflex in which an afferent impulse travels along a nerve fiber away from the cell body until it reaches a branching, where it is diverted to an end organ without entering the cell body. It does not involve a complete reflex arc, and therefore it is not a true reflex.

axon sheath [Gk, *axon* + AS, *scaeth*], a laminated myelin sheath that is interrupted at intervals by nodes of Ranvier.

axoplasm /ak'sōplaz'məm/, cytoplasm of an axon that encloses the neurofibrils.

axoplasmic flow /ak'sōplaz'mik/ [Gk, *axon* + *plassein*, to shape], the continuous pulsing, undulating movement of the cytoplasm between the cell body of a neuron, where protein synthesis occurs, and the axon fiber to supply it with the substances vital for the maintenance of activity and for repair. The nerve fiber depends totally on the cell body for metabolites, and any interruption in the axoplasmic flow caused by disease or trauma results in the degeneration of the unsupplied areas of the axon.

axosomatic synapse /ak'sōsōmat'ik/ [Gk, *axon* + *soma*, body], a synapse in which the axon of one neuron comes in contact with the cell body of another neuron.

axotomy /ak'sōt'əmē/, surgical transection of an axon.

Ayers, A. Jean, (1920-1989) The occupational therapist who developed the original theory and intervention techniques for sensory integration therapy (SIT).

Aygestin, a trademark for an oral progestin (norethindrone acetate).

ayurveda, a major health care system that emphasizes a preventive approach to health, focusing on an inner state of harmony and spiritual realization for self-healing.

It includes special types of diets, herbs, minerals, and changes based on a system of constitutional categories in lifestyle. Enemas and purgation are used to cleanse the body of excess toxins. Ayurveda emphasizes lifestyle analysis and change as the most significant aspects of the healing process.

azacitidine, an antineoplastic hormone.

■ **INDICATION:** This drug is used to treat myelodysplastic syndrome.

■ **CONTRAINDICATIONS:** Pregnancy, advanced malignant hepatic tumors, and known hypersensitivity to this drug or mannitol prohibit its use.

■ **ADVERSE EFFECTS:** Adverse effects of this drug include anxiety, depression, dizziness, fatigue, headache, cardiac murmur, hypotension, tachycardia, nausea, vomiting, anorexia, constipation, abdominal pain, abdominal distension or tenderness, hemorrhoids, mouth hemorrhage, tongue ulceration, stomatitis, dyspepsia, dysuria, urinary tract infection, ecchymosis, irritation at injection site, rash, sweating, pyrexia, and hypokalemia. Life-threatening side effects include diarrhea, hepatotoxicity, hepatic coma, renal failure, renal tubular acidosis, leukopenia, anemia, thrombocytopenia, and neutropenia.

azatadine maleate /azat'ədēn/, an antihistamine with anti-serotonin, anticholinergic, and sedative effects. It is used for treating allergic rhinitis and chronic urticaria.

azathioprine /az'əthrōprēn/, an immunosuppressive.

■ **INDICATIONS:** It is prescribed to prevent organ rejection after transplantation and to treat lupus erythematosus and other systemic inflammatory diseases, such as rheumatoid arthritis unresponsive to other agents.

■ **CONTRAINDICATIONS:** Known hypersensitivity to this drug prohibits its use. It is contraindicated in rheumatoid arthritis and in pregnant women.

■ **ADVERSE EFFECTS:** Among the most serious adverse reactions are bone marrow depression and hepatotoxicity. Nausea and fever are common.

azelaic acid /az'ē-la'ik/, a dicarboxylic acid occurring in whole grains and animal products. It has antibacterial effects on both aerobic and anaerobic organisms, particularly *Propionibacterium acnes* and *Staphylococcus epidermidis*; normalizes keratinization; and has a cytotoxic effect on malignant or hyperactive melanocytes. It is applied topically in the treatment of acne vulgaris.

azelastine, an H1-selective antihistamine that also inhibits leukotriene and platelet activating factor (PAF) synthesis and release.

■ **INDICATIONS:** This drug is used to treat seasonal allergic rhinitis and seasonal allergic conjunctivitis.

■ **CONTRAINDICATIONS:** Known hypersensitivity, acute asthma attacks, and lower respiratory tract disease prohibit this drug's use.

■ **ADVERSE EFFECTS:** Side effects include sedation (more common with increased doses), increased drowsiness, weight increase, and myalgia.

Azelex /az'ē-leks/, a trademark for a preparation of **azelaic acid** used for treating acne.

-azepam, combining form designating a diazepam-type antianxiety agent.

azidothymidine. See **zidovudine**.

Azilect, a trademark for **rasagiline**.

azithromycin, a macrolide antibiotic that suppresses the formation of protein by bacteria, retards bacterial growth, or causes death of the microorganisms. It does not suppress hepatic metabolism of other drugs like the macrolide prototype erythromycin and has a very long half-life, which makes it an appealing therapy against susceptible microorganisms.

■ INDICATIONS: It is prescribed in the treatment of mild to moderate infections by certain bacteria in adults, including respiratory tract infections, skin disorders, and sexually transmitted diseases.

■ CONTRAINDICATIONS: The drug should not be given to patients with allergies to erythromycin or any macrolide antibiotics or with kidney or liver diseases. Its safety has not been established for women who are pregnant or breast-feeding.

■ ADVERSE EFFECTS: The side effects most often reported include diarrhea, loose stools, nausea, stomach pains, or vomiting.

azlocillin sodium /az'lōsil'in/, a semisynthetic penicillin antibiotic.

■ INDICATIONS: It is prescribed for lower respiratory tract, urinary tract, skin, bone, and joint infections, and bacterial septicemia caused by susceptible strains of microorganisms, mainly *Pseudomonas aeruginosa*.

■ CONTRAINDICATION: Hypersensitivity to any of the penicillins prohibits its use.

■ ADVERSE EFFECTS: The most serious adverse reactions are anaphylactic reactions, convulsive seizures, epigastric pain, reduction in blood elements, and elevation in hepatic and renal parameters.

azo-, **az-**, prefix meaning ‘containing nitrogen’: *azotemia*, *azine*.

-azocine, combining form designating a narcotic agonist or antagonist.

azo compounds /ā'zō/ [Fr, *azote*, nitrogen], one of many organic aromatic compounds containing the divalent chromophore, $-N=N-$. They are produced by the alkaline reduction of nitro compounds among other methods.

azo dye, a type of nitrogen-containing compound used in commercial coloring materials. Some forms of the chemical are potential carcinogens.

azoic /āzō'ik/ [Gk, *a*, not, *zoe*, life], devoid of life.

azole antifungal, any of a group of antifungals characterized by the presence of an azole ring structure, which includes the triazoles and the imidazoles (qq.v.). They are usually fungistatic but can be fungicidal at higher concentrations and act by interfering with the enzyme activity of cytochrome P-450, decreasing the production of ergosterol and so damaging the cell membrane by altering its permeability and functions.

-azoline, combining form designating an antihistaminic or local vasoconstrictor.

azoospermia /āzō'aspur'mē-ə/ [Gk, *a*, *zoon*, not animal, *sperma* seed], lack of spermatozoa in the semen. It may be caused by testicular dysfunction, cancer chemotherapy, or blockage of the tubules of the epididymis, or it may be induced by vasectomy. Infertility, but not impotence, is associated with azoospermia. Compare **oligospermia**.

azoprotein /ā'zōprotēn/, a protein coupled to another substance through a diazo ($-N=N-$) linkage. Azoproteins are often used in immunochemical procedures.

Azorean disease. See **Machado-Joseph disease**.

-azosin, combining form designating a prazosin-type anti-hypertensive agent.

azotemia /az'ōtē'mē-ə/ [Fr, *azote*, nitrogen; Gk, *haima*, blood], retention of excessive amounts of nitrogenous compounds in the blood. This toxic condition is caused by failure of the kidneys to remove urea from the blood and is characteristic of uremia. Also spelled **azotaemia**. See also **uremia**. —*azotemic*, adj.

azoturia /az'ōtōrē-ə/ [Fr, *azote*, nitrogen; Gk, *ouron*, urine], an excess of nitrogenous compounds including urea in the urine.

AZT, a trademark for a human immunodeficiency virus inhibitor (**zidovudine**). Also called **Retrovir**.

azul, azula. See **pinta**.

Azulfidine, a trademark for a sulfonamide antibacterial (**sulfasalazine**) used to treat ulcerative colitis and rheumatoid arthritis.

azure /āz'hōr/, one of a group of basic blue methylthionine or phenothiazine dyes used in staining blood and cell nuclei.

azurophil, a substance that stains readily with an azure blue aniline dye. —*azurophilic*, adj.

azurophilia /āzh'ōōrōfēl'yə/, a condition in which the blood contains some cells that have granules that stain readily with azure (blue) dye.

azygography /az'īgog'rōfē/, the radiographic imaging of the azygos venous system after injection of a radiopaque contrast medium.

azygos. See **azygous**.

azygospore /az'īgəspōr/ [Gk, *a* + *zygon*, not yoke, *sporos*, seed], a spore that is produced directly from a gamete that has not undergone conjugation, as in certain algae and fungi.

azygous /az'ēgəs/ [Gk, *a* + *zygon*, not yoke], occurring as a single entity or part, such as any unpaired anatomical structure; not part of a pair. Also **azygos**. —*azygos* /az'ēgōs/, n.

azygous lobe, a congenital anomaly of the lung caused by a fold of pleural tissue carried by the azygous vein during descent into the thorax during embryonic development. It produces an extra lobe in the right upper lung and may appear on x-ray film as a fissure in the shape of an upside-down comma.

azygous vein, one of the seven veins of the thorax. Beginning opposite the first or second lumbar vertebra, it rises through the aortic hiatus in the diaphragm and passes to the right of the vertebral column to the fourth thoracic vertebra, then arches ventrally over the root of the right lung, and ends in the superior vena cava. It receives numerous veins, such as the hemiazygous veins, several esophageal veins, and the right bronchial vein. In cases of obstruction to the inferior vena cava it is the principal vein that returns blood to the heart. Compare **internal thoracic vein**, **left brachiocephalic vein**, **right brachiocephalic vein**.