

Index

NOTE: Page numbers in **boldface** type indicate a major discussion. A *t* following a page number indicates tabular material, an *f* following a page number indicates a figure, and a *b* following a page number indicates a boxed feature.

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WORD ROOTS: PREFIXES, SUFFIXES, AND COMBINING FORMS

Prefixes and Combining Forms

a-, an- *absence, lack* acardia, lack of a heart; anaerobic, in the absence of oxygen
ab- *departing from; away from* abnormal, departing from normal
acou- *hearing* acoustics, the science of sound
acr-, acro- *extreme, extremity; peak* acrodermatitis, inflammation of the skin of the extremities
ad- *to, toward* adorbital, toward the orbit
aden-, adeno- *gland* adeniform, resembling a gland in shape
aero- *air* aerobic respiration, oxygen-requiring metabolism
af- *toward afferent neurons, which carry impulses to the central nervous system*
alb- *white* corpus albicans of the ovary, a white scar tissue
amphi- *on both sides; of both kinds* amphibian, an organism capable of living both in water and on land
ana- *apart, up, again* anaphase of mitosis, when the chromosomes separate
angi- *vessel* angiitis, inflammation of a lymphatic vessel or blood vessel
ant-, anti- *opposed to; preventing, inhibiting* anticoagulant, a substance that prevents blood coagulation
ante- *preceding; before* antecubital, in front of the elbow
ap-, api- *tip, extremity* apex of the heart
append- *hang to* appendicular skeleton
aqua-, aque- *water* aqueous solutions
areola- *open space* areolar connective tissue, a loose connective tissue
arthr-, arthro- *joint* arthropathy, any joint disease
artic- *joint* articular surfaces of bones, the points of connection
atri- *vestibule* atria, upper chambers of the heart
aut-, auto- *self* autogenous, self-generated
ax-, axi-, axo- *axis, axle* axial skeleton, axis of vertebral column
azyg- *unpaired* azygous vein, an unpaired vessel
basal *base* basal lamina of epithelial basement membrane
bi- *two* bicuspid, having two cusps
bio- *life* biology, the study of life and living organisms
blast- *bud, germ* blastocyte, undifferentiated embryonic cell
brachi- *arm* brachial plexus of peripheral nervous system supplies the arm
brev- *short* peroneus brevis, a short leg muscle
broncho- *bronchus* bronchospasm, spasmodic contraction of bronchial muscle
bucco- *cheek* buccolabial, pertaining to the cheek and lip
caput- *head* decapitate, remove the head
carcin- *cancer* carcinogen, a cancer-causing agent
cardi-, cardio- *heart* cardiotoxic, harmful to the heart
carneo- *flesh* trabeculae carneae, ridges of muscle in the ventricles of the heart
caud- *tail* caudal (directional term)

cele- *abdominal* celiac artery
cephal- *head* cephalometer, an instrument for measuring the head
cerebro- *brain, especially the cerebrum* cerebrospinal, pertaining to the brain and spinal cord
cervic-, cervix *neck* cervical vertebrae, vertebrae located in the neck
chondr- *cartilage* chondrogenic, giving rise to cartilage
cili- *small hair* ciliated epithelium
circum- *around* circumnuclear, surrounding the nucleus
clavic- *key* clavicle, a "skeleton key"
co-, con- *together* concentric, common center, together in the center
coel- *hollow* coelom, the ventral body cavity
commis- *united* gray commissure of the spinal cord connects the two columns of gray matter
contra- *against* contraceptive, agent preventing conception
corn-, cornu- *horn* stratum corneum, outer layer of the skin composed of horny cells
corona *crown* coronal suture of the skull
corp- *body* corpse; corpus luteum, hormone-secreting body in the ovary
cort- *bark* cortex, the outer layer of the brain, kidney, adrenal glands, and lymph nodes
cost- *rib* intercostal, between the ribs
crani- *skull* craniotomy, a skull operation
crypt- *hidden* cryptomenorrhea, a condition in which menstrual symptoms are experienced but no external loss of blood occurs
cubit *the elbow* cubital fossa, depression on the anterior side of the elbow
cusps- *pointed* bicuspid and tricuspid, valves of the heart
cyst- *sac, bladder* cystitis, inflammation of the urinary bladder
cyt- *cell* cytology, the study of cells
de- *undoing, reversal, loss, removal* deactivation, becoming inactive
decid- *falling off* deciduous (milk) teeth
delta *triangular* deltoid muscle, roughly triangular in shape
den-, dent- *tooth* dens process of axis, tooth-shaped process
dendr- *tree, branch* dendrites, branches of a neuron
derm- *skin* dermis, deep layer of the skin
di- *twice, double* dimorphism, having two forms
dia- *through, between* diaphragm, the wall through or between two areas
dors- *the back* dorsal; dorsum; dorsiflexion
duc-, duct *lead, draw* ductus deferens, structure that carries sperm from the epididymis into the urethra during ejaculation
dura- *hard* dura mater, tough outer meninx
dys- *difficult, faulty, painful* dyspepsia, disturbed digestion
ec-, ex-, ecto- *out, outside, away from* excrete, to remove materials from the body
ef- *away* efferent nerve fibers, which carry impulses away from the central nervous system
en-, em- *in, inside* encysted, enclosed in a cyst or capsule

endo- *within, inner* endoderm, innermost of the three embryonic layers

entero- *intestine* enterologist, one who specializes in the study of intestinal disorders

epi- *over, above* epidermis, outer layer of skin

erythr- *red* erythrocyte, red blood cell

eu- *well* euesthesia, a normal state of the senses

exo- *outside, outer layer* exophthalmos, an abnormal protrusion of the eye from the orbit

extra- *outside, beyond* extracellular, outside the body cells of an organism

extrins- *from the outside* extrinsic muscles of the tongue

fasci-, fascia- *bundle, band* superficial and deep fascia

fenestra- *window* fenestrated capillaries

fontan- *fountain* fontanelles of the skull

foram- *opening* foramen magnum of the skull

foss- *ditch* mandibular fossa of the skull

gangli- *swelling or knot* dorsal root ganglia of the spinal nerves

gastr- *stomach* gastrin, a hormone that influences gastric acid secretion

germin- *grow* germinal epithelium of the gonads

glosso- *tongue* glossopathy, any disease of the tongue

glute- *buttock* gluteus maximus, largest muscle of the buttock

gon-, gono- *seed, offspring* gonads, the sex organs

hema-, hemato-, hemo- *blood* hematocyst, a cyst containing blood

hemi- *half* hemiglossal, pertaining to one half of the tongue

hepat- *liver* hepatitis, inflammation of the liver

hetero- *different, other* heterosexuality, sexual desire for a person of the opposite sex

hist- *tissue* histology, the study of tissues

holo- *whole* holocrine glands, whose secretions are whole cells

hom-, homo- *same* homeoplasia, formation of tissue similar to normal tissue; homocentric, having the same center

hyal- *clear* hyaline cartilage, which has no visible fibers

hydr-, hydro- *water* dehydration, loss of body water

hyper- *excess* hypertension, excessive tension

hypno- *sleep* hypnosis, a sleeplike state

hypo- *below, deficient* hypodermic, beneath the skin; hypokalemia, deficiency of potassium

hyster-, hystero- *uterus, womb* hysterectomy, removal of the uterus; hysterdynia, pain in the womb

ile- *intestine* ileum, the last portion of the small intestine

im- *not impermeable, not permitting passage, not permeable*

infra- *below, beneath* infraspinatus, the muscle located below the scapular spine

inter- *between* intercellular, between the cells

intra- *within, inside* intracellular, inside the cell

ipsi- *same* ipsilateral, on the same side

iso- *equal, same* isothermal, equal, or same, temperature

jugul- *throat* jugular veins, prominent vessels in the neck

kera- *horn* keratin, the water-repellent protein of the skin

labi-, labri- *lip* labial frenulum, the membrane which joins the lip to the gum

lact- *milk* lactiferous glands, milk-producing glands of the breast

lacun- *space, cavity, lake* lacunae, the spaces occupied by cells of cartilage and bone tissue

lamell- *small plate* concentric lamellae, rings of bone matrix in compact bone

lamina *layer, sheet* basal lamina, part of the epithelial basement membrane

lat- *wide* latissimus dorsi, a broad muscle of the back

later- *side* lateral (directional term)

leuko- *white* leukocyte, white blood cell

lingua- *tongue* lingual tonsil, adjacent to the tongue

lip-, lipo- *fat, lipid* lipophagy, a cell that has taken up fat in its cytoplasm

luci- *clear* stratum lucidum, clear layer of the epidermis

lumen *light* lumen, center of a hollow structure

lut- *yellow* corpus luteum, a yellow, hormone-secreting structure in the ovary

lymph *water* lymphatic circulation, return of clear fluid to the bloodstream

macro- *large* macromolecule, large molecule

magn- *large* foramen magnum, largest opening of the skull

mal- *bad, abnormal* malfunction, abnormal functioning of an organ

mamm- *breast* mammary gland, breast

mast- *breast* mastectomy, removal of a mammary gland

medi- *middle* medial (directional term)

medull- *marrow* medulla, the middle portion of the kidney, adrenal gland, and lymph node

mega- *large* megakaryocyte, large precursor cell of platelets

meningo- *membrane* meningitis, inflammation of the membranes of the brain

meso- *middle* mesoderm, middle germ layer

meta- *beyond, between, transition* metatarsus, the part of the foot between the tarsus and the phalanges

metro- *uterus* metroscope, instrument for examining the uterus

micro- *small* microscope, an instrument used to make small objects appear larger

mito- *thread, filament* mitochondria, small, filament-like structures located in cells

mono- *single* monospasm, spasm of a single limb

morpho- *form* morphology, the study of form and structure of organisms

multi- *many* multinuclear, having several nuclei

myelo- *spinal cord, marrow* myeloblasts, cells of the bone marrow

myo- *muscle* myocardium, heart muscle

narco- *numbness* narcotic, a drug producing stupor or numbed sensations

necro- *death* necrosis, tissue death

neo- *new* neoplasm, an abnormal growth

nephro- *kidney* nephritis, inflammation of the kidney

neuro- *nerve* neurophysiology, the physiology of the nervous system

noto- *back* notochord, the embryonic structure that precedes the vertebral column

ob- *before, against* obstruction, impeding or blocking up

oculo- *eye* monocular, pertaining to one eye

odonto- *teeth* orthodontist, one who specializes in proper positioning of the teeth in relation to each other

olfact- *smell* olfactory nerves

oligo- *few* oligodendrocytes, neuroglial cells with few branches

oo- *egg* oocyte, precursor of female gamete

ophthalgo- *eye* ophthalmology, the study of the eyes and related disease

orb- *circular* orbicularis oculi, muscle that encircles the eye

ortho- *straight, direct* orthopedic, correction of deformities of the musculoskeletal system

osteo- *bone* osteoderma, bony formations in the skin

oto- *ear* otoscope, a device for examining the ear

ov-, ovi- *egg* ovum, oviduct

oxy- *oxygen* oxygenation, the saturation of a substance with oxygen

pan- *all, universal* panacea, a cure-all

papill- *nipple* papillary muscles, muscles extending from the wall of the ventricles that anchor the atrioventricular valves

para- *beside, near, beyond* paraphrenitis, inflammation of tissues adjacent to the diaphragm

pariet- *a wall* parietal pleura, the layer of pleura against the thoracic wall

pect-, pectus *breast* pectoralis major, a large chest muscle

pelv- *a basin* pelvic girdle, which cradles the pelvic organs

peni- *a tail* penis, male copulatory organ

pep-, peps-, pept- *digest* pepsin, a digestive enzyme of the stomach; peptic ulcer

peri- *around* perianal, situated around the anus

phago- *eat* phagocyte, a cell that engulfs and digests particles or cells

phleb- *vein* phlebitis, inflammation of the veins

pia *tender* pia mater, delicate inner membrane around the brain and spinal cord

pin-, pino- *drink* pinocytosis, the engulfing of small particles by a cell

pleur- *side, rib* pleural serosa, the membrane that lines the thoracic cavity and covers the lungs

plex-, plexus *net, network* brachial plexus, the network of nerves that supplies the arm

pneumo- *air, wind* pneumothorax, air in the pleural cavity

pod- *foot* podiatry, the treatment of foot disorders

poly- *multiple* polymorphism, multiple forms

post- *after, behind* posterior, places behind (a specific) part

pre-, pro- *before, ahead of* prenatal, before birth

procto- *rectum, anus* proctoscope, an instrument for examining the rectum

pseudo- *false* pseudotumor, a false tumor

psycho- *mind, psyche* psychogram, a chart of personality traits

pulmo- *lung* pulmonary artery, which brings blood to the lungs

pyo- *pus* pyocyst, a cyst that contains pus

quad-, quadr- *four* quadriceps, four muscles located in the anterior thigh

re- *back, again* reinfect

rect- *straight* rectum; rectus abdominis, longitudinal muscle of the anterior abdominal wall

ren- *kidney* renal artery, arterial vessel to the kidney

retro- *backward, behind* retrogression, to move backward in development

rug- *fold, wrinkle* rugae, the folds in the stomach, gallbladder, and urinary bladder

sagitt- *arrow* sagittal (directional term)

sarco- *flesh* sarcomere, unit of contraction in skeletal muscle

sclero- *hard* sclerodermatitis, inflammatory thickening and hardening of the skin

semi- *half* semicircular, having the form of half a circle

septum *a fence* interventricular septum in the heart

serrat- *saw* serratus anterior, a muscle of the chest wall that has a jagged edge

sin-, sino- *a hollow* sinuses of the skull

soma- *body* somatic nervous system

splanchn- *organ* splanchnic nerve, autonomic supply to abdominal viscera

squam- *scale, flat* squamous epithelium, squamous suture of the skull

steno- *narrow* stenocoriosis, narrowing of the pupil

stroma *spread out* stroma, the connective tissue framework of some organs

sub- *beneath, under* sublingual, beneath the tongue

super- *above, upon* superior, quality or state of being above others or a part

supra- *above, upon* supracondylar, above a condyle

sym-, syn- *together, with* synapse, the region of communication between two neurons

synerg- *work together* synergists, muscles that work together to produce a specific movement

tachy- *rapid* tachycardia, abnormally rapid heartbeat

telo- *the end* telophase, the end of mitosis

templ-, tempo- *time* temporal region of the skull, one of the first locations for hair to become gray, thus showing the passage of time or age

teres *round, smooth* ligamentum teres, also called the round ligament

therm- *heat* thermometer, an instrument used to measure heat

tissue *woven* tissue

tox- *poison* antitoxic, effective against poison

trab- *beam, timber* trabeculae, spicules of bone in spongy bone tissue

trans- *across, through* transpleural, through the pleura

tri- *three* trifurcation, division into three branches

troph- *nourish* trophoblast, from which develops the fetal portion of the placenta

tuber- *swelling* tuberosity, a bump on a bone

vas- *a vessel, duct* vascular system, system of blood vessels

venter, ventr- *abdomen, belly* ventral (directional term)

villus *shaggy hair* microvilli, which have the appearance of hair in light microscopy

viscero- *organ, viscera* visceroinhibitory, inhibiting the movements of the viscera

Suffixes


- able** *able to, capable of viable, ability to live or exist*
- ac** *referring to cardiac, referring to the heart*
- algia** *pain in a certain part neuralgia, pain along the course of a nerve*
- ary** *associated with, relating to coronary, associated with the heart*
- ceps** *the head biceps, a muscle with two heads*
- cide** *destroy, kill germicide, an agent that kills germs*
- cipit** *head occipital*
- clast** *break osteoclast, a cell that dissolves bone matrix*
- crine** *separate endocrine organs, which secrete hormones into the blood*
- ectomy** *cutting out, surgical removal appendectomy, cutting out of the appendix*
- ell, -elle** *small organelle*
- emia** *condition of the blood anemia, deficiency of red blood cells*
- esthesi** *sensation anesthesia, lack of sensation*
- ferent** *carry efferent nerves, nerves carrying impulses away from the CNS*
- form, -forma** *shape cribriform plate of the ethmoid bone*
- fuge** *driving out vermifuge, a substance that expels worms of the intestine*
- gen** *an agent that initiates pathogen, any agent that produces disease*
- glea, -glia** *glue neuroglia, the connective tissue of the nervous system*
- gram** *a record; a recording of data electrocardiogram, a recording showing action of the heart*
- graph** *an instrument recording data or writing electrocardiograph, an instrument used to make an electrocardiogram*
- ia** *condition insomnia, condition of not being able to sleep*
- iatics** *medical specialty geriatrics, the branch of medicine dealing with diseases associated with old age*
- itis** *inflammation gastritis, inflammation of the stomach*
- lemma** *sheath, husk sarcolemma, the plasma membrane of a muscle cell*
- logy** *the study of pathology, the study of changes in structure and function brought on by disease*
- lysis** *loosening or breaking down hydrolysis, chemical decomposition of a compound into other compounds as a result of taking up water*
- malacia** *soft osteomalacia, a process leading to bone softening*
- mania** *obsession, compulsion erotomania, exaggeration of the sexual passions*
- odyn** *pain coccygodynia, pain in the region of the coccyx*
- oid** *like, resembling cuboid, shaped as a cube*
- oma** *tumor lymphoma, a tumor of the lymphatic tissues*
- opia** *defect of the eye myopia, nearsightedness*
- ory** *referring to, of auditory, referring to hearing*
- pathy** *disease osteopathy, any disease of the bone*
- phil, -philo** *like, love hydrophilic, water-attracting molecules*
- phobia** *fear acrophobia, fear of heights*
- plasm** *form, shape cytoplasm*
- plasty** *reconstruction of a part, plastic surgery rhinoplasty, reconstruction of the nose through surgery*
- plegia** *paralysis paraplegia, paralysis of the lower half of the body or limbs*
- rrhagia** *abnormal or excessive discharge metrorrhagia, uterine hemorrhage*
- rrhea** *flow, discharge diarrhea, abnormal emptying of the bowels*
- scope** *instrument used for examination stethoscope, instrument used to listen to sounds of various parts of the body*
- stalsis** *compression peristalsis, muscular contractions that propel food along the digestive tract*
- stasis** *arrest, fixation hemostasis, arrest of bleeding*
- stomy** *establishment of an artificial opening enterostomy, the formation of an artificial opening into the intestine through the abdominal wall*
- tomy** *to cut appendectomy, surgical removal of the appendix*
- ty** *condition of, state immunity, condition of being resistant to infection or disease*
- uria** *urine polyuria, passage of an excessive amount of urine*

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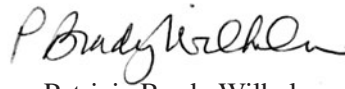
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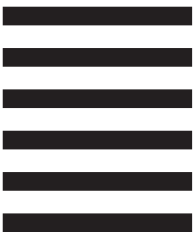
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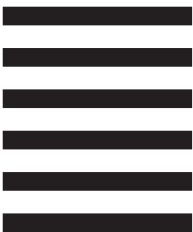
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