COMMON DISEASES

BY D.KIRUBI

INTRODUCTION

- A **disease** is a particular abnormal condition, a disorder of a structure or function, that affects part or all of an organism.
- Common diseases are those diseases that affects most population
- Diseases are sub divided according to the systems

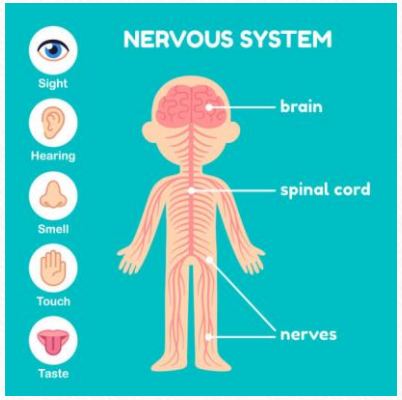
I. Nervous system
II. Cardiovascular system
III. Respiratory system
IV. Gastro intestinal system
V. Genital urinary system
VI. muscular skeletal system

Nervous system

definition

Nervous system is The system in the body that controls internal functions of the body and receives, interprets, and responds to stimuli.

- Nervous system comprises of brain ,spinal cord and nerves


NERVOUS SYSTEM
Sight
Hearing
Smell
Touch
Taste
brain
spinal cord
nerves

COMMON DISEASES OF THE NERVEOUS SYSTEM

- Headache
- Epilepsy and seizures
- Stroke
- Alzheimer's disease and dementia
- trauma

headache

- If headache comes once and disappears is not a problem but when its more frequent and un bearable then it becomes a disease

Causes of frequent headaches

- inflammation or other problems with the blood vessels in and around the brain, including stroke.
- Infections, such as meningitis.
- Intracranial pressure that's either too high or too low.
- Brain tumor.
- Traumatic brain injury.

EPILEPSY AND SEIZURES

DEFINATION

A seizure is **a sudden, uncontrolled electrical disturbance in the brain**. It can cause changes in your behavior, movements or feelings, and in levels of consciousness.

Epilepsy is Having two or more seizures at least 24 hours apart that aren't brought on by an identifiable cause .

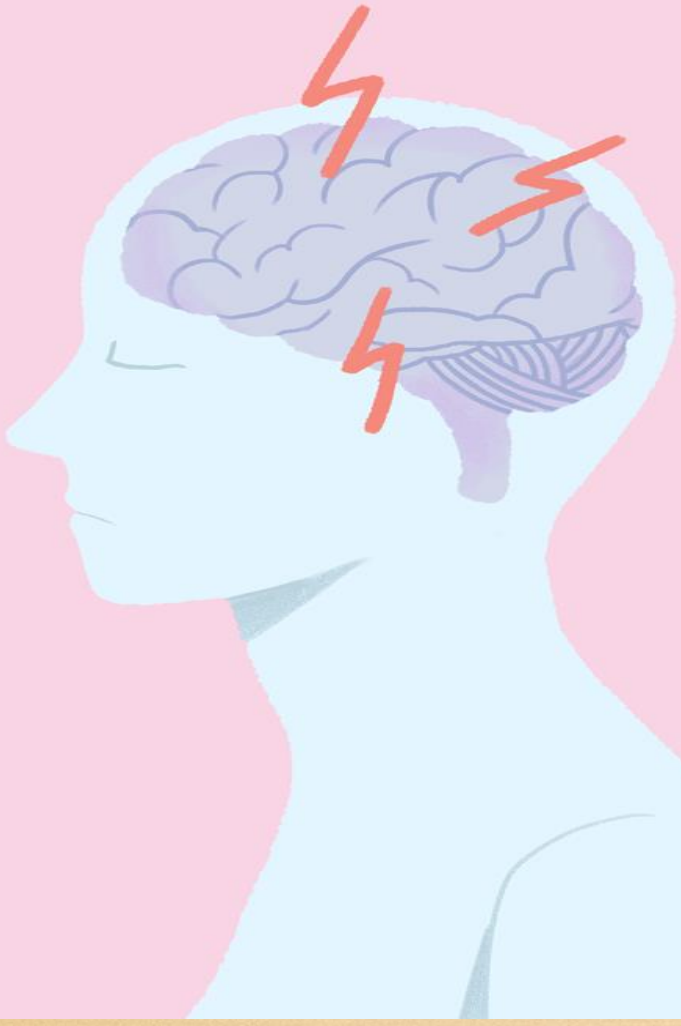
Signs and Symptoms of a Seizure

Confusion

Aura

Sudden falls

Staring



Uncontrollable jerking movements

Strange sensations and emotions

Loss of consciousness or awareness

well

FIRST AID OF A SEIZURE

Seizure first aid

Time the seizure

- Time the duration of the seizure
- Let the seizure run its course

Keep the person away from hazards

- Move any hazards out of the way
- Cushion their head
- Make sure nothing hinders their breathing
- Guide them away from danger (focal seizures)

Don't restrict their movements

- Don't restrain them
- Don't put anything in their mouth

Stay with them

- Reassure them
- Stay with them until they have fully recovered
- After the seizure, put them in the recovery position (if they are on the floor)

Make a record of what happened

- Include what happened before, during and after the seizure

Call 999 for an ambulance if...

- They have never had a seizure before
- They are not breathing or are blue around the lips
- The seizure lasts more than 5 minutes
- They are not responding after the seizure has stopped
- They have sustained an injury during the seizure

STROKE

- Cerebrovascular accident (CVA) is **the medical term for a stroke**. A stroke is when blood flow to a part of your brain is stopped either by a blockage or the rupture of a blood vessel.

SIGNS AND SYMPTOMS

- difficulty walking
- dizziness
- loss of balance and coordination
- difficulty speaking or understanding others who are speaking
- numbness or paralysis in the face, leg, or arm, most likely on just one side of the body
- blurred or darkened vision
- a sudden headache, especially when accompanied by nausea, vomiting, or dizziness

Alzheimer's disease and dementia

- Alzheimer's disease is an irreversible, progressive brain disorder that slowly destroys memory and thinking skills and, eventually, the ability to carry out the simplest tasks. It is the most common cause of dementia in older adults.

Dementia is not a specific disease but is rather a general term for the **impaired ability to remember, think, or make decisions that interferes with doing everyday activities**. more common as people grow older, it is not a normal part of aging.

TASK

Write notes on :

- Meningitis
- Brain tumor
- Neurological assessment

CARDIOVASCULAR SYSTEM

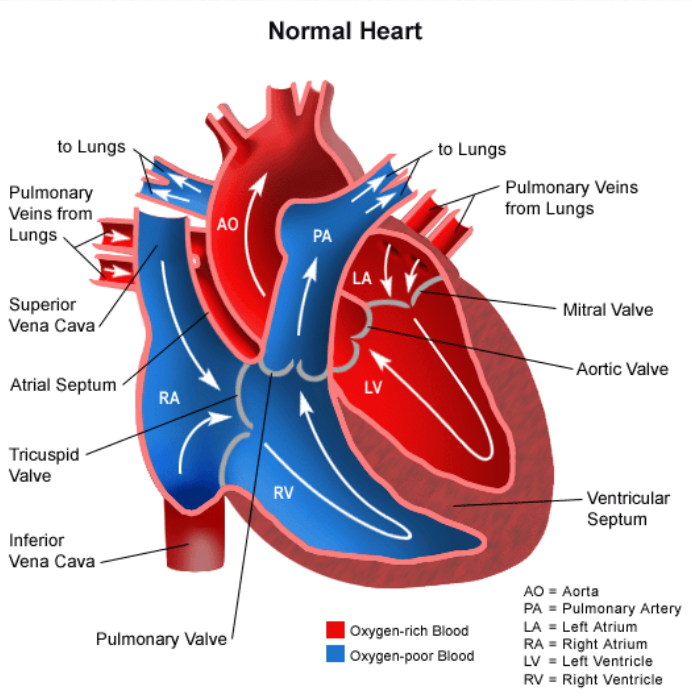
- The cardiovascular system **consists of the heart, blood vessels, and blood**

FUNCTION OF THE HEART is to pump blood and distributing oxygen and nutrients throughout the body **.**

Task

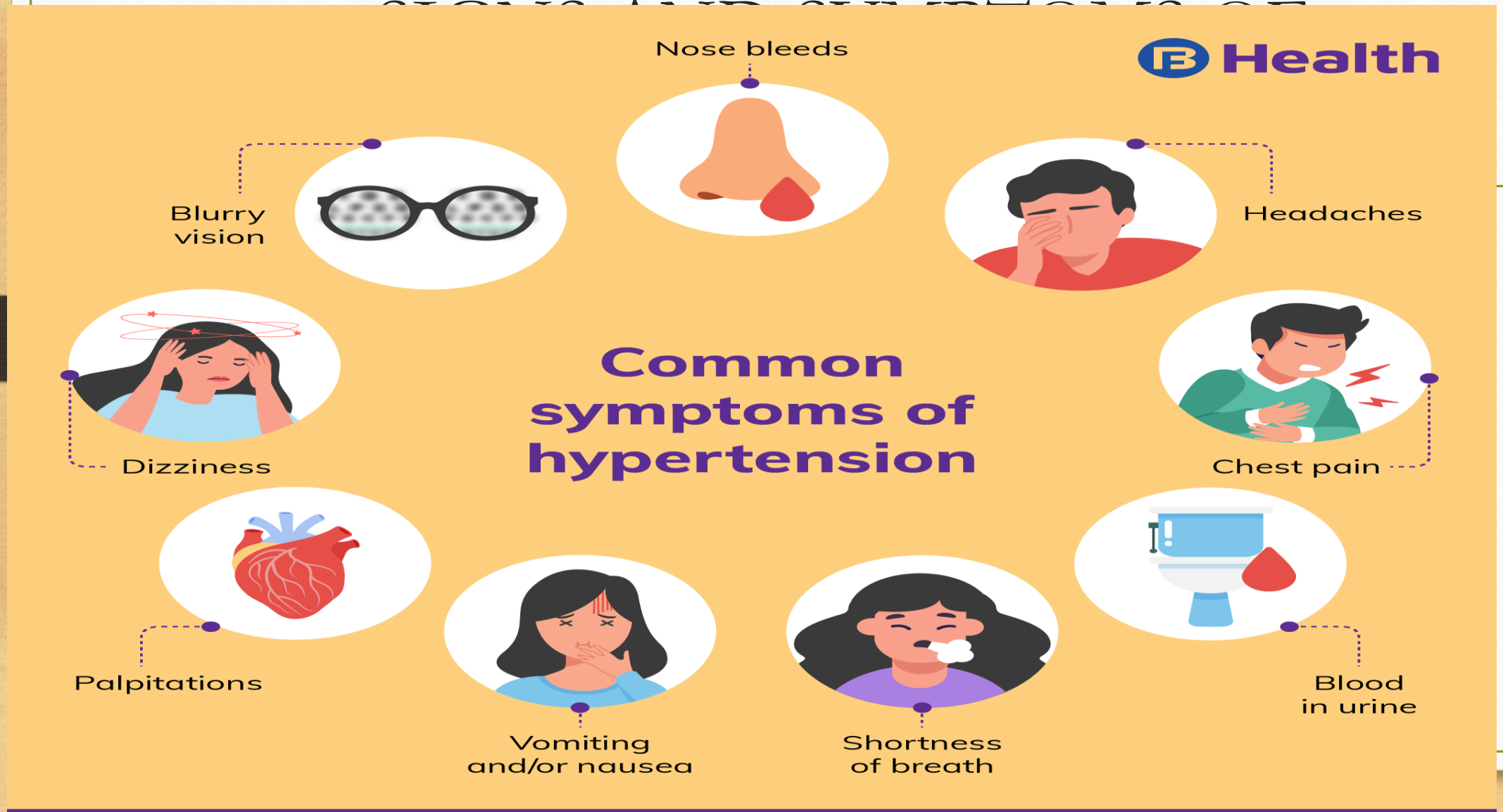
Draw and label the human heart showing the blood flow

ANATOMY OF THE HEART SHOWING BLOOD FLOW



DISEASES IN THE CARDIOVASCULAR SYSTEM

- **High blood pressure (hypertension)** is a common condition which Is caused by long-term force of the blood against artery walls which may eventually cause health problems, such as heart disease and stroke .
- **coronary heart disease** – a disease of the blood vessels supplying the heart muscle
- **cerebrovascular disease** – a disease of the blood vessels supplying the brain
- **peripheral arterial disease** – a disease of blood vessels supplying the arms and legs
- **congenital heart disease** – birth defects that affect the normal development and functioning of the heart caused by malformations of the heart structure from birth
- **deep vein thrombosis and pulmonary embolism** – blood clots in the leg veins, which can dislodge and move to the heart and lungs.


Health
Common symptoms of hypertension
Nose bleeds
Blurry vision
Headaches
Dizziness
Chest pain
Palpitations
Vomiting and/or nausea
Shortness of breath
Blood in urine

HYPOTENSION

- Hypotension is when blood pressure is below 90/60 mmhg
- CAUSES
- Emotional stress, fear, insecurity or pain (the most common causes of fainting)
- Dehydration, which reduces blood volume
- The body's reaction to heat, which is to shunt blood into the vessels of the skin, leading to dehydration
- Blood donation
- Internal bleeding, such as a perforated stomach ulcer
- Blood loss from trauma, such as a road accident or deep cut
- Pregnancy
- Medications for high blood pressure

CONTINUED

- Diuretics, which produce fluid loss
- Medications for depression
- Medications for certain heart conditions
- Allergic reaction to certain drugs or chemicals
- Some forms of infection, such as toxic shock syndrome
- Heart disease, which can hamper the pumping action of the heart muscle
- Some nervous system disorders, such as Parkinson's disease

MANAGEMENT OF HYPOTENSION

- Rehydration –give patient adequate amount of water
- Blood pressure close monitoring
- Arresting bleeding
- Blood transfusion
- Eating iron based foods during pregnancy
- Proper treatment of infections
- Blood pressure check before administering hypertension medication (antihypertensive)

Cardiac arrest

- cardiac arrest occurs when the heart ceases to produce an effective pulse and circulate blood. It may be caused by a cardiac electrical event (i.e., dysrhythmia) such as ventricular fibrillation, progressive profound bradycardia, or when there is no heart rhythm at all (a systole). Cardiac arrest may follow respiratory arrest; it may also occur when electrical activity is present but there is ineffective cardiac contraction or circulating volume, which is called pulseless electrical activity (PEA). PEA can be caused by hypovolemia (eg, with excessive bleeding), hypoxia, hypothermia, hyperkalemia, massive pulmonary embolism, myocardial infarction, and medication overdose (e.g., beta-blockers, calcium channel blockers).

Clinical manifestations

- In cardiac arrest, consciousness, pulse, and blood pressure are lost immediately. Ineffective respiratory gasping may occur. The pupils of the eyes begin dilating within 45 seconds. Seizures may or may not occur.
  The risk of irreversible brain damage and death increases with every minute from the time that circulation ceases. The interval varies with the age and underlying condition of the patient. During this period, the diagnosis of cardiac arrest must be made and measures must be taken immediately to restore circulation.

management

- Initiate immediate cardiopulmonary resuscitation (CPR).
  - Institute follow-up monitoring once patient is resuscitated.

TASK

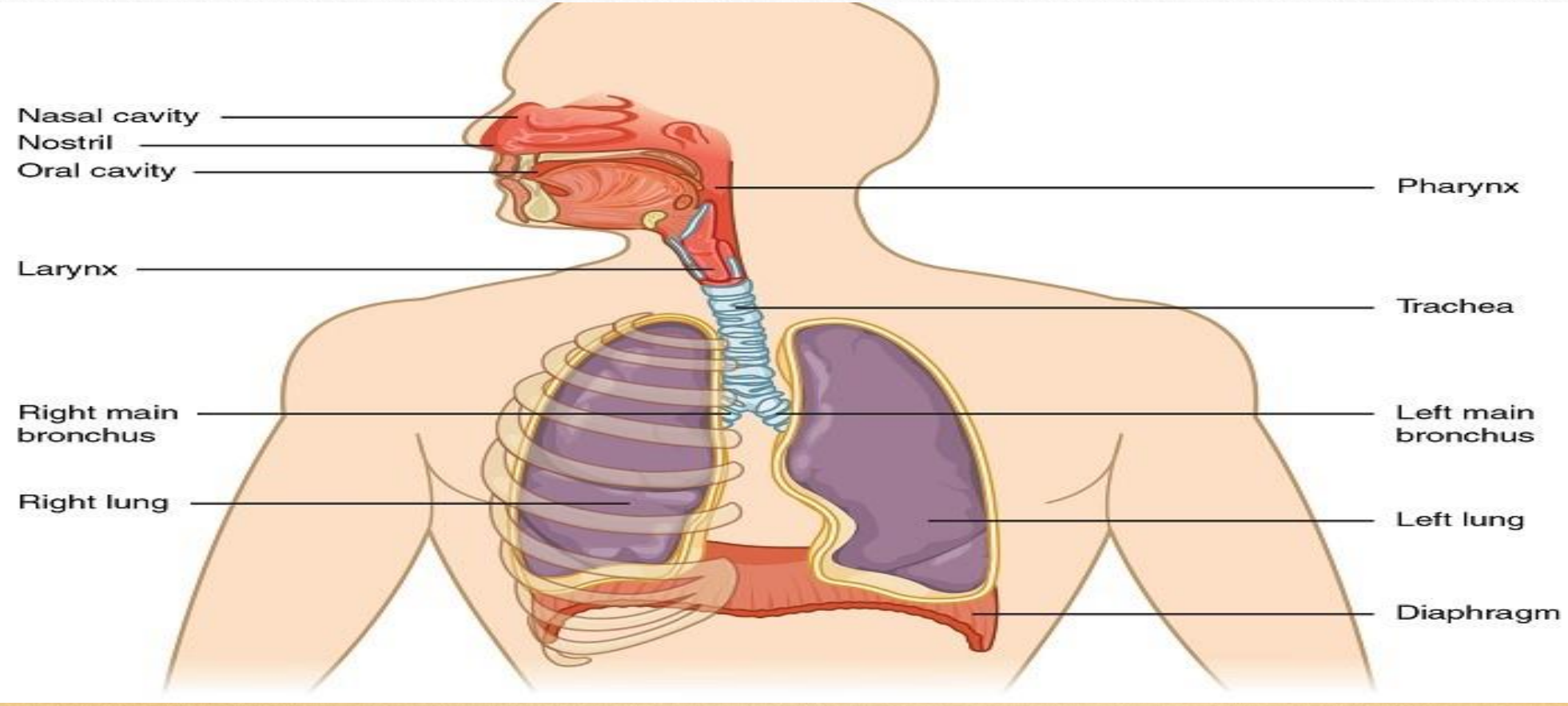
- In groups discuss and Write notes on

1. Myocardia infarction
2. Coronary artery disease
3. Ischemic heart disease
4. Cardiac edema
5. Angina pectoris

INDICATE

A. Definition
B. clinical presentation /signs and symptoms
C. Prevention
D. Management

RESPIRATORY DYSTEM



Nasal Cavity

- The **nasal cavity**
- is a large, air-filled space in the skull
- above and behind the nose in the middle of the face. It is a continuation of the two nostrils. As inhaled air flows through the nasal cavity
- , it is warmed and humidified. Hairs in the nose help trap larger foreign particles in the air before they go deeper into the respiratory tract
- . In addition to its respiratory functions, the nasal cavity
- also contains chemoreceptors that are needed for the sense of smell and that contribute importantly to the sense of taste. **Pharynx**

.

pharynx

- is a tube-like structure that connects the nasal cavity
- and the back of the mouth to other structures lower in the throat, including the larynx
- . The pharynx
- has dual functions: both air and food
- (or other swallowed substances) pass through it, so it is part of both the respiratory and digestive systems. Air passes from the nasal cavity
- through the pharynx
- to the larynx
- (as well as in the opposite direction). Food
- passes from the mouth through the pharynx
- to the esophagus

Larynx

- The **larynx**
- connects the pharynx
- and trachea
- and helps to conduct air through the respiratory tract
- . The larynx
- is also called the voice box because it contains the vocal cords, which vibrate when air flows over them, thereby producing sound

Trachea

- The **trachea**
- **,** or windpipe, is the widest passageway in the respiratory tract
- . It is about 2.5 cm (1 in.) wide and 10-15 cm (4-6 in.) long. It is formed by rings of cartilage
- , which make it relatively strong and resilient. The trachea
- connects the larynx
- to the lungs for the passage of air through the respiratory tract
- . The trachea
- branches at the bottom to form two bronchial tubes.

Bronchi and Bronchioles

- There are two main bronchial tubes, or **bronchi (singular, bronchus)**, called the right and left bronchi. The bronchi carry air between the
- trachea
- and lungs. Each bronchus branches into smaller, secondary bronchi; and secondary bronchi branch into still smaller tertiary bronchi. The smallest bronchi branch into very small tubules called bronchioles. The tiniest bronchioles end in alveolar ducts, which terminate in clusters of minuscule air sacs, called alveoli (singular, alveolus), in the lungs.

Lungs

- The **lungs** are the largest organs of the respiratory tract.
- They are suspended within the pleural cavity of the thorax . Have lobes, which are separated from each other by connective tissues. The right lung is larger and contains three lobes. The left lung

is smaller and contains only two lobes. The smaller left lung

allows room for the heart

which is just left of the center of the chest.

Cont.. ..

- The lungs receive blood
- from two major sources. They receive deoxygenated blood
- from the heart
- . This blood
- absorbs oxygen in the lungs and carries it back to the heart
- to be pumped to cells throughout the body. The lungs also receive oxygenated blood
- from the heart
- that provides oxygen to the cells of the lungs for cellular respiration

ASTHMA

- Asthma is a chronic inflammatory disease of the airways characterized by hyper responsiveness ,mucosal edema, and mucous production

Symptoms

Cough with or without mucus production

Chest tightness

Wheezing during exhation (breathing out)

Dyspnea

Risk factors

- Family history
- Allergy e.g. pollutants ,cold,heat,dust ,smoke or perfumes
- Exercise induced asthma -maximal symptoms during exercise, absence of nocturnal symptoms, and sometimes only a description of a “choking” sensation during exercise.
-

home-community based care

- Teach patient and family about asthma (chronic inflammatory), purpose and action of medications, triggers to avoid
and how to do so, and proper inhalation technique.
• Teach patient how to implement an action plan and how
and when to seek assistance.
• Obtain current educational materials for the patient based
on the patient's diagnosis, causative factors, educational
level, and cultural background.
- Emphasize adherence to prescribed therapy, preventive
measures, and need for follow-up appointments.

Chronic obstructive pulmonary diseases (COPD)

- COPD is a disease characterized by airflow limitation that is not fully reversible. The airflow limitation is usually progressive and associated with an abnormal inflammatory response of the lung to noxious particles or gases, resulting in narrowing of airways, hyper secretion

RISK FACTORS

- Chronic asthma
- Cigarettes smoking
- Air pollution
- Occupation exposure e.g. cotton, grain
- Complications from pneumonia, atelectasis

Clinical manifestations

- Chronic cough , sputum production and dyspnea on exertion .often worsen over time
- Other symptoms specific to asthma ,bronchitis ,emphysema

Home- and Community-Based Care

- Provide instructions about self-management; assess the knowledge of patients and family members about self-care and the therapeutic regimen.
  • Teach patients and family members early signs and symptoms of infection and other complications so that they seek appropriate health care promptly.

Cont.…

- • Instruct patient to avoid extremes of heat and cold and air pollutants (e.g., fumes, smoke, dust, talcum, lint, and aerosol sprays). High altitudes aggravate hypoxemia.
  • Encourage patient to adopt a lifestyle of moderate activity, ideally in a climate with minimal shifts in temperature and humidity; patient should avoid emotional disturbances and stressful situations; patient should be encouraged to stop smoking

Nose bleeding (epistaxis)

- Epistaxis is a hemorrhage from the nose caused by the rupture of tiny, distended vessels in the mucous membrane of any area of the nasal passage.

RISK FACTORS

infections, low humidity, nasal
inhalation of illicit drugs, trauma (including vigorous nose blowing and nose picking), arteriosclerosis, hypertension, nasal tumors, thrombocytopenia, aspirin use, liver disease, and hemorrhagic syndromes.

Management

- The patient sits upright with the head tilted forward to prevent swallowing and aspiration of blood and is directed to pinch the soft outer portion of the nose against the midline septum for 5 or 10 minutes continuously.
- If not stopping or bleeding cannot be identified the nose may be packed with gauze impregnated with petrolatum jelly or antibiotic ointment. The packing may remain in place for 48 hours or up to 5 or 6 days if necessary to control bleeding. And seek medical attention immediately

PHARYNGITIS

- Acute pharyngitis, commonly referred to as a “sore throat,” is a sudden painful inflammation of the pharynx, caused mostly by viral infections, with bacterial infections accounting for the remainder of cases

CLINICAL MANIFESTATION

Fiery-red pharyngeal membrane and tonsils.

- Lymphoid follicles swollen and freckled with white-purple exudate.
- Cervical lymph nodes enlarged and tender.
- Fever, malaise, and sore throat.
- Hoarseness.

Management

- Viral pharyngitis is treated with supportive measures, whereas antibiotic agents are used to treat pharyngitis caused by bacteria
- Encourage bed rest during febrile stage of illness; instruct frequent rest periods once patient is up and about
- Instruct patient about secretion precautions (e.g., disposing of used tissues properly) to prevent spread of infection
- Encourage patient to drink plenty of fluids, and encourage gargling with warm salt water to relieve throat discomfort. Using lozenges may help to keep the throat moist.

PNEUMONIA

- Pneumonia is an inflammation of the lung parenchyma caused by various microorganisms, including bacteria, mycobacteria, fungi, and viruses

CLASSIFICATION

- Community acquired pneumonia (CAP)
- Hospital acquired (nosocomial) pneumonia (HAP)
- pneumonia in the immunocompromised host e.g. cancer patient
- aspiration pneumonia

Clinical manifestations

- Sudden chills and rapidly rising fever (38.5C to 40.5C
  • chest pain aggravated by respiration and coughing.
  • Severely ill patient has marked tachypnea (25 to 45 breaths/min) and dyspnea; orthopnea when not propped up. Appetite is poor, and the patient is diaphoretic and tires easily.
- Sputum purulent, rusty, blood-tinged, viscous, or green depending on etiologic agent
- Headaches

Home and community based care

- Instruct patient to continue taking full course of antibiotics as prescribed; teach the patient about their proper administration and potential side effects.
  • Instruct patient about symptoms that require contacting the health care provider: difficulty breathing, worsening cough, recurrent/increasing fever, and medication intolerance.
  P
  • Advise patient to increase activities gradually after fever subsides.
  • Advise patient that fatigue and weakness may linger.
  patients at risk

Cont.…

- • Encourage breathing exercises to promote lung expansion and clearing.
  • Encourage follow-up chest x-rays.
  • Encourage patient to stop smoking.
  • Instruct patient to avoid stress, fatigue, sudden changes in temperature, and excessive alcohol intake, all of which lower resistance to pneumonia.
  • Review principles of adequate nutrition and rest.
  • Recommend influenza vaccine to all patients at risk

TUBERCULOSIS

- Tuberculosis (TB), an infectious disease primarily affecting the lung parenchyma, is most often caused by *Mycobacterium tuberculosis*. It may spread to almost any part of the body, including the meninges, kidney, bones, and lymph nodes

RISK FACTORS

- Close contact with someone who has active TB
- Immunocompromised status (e.g., elderly, cancer, corticosteroid therapy, and HIV)
- People lacking adequate health care (e.g., homeless or impoverished, minorities, children, and young adults)
  • Preexisting medical conditions, including diabetes, chronic renal failure, and malnourishment

CONT..

- • Immigrants from countries with a high incidence of TB
  •Institutionalization (e.g., long-term care facilities, prisons)
  • Living in overcrowded, substandard housing
  • Occupation (e.g., health care workers, particularly those performing high-risk activities)

Clinical manifestations

- Low-grade fever, cough, night sweats, fatigue, and weight loss
  • Nonproductive cough, which may progress to mucopurulent sputum with hemoptysis

Preventive measures

- Carefully instruct the patient about important hygiene measures, including mouth care, covering the mouth and nose when coughing and sneezing, proper disposal of tissues, and hand washing .
- Report any cases of TB to the health department so that people who have been in contact with the affected patient during the infectious stage can undergo screening and possible treatment, if indicated.
-

CONT….

- Instruct patient about the risk of spreading TB to other parts of the body (spread or dissemination of TB infection to no pulmonary sites of the bod
- Instruct relatives to open windows to allow ventilation of air in the rooms .

GROUP WORK

DISCUSS AND WRITE NOTES ON

1. Tonsillitis
2. Atelectasis
3. Pulmonary edema
4. Emphysema
5. Chest pains

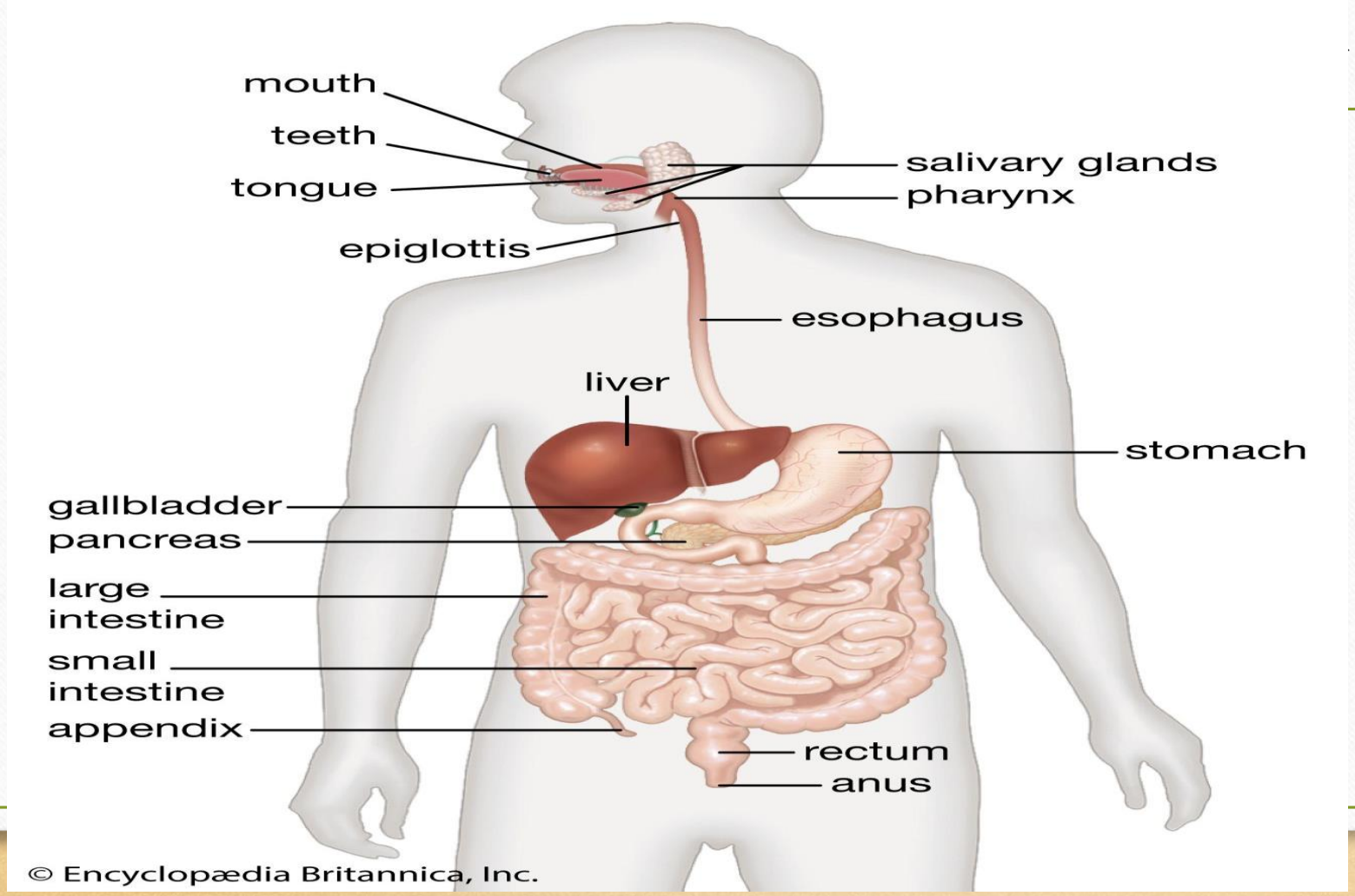
include

A. Definition
B. Clinical presentation /signs and symptoms
C. Preventive measures
D. Management and home remedies

GASTROINTESTINAL SYSTEM

- Gastrointestinal system runs from the mouth –esophagus – stomach-small intestine- large intestine –anus

DIAGRAM SHOWING THE GASTRO



MOUTH

- The mouth is **an oval-shaped cavity inside the skull**. The two main functions of the mouth are eating and speaking. Parts of the mouth include the lips, vestibule, mouth cavity, gums, teeth, hard and soft palate, tongue and salivary glands. The mouth is also known as the oral cavity or the buccal cavity.

esophagus

- The esophagus is **the muscular tube that carries food and liquids from your mouth to the stomach**. You may not be aware of your esophagus until you swallow something too large, too hot, or too cold.

STOMACH

- The stomach is **a J-shaped organ that digests food**. It produces enzymes (substances that create chemical reactions) and acids (digestive juices). This mix of enzymes and digestive juices breaks down food so it can pass to your small intestine **emulsification**

LIVER

- The liver is **your largest internal organ**., it's located mainly in the upper right portion of your abdomen, beneath the diaphragm and above your stomach.

FUNCTIONS OF A LIVER

- Bile production and excretion.
- Excretion of bilirubin, cholesterol, hormones, and drugs.
- Metabolism of fats, proteins, and carbohydrates.
- Enzyme activation.
- Storage of glycogen, vitamins, and minerals.
- Synthesis of plasma proteins, such as albumin, and clotting factors

small intestine

- The small intestine or small bowel is **an organ where most of the absorption of nutrients from food takes place**. It lies between the stomach and large intestine, and receives bile and pancreatic juice through the pancreatic duct to aid in digestion.

LARGE INTESTINE

- The large intestine, also known as the large bowel, is **the last part of the gastrointestinal tract and of the digestive system in vertebrates**. Water is absorbed here and the remaining waste material is stored in the rectum as feces before being removed by defecation

Conditions affecting gastrointestinal system

- Diarrhea
- Vomiting
- Diabetes mellitus
- Intestinal obstruction
- Constipation
- Peptic ulcerative disease (PUD)
- Gastritis

Diarrhea

Diarrhea is a condition defined by an increased frequency of bowel movements (more than three per day)

types of diarrhea

- secretory
- osmotic
- mal absorptive
- infectious
- exudative

clinical manifestation

- Increased frequency and fluid content of stool
  • Abdominal cramps, distention, intestinal rumbling (borborygmus), anorexia, and thirst
  • Painful spasmodic contractions of the anus and ineffectual straining (tenesmus) with each defecation

Management

- Inspect mucous membranes and skin to determine hydration status, and assess perianal area.
- Increase oral fluids; oral glucose and electrolyte solution maybe prescribed.
- IV therapy is used for rapid hydration in very young or elderly patients.
- Antimicrobials are prescribed when the infectious agent has been identified or diarrhea is severe
- Recommend bland diet (semisolids to solids) when food intake is tolerated.

Cont..

- Encourage patient to limit intake of caffeine and carbonated beverages, and avoid very hot and cold foods because these increase intestinal motility.
- Advise patient to restrict intake of milk products, fat, whole grain products, fresh fruits, and vegetables for several days
- Monitor serum electrolyte levels closely

CONSTIPATION

- Constipation refers to an abnormal infrequency or irregularity of defecation, abnormal hardening of stools that makes their passage difficult and sometimes painful, decrease in stool volume, or prolonged retention of stool in the rectum

CAUSES

certain medications e.g. zinc sulphate

rectal or anal disorders; obstruction; metabolic, neurologic, and neuromuscular conditions; endocrine disorders;

lead poisoning;

connective tissue disorders; and a variety of disease conditions.
weakness, immobility, debility, fatigue,

inability to increase intra-abdominal pressure to pass stools.

CONT…….

develops when people do not take the time or ignore the urge to defecate or as the result of

dietary habits (low consumption of fiber and inadequate fluid intake),

lack of regular exercise, and a stress-filled life.

Chronic laxative use .

Clinical manifestations

- Fewer than three bowel movements per week, abdominal distention, and pain and pressure
  • Decreased appetite, headache, fatigue, indigestion, sensation of incomplete emptying
  • Straining at stool; elimination of small volume of hard, dry stool
  • Complications such as hypertension, hemorrhoids and fissures, fecal impaction, and megacolon

management

- Treatment should target the underlying cause of constipation and aim to prevent recurrence, including education,
bowel habit training, increased fiber and fluid intake, and
judicious use of laxatives.
• Discontinue laxative abuse; increase fluid intake; include
fiber in diet; try biofeedback, exercise routine to strengthen
abdominal muscles.
• If laxative is necessary, use bulk-forming agents, saline and
osmotic agents, lubricants, stimulants, or fecal softeners.
• Specific medication therapy to increase intrinsic motor
function (eg, cholinergics, cholinesterase inhibitors, or prokinetic agents).

DIABATES MELLITUS

- Diabetes mellitus is a group of metabolic disorders characterized by elevated levels of blood glucose (hyperglycemia) resulting from defects in insulin secretion, insulin action, or both

TYPES OF DIABATES MELLITUS (DM)

Type 1 DM –is characterized by destruction of pancreas due to genetic ,immunologic and possibly environmental e.g. viral .insulin injections is needed to control blood glucose level .has sudden onset before age of 30 years

Type 2 DM - It results from a decreased sensitivity to insulin (insulin resistance) or from a decreased amount of insulin production.
• Type 2 diabetes is first treated with diet and exercise, and then with oral hypoglycemic agents as needed.

Gestational DM – occurs during pregnancy

Drug induced DM – occurs as a result of drugs e.g. steroids e.g. prednisolone

Clinical manifeststations

- Polyuria, polydipsia, and polyphagia.
  • Fatigue and weakness, sudden vision changes, tingling or numbness in hands or feet, dry skin, skin lesions or wounds that are slow to heal, and recurrent infections.
  • Onset of type 1 diabetes may be associated with sudden weight loss or nausea, vomiting, or stomach pains.

Cont..

- Type 2 diabetes results from a slow (over years), progressive glucose intolerance and results in long-term complications if diabetes goes undetected for many years (e.g., eye disease, peripheral neuropathy, peripheral vascular disease). Complications may have developed before the actual diagnosis is made.
  • Signs and symptoms of DKA include abdominal pain, nausea, vomiting, hyperventilation, and a fruity breath odor.
  Untreated DKA may result in altered level of consciousness, coma

Management

- Physical exercise
- Lifestyle modification
- Meal plan and taking diabetic meals
- Taking drugs as prescribed
- Regularly monitoring blood sugar as adviced

GASTRITIS

- Gastritis is inflammation of the stomach mucosa. Acute gastritis lasts several hours to a few days and is often
- caused by
  dietary indiscretion (eating irritating food that is highly seasoned or food that is infected).
- excessive use of aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs),

CONT…..

- excessive alcohol intake, bile reflux, and radiation therapy.
- A more severe form of acute gastritis is caused by strong acids or alkali, which may cause the mucosa to become gangrenous or to perforate.
- Gastritis may also be the first sign of acute systemic infection (HELICOBACTOR PYLORI)

CLINICAL PRESENTATION

- **Acute Gastritis**
  May have rapid onset of symptoms: abdominal discomfort, headache, lassitude, nausea, anorexia, vomiting, and hiccupping
  Chronic Gastritis
  • May be asymptomatic.
  • Complaints of anorexia, heartburn after eating, belching, a sour taste in the mouth, or nausea and vomiting.
  • Patients with chronic gastritis from vitamin deficiency usually have evidence of malabsorption of vitamin B12.

MANAGEMENT

- Avoiding acidic foods e.g. caffeine, nicotine, spicy foods, irritating or highly seasoned foods,
- Analgesics e.g. paracetamol
- Anti acids
- Avoiding acidic drugs e.g. Diclofenac
- Stress management Discourage caffeinated beverages (caffeine increases gastric activity and pepsin secretion), alcohol, and cigarette smoking (nicotine inhibits neutralization of gastric acid in the duodenum).

PEPTIC ULCERS

- A peptic ulcer is an excavation formed in the mucosal wall of the stomach, pylorus, duodenum, or esophagus. It is frequently referred to as a gastric, duodenal, or esophageal ulcer, depending on its location
- Peptic ulcers are more likely to be in the duodenum than in the stomach.

Causes

- Helicobacter pylori (h pylori)
- Chronic use of NSAIDS drugs e.g. diclofenac
- Alcoholism
- Excessive smoking
- High degree stress

Clinical manifestations

- Symptoms of an ulcer may last days, weeks, or months and may subside only to reappear without cause. Many patients have asymptomatic ulcers.
  • Dull, gnawing pain and a burning sensation in the midepigastrium or in the back are characteristic.
  • Pain is relieved by eating or taking alkali; once the stomach has emptied or the alkali wears off, the pain returns.
  • Sharply localized tenderness is elicited by gentle pressure on the epigastrium or slightly right of the midline.
  • Other symptoms include pyrosis (heartburn) and a burning sensation in the esophagus and stomach, which moves up to the mouth, occasionally with sour eructation (burping).
  • Vomiting is rare

Management

- Stress reduction and rest are priority interventions. The patient needs to identify situations that are stressful or exhausting . implement changes, such as establishing regular rest periods during the day .
- Smoking cessation is strongly encouraged because smoking raises duodenal acidity and significantly inhibits ulcer repair.
-

CONT..

- Dietary modification may be helpful. Patients should eat whatever agrees with them . Alcohol and caffeinated beverages such as coffee (including d Diets rich in milk and cream should be avoided also because they are potent acid stimulators. caffeinated coffee, which stimulates acid secretion) should be avoided .
- Monitor vital signs closely
- Drugs e.g. antacids

HEPATITIS B

- Hepatitis B virus (HBV) is a DNA virus transmitted primarily through blood. The virus has been found in saliva, semen, and vaginal secretions and can be transmitted through mucous membranes and breaks in the skin. Hepatitis B has a long incubation period (1 to 6 months). It replicates in the liver and remains in the serum for long periods, allowing transmission of the virus.

RISK FACTORS

- Those at risk include
- all health care workers,
- patients in hemodialysis and oncology units,
- Sexually active homosexual and bisexual men,
- and IV drug users.
  About 10% of patients progress to a carrier state or develop chronic hepatitis. Hepatitis B remains a major worldwide cause of cirrhosis and hepatocellular carcinoma.

CLINICAL MANIFESTATION

- Symptoms may be insidious and variable; subclinical episodes frequently occur, fever and respiratory symptoms are rare; some patients have arthralgias and rashes.
  • Loss of appetite, dyspepsia, abdominal pain, general aching, malaise, and weakness may occur.
  • Jaundice may or may not be evident. With jaundice, there are light-colored stools and dark urine.
  • Liver may be tender and enlarged; spleen is enlarged and palpable in a few patients. Posterior cervical lymph nodes may also be enlarged.

PREVENTION

- Screening of blood donors
  - Good personal hygiene
  - Education
  - Hepatitis B vaccine

MANAGEMENT

- Convalescence may be prolonged and recovery may take 3 to 4 months; encourage gradual activity after complete clearing of jaundice.
  • Identifies psychosocial issues and concerns, particularly the effects of separation from family and friends if the patient is hospitalized; if not hospitalized, the patient will be unable to work and must avoid sexual contact.
  • Include family in planning to help reduce their fears and anxieties about the spread of the disease.
  • Instruct patient and family to provide adequate rest and nutrition.
  • Inform family and intimate friends about risks of contracting hepatitis B.

CONT…

- • Arrange for family and intimate friends to receive hepatitis B vaccine or hepatitis B immune globulin as prescribed.
  • Caution patient to avoid drinking alcohol and eating raw shellfish.
  • Inform family that follow-up home visits by home care nurse are indicated to assess progress and understanding, reinforce teaching, and answer questions.

CONT…

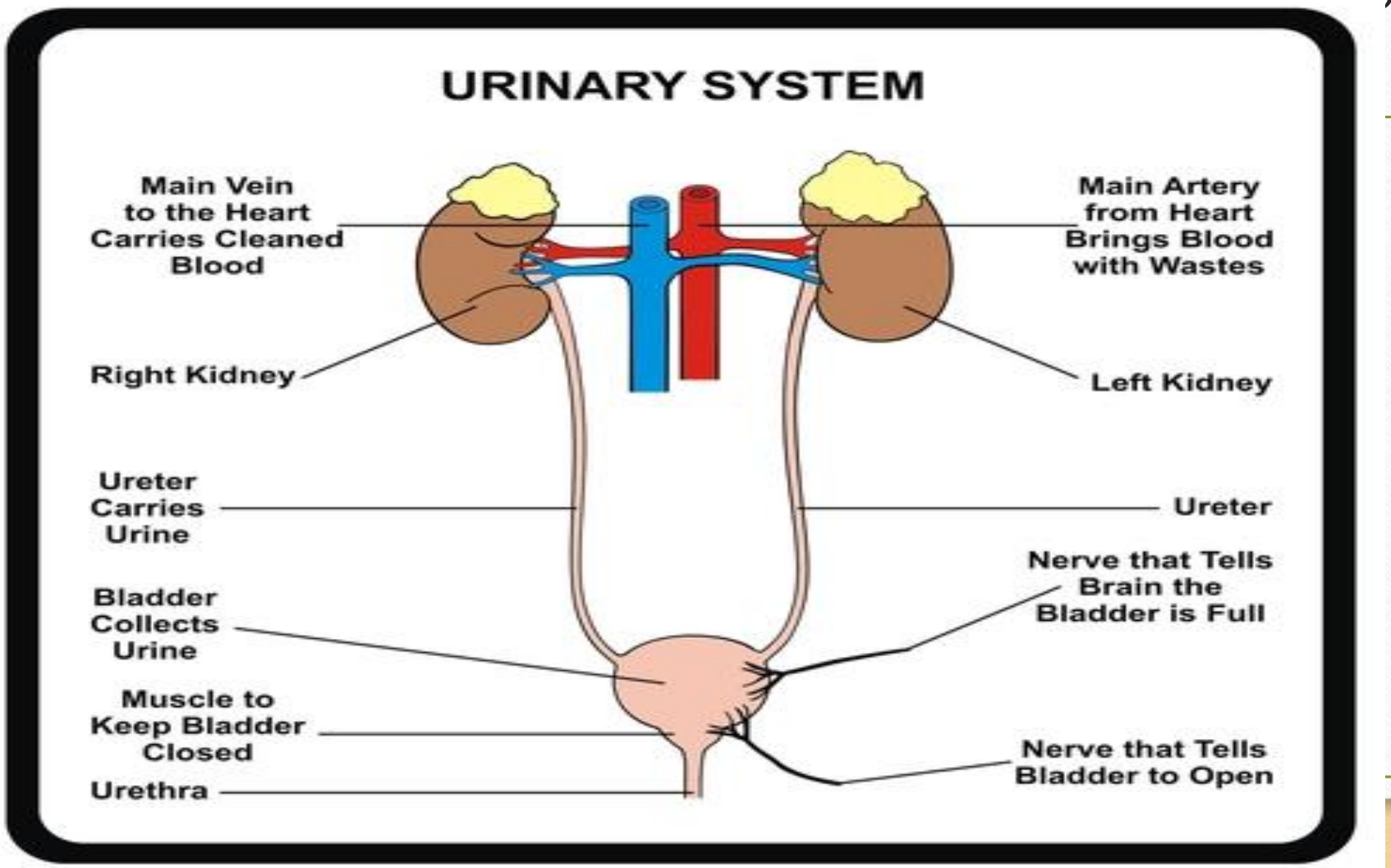
- • Encourage patient to use strategies to prevent exchange of body fluids, such as avoiding sexual intercourse or using condoms.
  • Emphasize importance of keeping follow-up appointments and participating in other health promotion activities and recommended health screenings.

GENITAL URINALY SYSTEM

RENAL FAILURE

- Renal failure results when the kidneys are unable to remove metabolic waste and perform their regulatory functions. Acute renal failure (ARF) is a rapid loss of renal function due to damage to the kidneys.

DIAGRAM SHOWING URINALY SYSTEM



KIDNEYS

- The kidneys' function is to **filter your blood**. They remove wastes, control the body's fluid balance, and keep the right levels of electrolytes. All of the blood in your body passes through them. Blood comes into the kidney, waste gets removed, and salt, water, and minerals are adjusted, if needed.

Ureter

- The ureter is **a tube that carries urine from the kidney to the urinary bladder**. There are two ureters, one attached to each kidney. The upper half of the ureter is located in the abdomen and the lower half is located in the pelvic area.

Bladder

- Bladder. This triangle-shaped, hollow organ is located in the lower abdomen. It is held in place by ligaments that are attached to other organs and the pelvic bones. The bladder's walls **relax and expand to store urine, and contract and flatten to empty urine through the urethra**.

Urethra

- Urethra. This tube **allows urine to pass outside the body**. The brain signals the bladder muscles to tighten, which squeezes urine out of the bladder. At the same time, the brain signals the sphincter muscles to relax to let urine exit the bladder through the urethra.

CATEGORIES OF ACUTE RENAL FAILURE

- Three major categories of ARF are prerenal (hypo perfusion, as from volume depletion disorders, extreme vasodilation, or impaired cardiac performance); intrarenal (parenchymal damage to the glomeruli or kidney tubules, as from burns, crush injuries, infections, transfusion reaction, or nephrotoxicity, which may lead to acute tubular necrosis [ATN]); and postrenal (urinary tract obstruction, as from calculi, tumor, strictures, prostatic hyperplasia, or blood clots)

Clinical manifestation

- Critical illness and lethargy with persistent nausea, vomiting, and diarrhea.
  • Skin and mucous membranes are dry.
  • Central nervous system manifestations: drowsiness, headache, muscle twitching, seizures.
  • Urine output scanty to normal; urine may be bloody with low specific gravity.
- Anemia from blood loss due to uremic GI lesions, reduced red blood cell life-span, and reduced erythropoietin production.
- Hyperkalemia may lead to dysrhythmias and cardiac arrest.

Management

- Monitoring fluid and electrolyte balance

Screen parenteral fluids, all oral intake, and all medications for hidden sources of potassium.
• Monitor cardiac function and musculoskeletal status for signs of hyperkalemia.
• Pay careful attention to fluid intake , urine output, apparent edema, distention of the jugular veins, alterations in heart sounds and breath sounds, and increasing difficulty in breathing.
• Maintain daily weight and intake and output records.
.

Cont..

- Adequate intake of calories and vitamins is ensured. Calories are supplied with carbohydrates and fats to prevent
  wasting.
  • Protein is restricted; allowed protein must be of high biologic value (dairy products, eggs, meats).
- Vitamin supplementation.
  • Report indicators of deteriorating fluid and electrolyte status immediately. Prepare for emergency treatment of hyperkalemia. Prepare patient for dialysis as indicated to correct fluid and electrolyte imbalances

BENIGN PROSTETIC HYPERPLASIA (BPH)

- Benign prostatic hyperplasia (BPH) is enlargement, or hypertrophy, of the prostate gland. The prostate gland enlarges,
  extending upward into the bladder and obstructing the outflow of urine.
  BPH is common in men older than 40 years

CLINICAL MANIFESTATIONS

- • Hesitancy in starting urination, increased frequency of urination, nocturia, urgency, abdominal straining.
  • Decrease in volume and force of urinary stream, interruption of urinary stream, dribbling.
  • Sensation of incomplete emptying of the bladder, acute urinary retention (more than 60 mL), and recurrent UTIs.
  • Fatigue, anorexia, nausea and vomiting, and pelvic discomfort are also reported, and ultimately azotemia and renal failure result with chronic urinary retention and large residual

MANAGENT

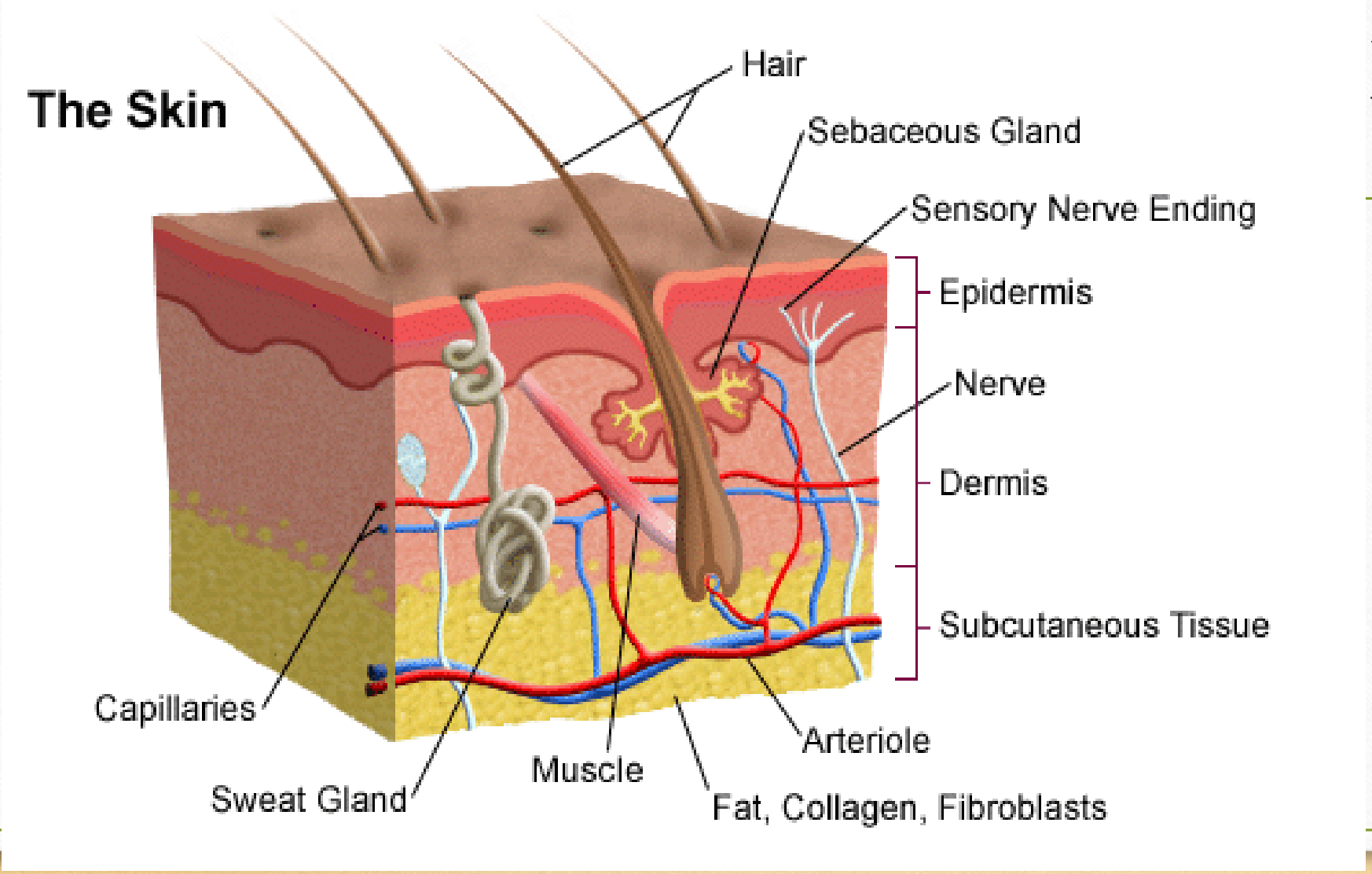
- Urinary catheterization
- Treatment of the Urinary tract infections
- Prostatectomy

Task

- Urinary tract infection
- Candidiasis
- Prostitis
- Cancer
- Acne valguris

MUSCULAR SKELETAL AND SKIN

KIN


The Skin
Hair
Sebaceous Gland
Sensory Nerve Ending
Epidermis
Nerve
Dermis
Subcutaneous Tissue
Capillaries
Sweat Gland
Muscle
Arteriole
Fat, Collagen, Fibroblasts

Functions of the skin

- Provides a protective barrier against mechanical, thermal and physical injury and hazardous substances.
- Prevents loss of moisture.
- Reduces harmful effects of UV radiation.
- Acts as a sensory organ (touch, detects temperature).
- Helps regulate temperature.
- An immune organ to detect infections.

OSTEOARTHRITIS

- OA, also known as degenerative joint disease or osteoarthrosis, is the most common and most frequently disabling joint
disorder. It is characterized by a progressive loss of joint cartilage

RISK FACTORS

- age, OA peaks between the fifth and sixth decades of life
- congenital and
  developmental disorders of the hip
- obesity
- previous joint damage
- repetitive use (occupational or recreational), anatomic
  deformity

CLINICAL MANIFESTATION

Pain, stiffness, and functional impairment are primary clinical manifestations.

- Stiffness is most common in the morning after awakening.

It usually lasts less than 30 minutes and decreases with movement.

- Functional impairment is due to pain on movement and limited joint motion when structural changes develop.
- OA occurs most often in weight-bearing joints (hips, knees, cervical and lumbar spine); finger joints are also involved.

MEDICAL MANAGEMENT

- Management focuses on slowing and treating symptoms
  because there is no treatment available that stops the degenerative joint disease process.

PREVENTION

- Weight reduction
  - Prevention of injuries
  - Perinatal screening for congenital hip disease
  - Exercise

FRACTURES

- A fracture is a complete or incomplete disruption in the continuity of bone structure and is defined according to its type and extent. Fractures occur when the bone is subjected to stress greater than it can absorb

CAUSES

- Fractures can be caused by a
  direct blow, crushing force, sudden twisting motion, or even
  extreme muscle contractions.

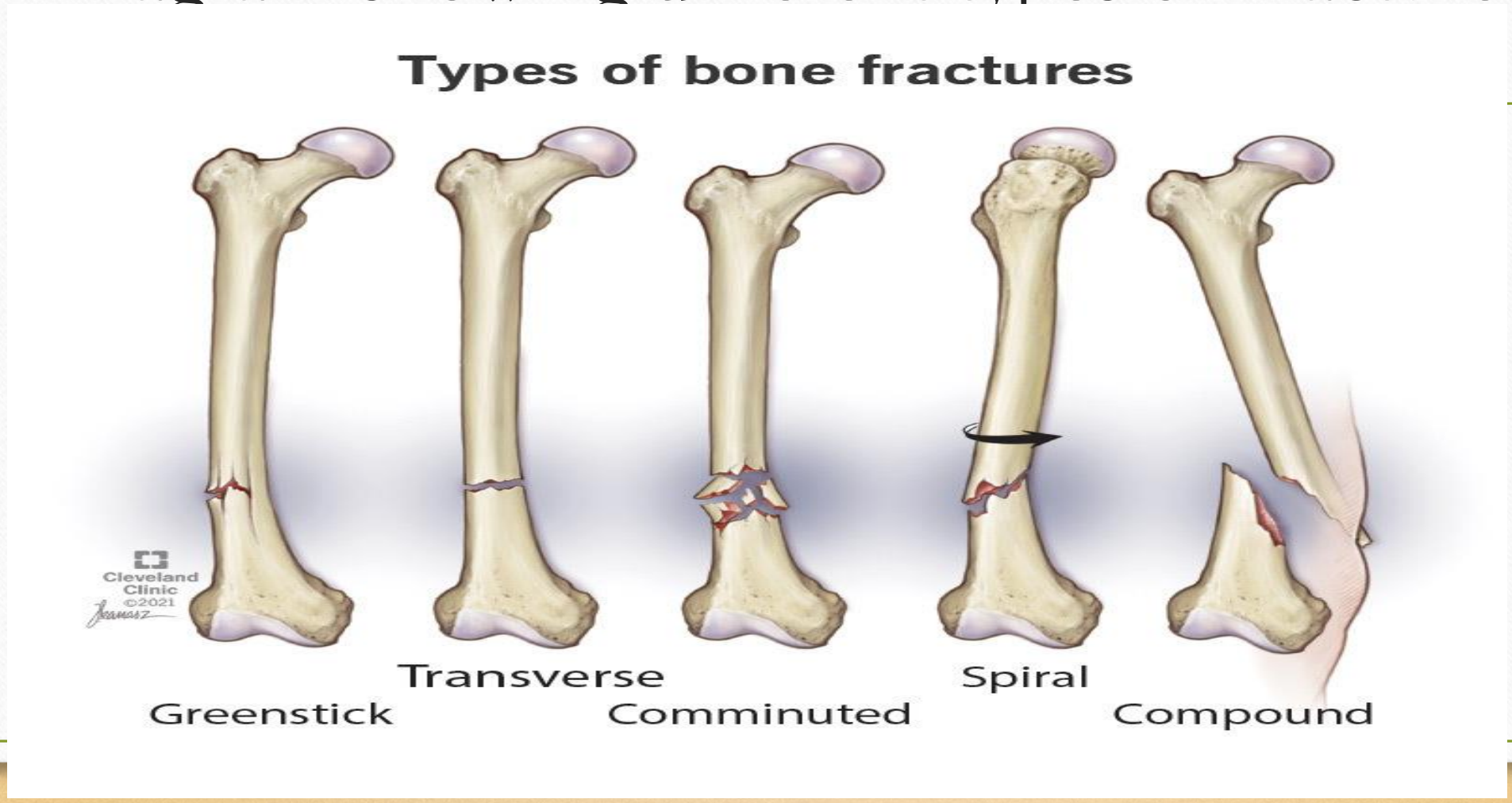
TYPES OF FRACTURES

- Complete fracture: a break across the entire cross section of the bone, which is frequently displaced.
  • Incomplete fracture, also called greenstick fracture: Break occurs only through part of the cross section of the bone.
  • Comminuted fractures: a break with several bone fragments.
  • Closed fracture, or simple fracture: does not produce a break in the skin.

CONT…

• Open fracture, or compound or complex fracture: a break in which the skin or mucous membrane wound extends to the fractured bone. Open fractures are graded as follows: grade I: a clean wound less than 1 cm long; grade II: a larger wound without extensive soft tissue damage; grade III: wound is highly contaminated and has extensive soft tissue damage (most severe type).
• An intra-articular fracture extends into the joint surface of a bone.

Diagram showing different types of fractures



The clinical signs and symptoms of a fracture

- Acute pain
- loss of function
- Deformity
- shortening of the extremity
  crepitus, localized edema

EMERGENCY MANAGEMENT

- Immediately after injury, immobilize the body part before the patient is moved.
  • Splint the fracture, including joints adjacent to the fracture, to prevent movement of fracture fragments.
  • Immobilization of the long bones of the lower extremities may be accomplished by bandaging the legs together, with the unaffected extremity serving as a splint for the injured one.

CONT……..

- In an upper extremity injury, the arm may be bandaged to the chest, or an injured forearm may be placed in a sling.
  • Assess neurovascular status distal to the injury both before and after splinting to determine adequacy of peripheral tissue perfusion and nerve function.
  • Cover the wound of an open fracture with a sterile dressing to prevent contamination of deeper tissues.

MANAGING CLOSED FRACTURES

- Instruct the patient regarding the proper methods to control edema and pain (eg, elevate extremity to heart level,
  take analgesics as prescribed).
  • Teach exercises to maintain the health of unaffected muscles and to strengthen muscles needed for transferring and
  for using assistive devices (eg, crutches, walker).

CONT……

- Teach patients how to use assistive devices safely.
  • Arrange to help patients modify their home environment as needed and to secure personal assistance if necessary.
  • Provide patient teaching, including self-care, medication information, monitoring for potential complications, and the need for continuing health care supervision.

MANAGING OPEN FRACTURE

- The objectives of management are to prevent infection of the wound, soft tissue, and bone and to promote healing of bone and soft tissue. In an open fracture, there is the risk of osteomyelitis, tetanus, and gas gangrene.
  • Administer IV antibiotics immediately upon the patient's arrival in the hospital along with tetanus toxoid if needed.

CONT…….

- Perform wound irrigation and debridement.
- Elevate the extremity to minimize edema.
- Assess neurovascular status frequently.
- Take the patient's temperature at regular intervals, and monitor for signs of infection.

GROUP WORK

DISCUSS AND WRITE NOTES ON

Discuss and write notes on :

Dermatitis

include

A. Definition
B. Causes
C. Clinical presentation /signs and symptoms
D. Preventive measures
E. Management and home remedies