

**Ministry of Higher Education and Scientific Research
Middle Technical University
Technical Institute/Baquba**

Educational Case for

Medical–Surgical Nursing

(Theoretical Part)

**First stage
Nursing Department**

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Unit 1

Targeted Population The students in the first stage for nursing department

Rational This unit designed to learn:
definitions for the terms *health* and *illness*
the importance of health promotion in patient care.

Central Ideas

- Health definition
- Factors affecting health
- Nursing Process

Objectives after studying this unit, you'll learn:
Roles and functions of a medical-surgical nurse
Definitions for the terms *health* and *illness*
The importance of health promotion in patient care.

Pre-Test

1. A nurse in a health care clinic is evaluating the level of wellness for patient using the health/wellness/illness continuum tool. Which of the following clients is measured at the center of the continuum?
A. A college student who has influenza
B. An older adult who is newly diagnosed with type 2 diabetes mellitus
C. A new mother who has a urinary tract infection
D. A young male who has a long history of well-controlled rheumatoid arthritis
2. A nurse is evaluating patient at a health fair for modifiable variables affecting health and wellness. The nurse identifies which of the following as a modifiable variable?
A. A male who smokes on social occasions
C. An adult with alopecia
D. An adolescent with Trisomy 21

Week 1

Health: World Health Organization (WHO) defines health as a “ state of completes physical, mental and social wellbeing, not merely the absence of disease or infirmity.

Factors affecting health

1. Genetics
2. Cognitive Abilities
3. Demographic Factors
4. Geographic Locale
5. Culture
6. Lifestyle and Environment
7. Health Beliefs and Practices
8. Previous Health Experiences
9. Spirituality
10. Support Systems

Nursing Process

The nursing process is a systematic method for assessing health status, diagnosing health care needs, formulating a plan of care, initiating plan and evaluating the effectiveness of plan. The nursing process consists of five interrelated phases:-

1. Assessment
2. Diagnosis
3. Planning
4. Implementation
5. Evaluation



1. Assessment :- This refers to a systematic collection of data, to assist in identifying needs and problems. Data are collected in a systematic fashion, utilizing the interview or nursing history, physical examinations, laboratory results and other resources.

2. Diagnosis :- Nursing diagnosis is a clinical judgment about individual family or community responses to actual and potential health problems and life processes. During this phase, the data collected during assessment are critically analyzed and interpreted.

3. Planning: - Planning is a systematic approach in developing a plan of action based on a careful assessment. Strategies are developed to prevent, minimize or connect the problems identified in the nursing diagnosis. It consists of several steps including establishing priorities, setting objectives, writing interventions, recording outcomes of nursing interventions in an organized fashion to complete the nursing care plan.

4. Implementation:- It refers to carry out a plan that is based on careful assessment of need. It is the initiation and completion of action necessary to achieve the outcomes or objectives.

5. Evaluation:- It is an ongoing process that determines the extent to which the goals care has been achieved. The nurses assess the progress of the patient, institute corrective measures if required, and revise the nursing care plan.

Advantages of nursing process : The nursing process helps the nurse and the nursing in many ways:

1. Create a health data base of a patient.
2. Identify actual or potential health problems of a patient.
3. Establish priorities of nursing actions for providing proper services to the patients.
4. Develop planned organized and individualized nursing care.
5. Increase the effectiveness of nursing care.

Post-Test

1. Which action is an example of health promotion?
 - A. Administering antibiotics to a patient
 - B. Splinting a patient's fractured bone
 - C. Assisting a patient in smoking cessation
 - D. Inserting an I.V. catheter

2. The effect of illness on a family unit depends on several factors, including:
 - A. when the illness occurs.
 - B. which family member is affected.
 - C. whether the illness is due to poor health habits.
 - D. at what point the patient sought care.

Unit 2&3

Targeted Population The students in the first stage for nursing department

Rational This unit designed to learn:

Techniques for assessing the GI system and interpreting abnormal findings.

Relevant nursing diagnoses for GI disorders.

Nursing care for common GI disorders.

Central Ideas

- Appendicitis
- Hernia

Objectives after studying this unit, you'll learn:

Anatomy and physiology of the GI system.

Important questions and discussion topics for the health history.

Techniques for assessing the GI system and interpreting abnormal findings.

Pre-Test

1. What is the most important sign in Appendicitis

A. Headache

B. Cough

C. Colic and Pain

2. Complications of Hernia

A. Irreducibility

B. Obstruction

C. Strangulation

D. All above

Week 2&3**Appendicitis**

Appendicitis occurs when the appendix becomes inflamed. It's the most common major surgical emergency. The appendix may harbor good bacteria that protect the gut and play a role in the immune system. Although it can occur at any age, it more commonly occurs between the ages of 10 and 30 years.

Causes

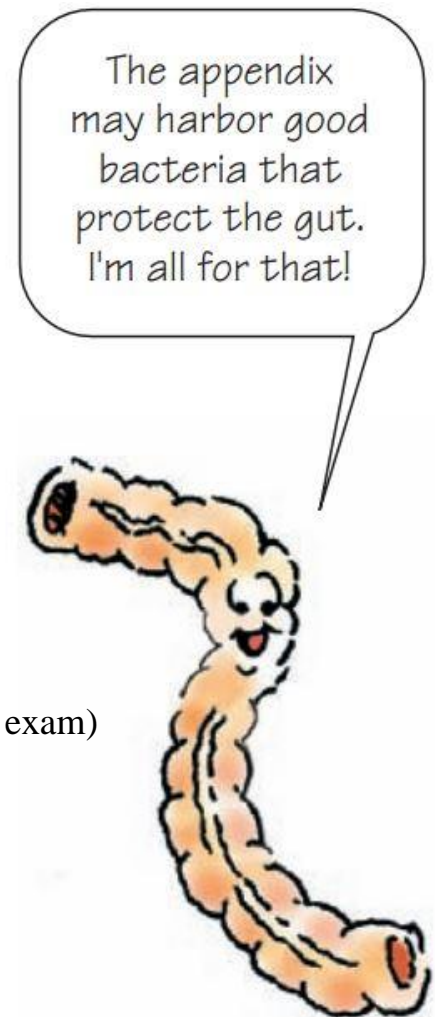
1. Mucosal Ulceration
2. Fecal Mass
3. Stricture
4. Barium Ingestion
5. Viral Infection.

Signs and Symptoms

1. Abdominal pain in the right lower quadrant
2. Rebound tenderness
3. Guarding (protecting the abdomen from painful exam)
4. Rigidity of the abdomen
5. Fever
6. Nausea, vomiting, loss of appetite

Laboratory Tests and Diagnostic Procedures

1. Diagnosis is based on a complete physical examination and laboratory and imaging tests.
2. CT scan shows enlarged appendix.
3. Ultrasound may show enlarged appendix.
4. Elevated white blood cell count (WBC).



Medical Management

1. Surgery (conventional or laparoscopic) is indicated if appendicitis is diagnosed and should be performed as soon as possible to decrease risk of perforation.
2. Administer antibiotics and IV fluids until surgery is performed.
3. Analgesic agents can be given after diagnosis is made.

Complications of Appendectomy

1. The major complication is perforation of the appendix, which can lead to peritonitis, abscess formation (collection of purulent material), or portal pylephlebitis.
2. Perforation generally occurs 24 hours after the onset of pain. Symptoms include a fever of 37.7C or greater, a toxic appearance, and continued abdominal pain or tenderness.

Nursing Care

1. Nursing goals include relieving pain, preventing fluid volume deficit, reducing anxiety.
2. Preoperatively, prepare patient for surgery, start IV line, administer antibiotic.
3. Postoperatively, place patient in high Fowler's position, give narcotic analgesic as ordered, administer oral fluids, give food as desired on day of surgery (if tolerated).
4. If a drain is left in place at the area of the incision, monitor carefully for signs of intestinal obstruction, secondary hemorrhage, or secondary abscesses.

Hernia

Hernia is the protrusion of an organ through its containing wall, could be either congenital or acquired. Its divided into ***External*** hernias which are common and ***Internal*** hernias which are rare.

Types

External abd. Hernias → inguinal

→ femoral

→ umbilical

→ incisional

→ epigastric

Internal abd. Hernias → diaphragmatic

→ paraduodenal

→ paracaecal

→ iatrogenic internal

Predisposing factors

A hernia occurs because of

(a) weakness or defect in the abdominal wall.

(b) positive intra-abdominal pressure (IAP) (which is often raised) forces the viscus into the defect.

Complications

Most hernias are uncomplicated at presentation. The three important complications of hernias are, in order of progression,

1. **Irreducibility:** when the contents of the sac of the hernia can't be replaced into the abdomen.
2. **Obstruction:** a loop of the bowel is trapped within the sac of the hernia in such a way that the lumen but not the blood supply is obstructed.
3. **Strangulation:** the blood supply to the content of the sac has been cut, so they are dead or dying, It is acutely tender.

Treatment

Uncomplicated hernias require either no treatment, support with a truss, or operative treatment, whereas complicated hernias always require surgery, often urgently.

Nursing Care

1. Teach patient to wear truss pad with hernia belt during waking hours.
2. Teach patient to avoid increasing intra-abdominal pressure for 2 to 3 weeks postoperatively (avoid coughing, straining, heavy lifting).



Post-Test

1. Which of the following would indicate that a patient's appendix has ruptured?

A .Diaphoresis

B .Anorexia

C .Pain at Mc Burney's point

D .Relief from pain

2. By far most hernias develop in the:

A. Head

B. Heart

C. Abdomen

D. face

Unit 4

Targeted Population The students in the first stage for nursing department

Rational This unit designed to learn:

Important questions and discussion topics for the health history.

Techniques for assessing the GI system and interpreting abnormal findings.

Relevant nursing diagnoses for GI disorders.

Nursing care for common GI disorders.

Central Ideas

- Cholecystitis
- Hepatitis
- Cirrhosis

Objectives after studying this unit, you'll learn:

Anatomy and physiology of the GI system.

Important questions and discussion topics for the health history.

Techniques for assessing the GI system and interpreting abnormal findings.

Pre-Test

1. Which statement about hepatitis is true?
 - A. Type A hepatitis can lead to fulminant hepatitis.
 - B. Type B hepatitis is transmitted via blood products, urine, and other body fluids.
 - C. Type C hepatitis is transmitted via the fecal-oral route only.
 - D. Type D hepatitis is mild in severity

2. When assessing a patient in the early stages of cirrhosis of the liver, what sign would be anticipated?
 - A. Jaundice
 - B. Peripheral edema
 - C. Ascites
 - D. Anorexia

Week 4**Cholecystitis**

An inflammation of the gallbladder, often accompanied by the formation of gallstones (cholelithiasis), is cholecystitis. The inflammation may be either acute or chronic in nature.

Signs and Symptoms

1. Upper abdominal, epigastric, or right upper quadrant abdominal pain which may radiate to right shoulder.
2. Nausea and vomiting, especially following fatty foods.
3. Loss of appetite.
4. Fever.
5. Pruritis (itching) of skin due to build-up of bile salts.
6. Clay-colored stools and Dark, foamy urine.
7. Jaundice—yellowish skin, sclera and mucous membrane discoloration.

Laboratory Tests and Diagnostic Procedures

1. WBC increased indicates inflammation
2. Direct, indirect, and total serum bilirubin
3. Serum cholesterol (greater than 200 mg/dL)
4. Ultrasound
5. abdominal X-ray or CT scan
6. Cholangiography

Complications

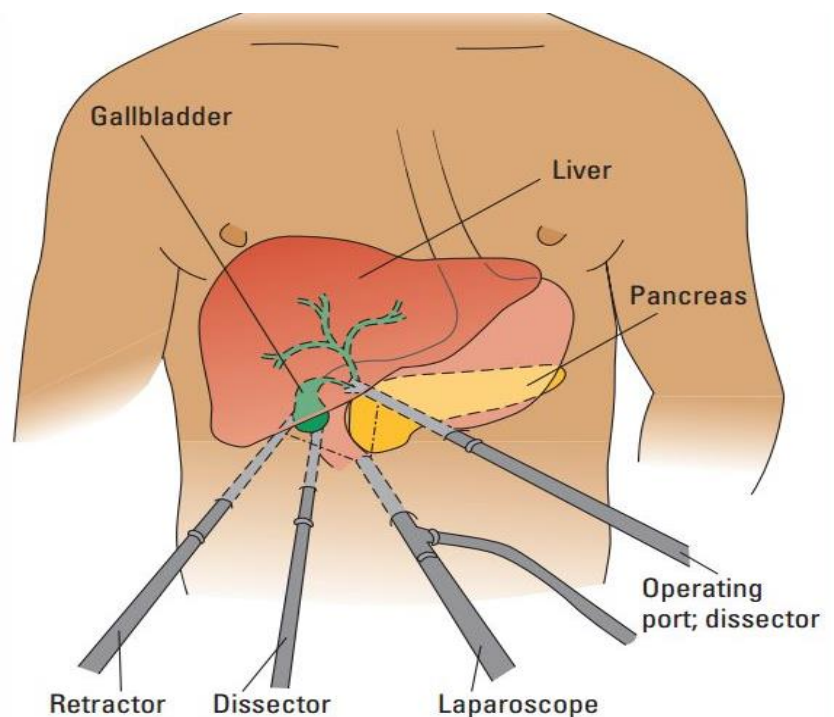
1. Obstruction of the bile duct.
2. Bile peritonitis.
3. Post-cholecystectomy syndrome (PCS).

Treatment

1. Low-fat diet.
2. Intravenous fluid replacement for vomiting and antiemetic for control of nausea and vomiting (Meclodine).
3. Replace fat-soluble vitamins (A, D, E, K) as needed.
4. Administer analgesics for adequate pain control.
5. Administer antibiotics for acute symptoms.
6. Surgical removal of gallbladder.

Nursing Care

1. Monitor vital signs for changes in temperature, pulse rate, respiratory rate, and blood pressure.
2. Assess abdomen for bowel sounds, distention, and tenderness.
3. Assess pain level for adequate pain control.
4. Assess postoperative wound for drainage, signs of infection.
5. Monitor T-tube drainage in postoperative open cholecystectomy patients; empty and record at least every 8 hours.
6. Advance diet to low-fat diet postoperatively as tolerated



Hepatitis

Hepatitis is an inflammation of the liver cells. This is most commonly due to a viral cause which may be either an acute illness or become chronic. The disease may also be due to exposure to drugs or toxins.

There are five major categories of viral hepatitis:

1. Hepatitis A virus (HAV)
2. Hepatitis B virus (HBV)
3. Hepatitis C virus (HCV)
4. Hepatitis D virus (HDV)
5. Hepatitis E virus (HEV)

TYPE	ROUTE OF TRANSMISSION	RISK FACTORS
Hepatitis A (HAV)	› Fecal-oral route	› Ingestion of contaminated food or water › Close personal contact with an infected individual
Hepatitis B (HBV)	› Blood	› Unprotected sex with infected individual › Infants born to infected mothers › Contact with infected blood › Injection drug users
Hepatitis C (HCV)	› Blood	› Drug abuse › Sexual contact
Hepatitis D (HDV)	› Coinfection with HBV	› Injection drug users › Unprotected sex with infected individual
Hepatitis E (HEV)	› Fecal-oral route	› Ingestion of contaminated food or water

Signs and Symptoms**Acute hepatitis:**

1. Malaise
2. Nausea and vomiting
3. Diarrhea or constipation
4. Low-grade fever
5. Dark urine due to change in liver function
6. Jaundice due to liver compromise
7. Tenderness in right upper quadrant of abdomen

8. Hepatomegaly
9. Arthritis, glomerulonephritis

Chronic hepatitis:

1. Asymptomatic with elevated liver enzymes
2. Symptoms as acute hepatitis
3. Cirrhosis due to altered liver function
4. Ascites due to decrease in liver function, increased portal hypertension
5. Bleeding from esophageal varices
6. Encephalopathy due to diminished liver function
7. Bleeding due to clotting disorders
8. Enlargement of spleen

Complications

1. Chronic hepatitis
2. Fulminating hepatitis
3. Cirrhosis of the liver
4. Liver cancer
5. Liver failure

**Treatment**

1. Avoid medications metabolized in the liver and avoid alcohol.
2. Remove or discontinue causative agent if drug-induced or toxic hepatitis.
3. IV fluids if vomiting during acute hepatitis.
4. High-calorie diet; breakfast is usually the best tolerated meal.
5. Liver transplantation.

Nursing Care

1. Monitor vital signs.
2. Assess abdomen for bowel sounds, tenderness, ascites.
3. Plan appropriate rest for patient in acute phase.
4. Monitor intake and output.
5. Assess mental status for changes due to encephalopathy.
6. Assist patient to:
 - a) Plan palatable meals; remember that breakfast is generally the best tolerated meal.
 - b) Avoid smoking areas—intolerance to smoking.

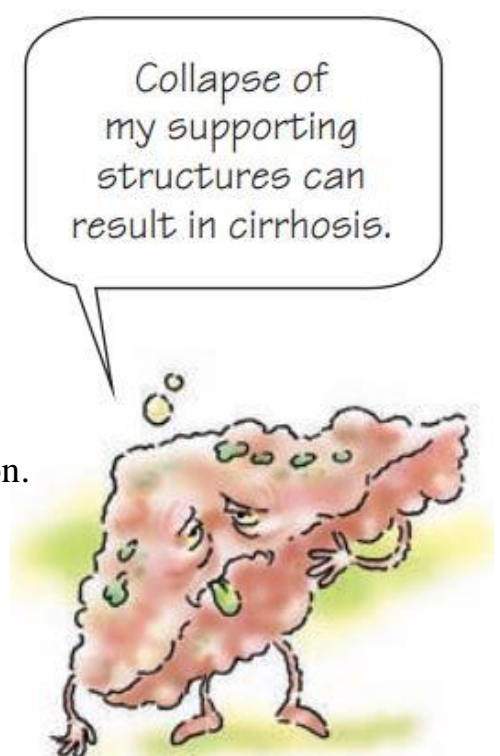
Cirrhosis

Cirrhosis is a chronic disease characterized by replacement of normal liver tissue with diffuse fibrosis that disrupts the structure and function of the liver.

- ❖ Cirrhosis, or scarring of the liver, is divided into three types: **alcoholic**, most frequently due to chronic alcoholism and the most common type of cirrhosis; **postnecrotic**, a late result of a previous acute viral hepatitis; and **biliary**, a result of chronic biliary obstruction and infection (least common type of cirrhosis).

Signs And Symptoms

1. Fatigue.
2. Weight loss, abdominal pain, distention.
3. Pruritus (severe itching of skin).
4. Confusion or difficulty thinking.
5. Personality changes and sometimes depression.
6. Ascites.
7. Jaundice.



Lab. Tests and Diagnosis

1. Liver function tests (AST, ALT, Bilirubin) elevated.
2. Ultrasound scanning
3. CT scan
4. MRI
5. Radioisotope liver scans

Medical Management

1. Treatment includes antacids, vitamins and nutritional supplements, balanced diet; diuretics (for ascites); avoidance of alcohol.
2. Colchicine may increase the length of survival in patients with mild to moderate cirrhosis.

Nursing Care

1. Weigh patient daily.
2. Assess peripheral edema.
3. Assess heart and lung sounds for excess fluid.
4. Elevate head of bed 30 degrees or greater to ease breathing.
5. Elevate feet to decrease peripheral edema.
6. Monitor for signs of bleeding or bruising.
7. Monitor level of consciousness, orientation, recent and remote memory, behavior, mood, and affect.

Post-Test

1. Which statement about hepatitis is true?
 - A. Type A hepatitis can lead to fulminant hepatitis.
 - B. Type B hepatitis is transmitted via blood products, urine, and other body fluids.
 - C. Type C hepatitis is transmitted via the fecal-oral route only.
 - D. Type D hepatitis is mild in severity.

2. A nurse is reviewing nutrition teaching for a patient who has cholecystitis. Which of the following food choices can trigger cholecystitis?
 - A. Brownie with nuts
 - B. Bowl of mixed fruit
 - C. Grilled turkey
 - D. Baked potato

Unit 5

Targeted Population The students in the first stage for nursing department

Rational This unit designed to learn:

The functions of hormones in the body.

Techniques for assessing the endocrine system.

Causes, pathophysiology, diagnostic tests, and nursing interventions for common endocrine system disorders.

Central Ideas

- Goiter
- Diabetes Mellitus

Objectives after studying this unit, you'll learn:

Techniques for assessing the endocrine system.

Causes, pathophysiology, diagnostic tests, and nursing interventions for common endocrine system disorders.

Pre-Test

1. Which statement about diabetes mellitus is false?
 - A. Type 2 diabetes commonly occurs in adults after age 40.
 - B. Type 1 diabetes usually occurs before age 30.
 - C. Type 1 diabetes is treated primarily with exercise and meal planning.
 - D. An increasing number of adolescents are being diagnosed with type 2 diabetes.
2. A nurse is caring for a patient who has blood glucose of 52 mg/dL. The patient is lethargic but arousable. Which of the following actions should the nurse perform first?
 - A. Recheck blood glucose in 15 min.
 - B. Provide a carbohydrate and protein food.
 - C. Provide 10 gm grape juice.
 - D. Report findings to the provider.

Week 5**Goiter**

A lack of iodine in the patient's diet (endemic, simple goiter) causes the thyroid gland to become enlarged. This is seen less today because iodine is added to table salt.

Signs And Symptoms

1. Difficulty in swallowing (dysphagia) due to a large thyroid pressing on the esophagus.
2. Enlarged thyroid gland.
3. Respiratory distress from the large gland, causing pressure on the trachea.
4. A tight feeling in the throat from a large gland.
5. Coughing.

Lab. Tests and Diagnosis

1. Decreased or normal serum T4 level.
2. Increased serum TSH.
3. A scan of the thyroid by a radioactive isotope.
4. Ultrasound.

Treatment

1. If increased TSH, administer hormone replacement with levothyroxine (T4), dessicated thyroid, or liothyronine (T3).
2. If the thyroid gland is overactive, then administer small doses of Lugol's solution or potassium iodide solution.
3. If the simple goiter cannot be reduced through medication, then a thyroidectomy is performed during which all or part of the thyroid is removed.

Nursing Care

1. Avoid goitrogenic foods or drugs in sporadic goiter since they make thyroid hormone production.
2. Use iodized salt to prevent and treat endemic goiter, since the thyroid needs iodine to make thyroid hormone.
3. Explain to patient:
 - a) The need for life-long thyroid replacement after thyroidectomy and radioactive iodine.
 - b) The need for intermittent lab work to monitor the thyroid.
 - c) Visits to the primary care practitioner to monitor size of thyroid gland.

Diabetes Mellitus (DM)

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 Diabetes

1. **Type 1** (Insulin-Dependent Diabetes Mellitus) :

It results from a decreased sensitivity to insulin (insulin resistance) or from a decreased amount of insulin production. Type 1 diabetes has a sudden onset, usually before the age of 30 years.
2. **Type 2** (Non-Insulin-Dependent Diabetes Mellitus) :

It results from a decreased sensitivity to insulin (insulin resistance) or from a decreased amount of insulin production. Type 2 diabetes occurs most frequently in patients older than 30 years and in patients with obesity.
3. **Gestational DM** (during pregnancy).

Signs and Symptom

1. Hyperglycemia – blood glucose level usually greater than 250 mg/dL.
2. Polyuria (excess urine production and frequency).
3. Polydipsia (excessive thirst) due to dehydration.
4. Polyphagia (excessive hunger and eating).
5. Other manifestations can include; acetone/fruity breath odor due to accumulation of ketones, headache, nausea, vomiting, abdominal pain, inability to concentrate, decreased level of consciousness, and seizures leading to coma.

Lab. Tests and Diagnosis

1. Manifestations of diabetes plus casual blood glucose concentration greater than 200 mg/dL (without regard to time since last meal).
2. Fasting blood glucose greater than 126 mg/dL.

Complications

1. Hypoglycemia
2. Diabetic Ketoacidosis
3. Macrovascular (large vessel) disease: affects coronary, peripheral vascular, and cerebral vascular circulations.
4. Microvascular (small vessel) disease: affects the eyes (retinopathy) and kidneys (nephropathy).
5. Neuropathic disease: affects sensory motor and autonomic nerves.

Medical Management

The main goal of treatment is to normalize insulin activity and blood glucose levels to reduce the development of vascular and neuropathic complications, and its occur through:

1. Insulin treatments (rapid, short, intermediate, and long-acting).

2. Medications (Metformin (Glucophage), sulfonylureas) for hyperglycemia and administer glucagon subcutaneous or IM if hypoglycemia.
3. Nutritional Management.

Nursing Care

Educate the patient about:

1. The disease and the importance of maintaining normal glucose levels and teach importance of daily medications.
2. Diet and food choices, including portion sizes.
3. Encourage exercise.
4. Teach self-injection of insulin (Type I).
5. Prevention of complications, such as hyperglycemia and hypoglycemia.
6. Explain hypoglycemia signs and symptoms and interventions.
7. Teach the management of hypoglycemia: glucose tablets, or 4 ounces of fruit juice, several hard candies, or a small amount of a carbohydrate.
8. Explain the signs and symptoms of hyperglycemia: fatigue, headache, blurry vision, dry itchy skin.



Post-Test

1. A nurse is teaching foot care to a patient who has diabetes mellitus. Which of the following information should the nurse include in the teaching? (Select all that apply.)

- A. Remove calluses using over-the-counter remedies.
- B. Apply lotion between toes.
- C. Perform nail care after bathing.

2. A nurse is presenting information to a group of clients about nutrition habits that prevent type 2 diabetes mellitus. Which of the following should the nurse include in the information?

- A. Eat less meat and processed foods.
- B. Decrease intake of saturated fats.
- C. Increase daily fiber intake.
- D. Limit saturated fat intake to 15% of daily caloric intake.

Unit 6&7

Targeted Population The students in the first stage for nursing department

Rational This unit designed to learn:

Anatomy and physiology of the musculoskeletal system

Techniques for assessing the musculoskeletal system

Tests to diagnose musculoskeletal disorders

Causes, pathophysiology, diagnostic tests, and nursing interventions for common musculoskeletal disorders.

Central Ideas

- Fractures
- Amputation

Objectives after studying this unit, you'll learn:

Techniques for assessing the musculoskeletal system.

Tests to diagnose musculoskeletal disorders.

Causes, pathophysiology, diagnostic tests, and nursing interventions for common musculoskeletal disorders.

Pre-Test

1. Incomplete fracture where one side of the bone breaks and the other side bends; occurs only in children

- A .Impacted fracture
- B .Closed
- C .Comminuted
- D .Greenstick

2. Bone fragments into three or more pieces; common in the elderly

- A .Closed
- B .Open
- C .Comminuted
- D .Greenstick

Week 6&7**Fractures**

A fracture is a complete or incomplete disruption in the continuity of bone structure. This results in damage to surrounding muscles and tissue, leading to hemorrhage, edema, and local tissue damage.

Types of Fractures : common types of fractures

1. **Simple** fracture has one fracture line
2. **Fatigue** (stress) fracture results when excess strain occurs from recreational and athletic activities.
3. **Compression** fracture occurs from a loading force pressing on callus bone.
4. **Comminuted**: Bone is fragmented.
5. **Oblique**: Fracture occurs at oblique angle and across bone.
6. **Spiral**: Fracture occurs from twisting motion (common with physical abuse).
7. **Impacted**: Fractured bone is wedged inside opposite fractured fragment.
8. **Greenstick**: Fracture occurs on one side (cortex) but does not extend completely through the bone (most often in children).

Clinical Manifestations (Signs and Symptom)

The clinical signs and symptoms of a fracture include acute pain, loss of function, deformity, shortening of the extremity, crepitus, and localized edema and ecchymosis. Not all of these are present in every fracture.

Lab. Tests and Diagnosis

1. Standard radiographs, X-ray shows fracture may be displaced or not.
2. CT scan shows fracture-useful when patient's body part cannot be turned or positioned for imaging (e.g. the neck).

Complications

- ❖ *Early complications* include shock, fat embolism, and venous thromboemboli (deep vein thrombosis [DVT], pulmonary embolism [PE]).
- ❖ *Delayed complications* include delayed union, malunion, nonunion, avascular necrosis of bone.

Treatment

1. Immobilize broken bone—to stabilize area, initially may be done with splint until fracture reduced (replaced into proper position) and cast applied or fixation device applied surgically.
2. Pain management as needed.

Immobilization secures the injured extremity in order to:

1. Prevent further injury.
2. Promote healing/circulation.
3. Reduce pain.
4. Correct a deformity.

Types of Immobilization Devices

1. Casts
2. Splints/immobilizers
3. Traction
4. External fixation
5. Internal fixation

**Emergency Management (First Aid)**

1. Immediately after injury, immobilize the body part before the patient is moved.

2. Splint the fracture, including joints near to the fracture, to prevent movement of fracture fragments.
3. 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.
4. In an upper extremity injury, the arm may be bandaged to the chest, or an injured forearm may be placed in a sling.
5. Assess neurovascular status distal to the injury both before and after splinting to determine adequacy of peripheral tissue perfusion and nerve function.
6. Cover the wound of an open fracture with a sterile dressing to prevent contamination of deeper tissues.

Amputation

Amputation is the Surgical removal of a body part, most commonly an extremity. Amputations can be elective due to complications of peripheral vascular disease and arteriosclerosis (gangrene) caused by low blood flow or complete blockage of blood to the affected limb, or traumatic due to an accident.

Risk Factors

1. Traumatic injury (motor vehicle crashes, industrial equipment, and combat/war injuries).
2. Thermal injury (frostbite, electrocution, burns).
3. Peripheral vascular disease.
4. Malignancy.
5. Chronic disease processes (gangrene, Diabetes Mellitus, Infection).

Signs and Symptom

1. Altered peripheral pulses
2. Differences in temperature of extremities
3. Altered color of extremities

4. Presence of infection and open wounds
5. Lack of sensation in the affected extremity

Lab. Tests and Diagnosis

1. Angiography
2. Doppler laser and ultrasonography

Nursing Care

1. Apply direct pressure using gauze, if available, or clean cloth to prevent life-threatening hemorrhage.
2. Elevate the extremity above the heart to decrease blood loss.
3. Wrap the severed extremity in dry sterile gauze (if available) or in a clean cloth, and place in a sealed plastic bag.
4. Submerge the bag in ice water, and send with the injured patient.
5. Prevent postoperative complications (hypovolemia, pain, infection).
6. Assess surgical site for bleeding. Monitor vital signs frequently.
7. Monitor and treat pain, monitor for signs of infection and/or non-healing of incision.



Post-Test

1. An open fracture is a fracture that
 - A. Results in multiple pieces of bone
 - B. Occurs when a broken bone pierces through the skin
 - C. Ruptures a blood vessel
 - D. Damages a nerve

2. The 80-year-old man with diabetes has had vascular problems with his feet and lower legs for 10 years and is scheduled for a left below-knee amputation. The remark by the patient that indicates an understanding of the procedure is:
 - A. "I am glad this amputation will end my diabetic problems."
 - B. "After they have hacked my leg, I won't be able to drive."
 - C. "If this heals well, how long until I get a prosthesis?"
 - D. "I hate that my left knee is going to be useless without a foot."

Unit 8

Targeted Population The students in the first stage for nursing department

Rational This unit designed to learn:

The role of the renal and urinary systems and their effects on other body systems

Techniques for assessing renal and urologic function

Causes, signs and symptoms, diagnostic tests, and nursing interventions for common renal and urologic disorders.

Central Ideas

- Glomerulonephritis
- Renal Calculi

Objectives after studying this unit, you'll learn:

Techniques for assessing renal and urologic function

Causes, signs and symptoms, diagnostic tests, and nursing interventions for common renal and urologic disorders.

Pre-Test

1. You have a patient that might have a urinary tract infection (UTI). Which statement by the patient suggests that a UTI is likely?

- A. I pee a lot.
- B. It burns when I pee.
- C. I go hours without the urge to pee.
- D. My pee smells sweet.

2. Which drug is indicated for pain related to acute renal calculi?

- A. Narcotic analgesics
- B. Nonsteroidal anti-inflammatory drugs (NSAIDS)
- C. Muscle relaxants
- D. Salicylates

Week 8**Glomerulonephritis**

Glomerulonephritis is an inflammation of the glomerular capillaries, usually following a streptococcal infection. It is an immune complex disease, not an infection of the kidney, exists as an acute, and chronic disease.

Signs and Symptoms

1. Hematuria
2. Peripheral edema
3. Elevated blood pressure
4. Oliguria-decrease in urine output
5. Nausea, vomiting, loss of appetite

Lab.Tests and Diagnosis

1. Urinalysis: proteinuria, hematuria,
2. White blood cell count (elevated indicating inflammation)
3. Kidney biopsy

Complications

1. Uremia
2. pulmonary edema, congestive heart failure, pericarditis
3. Anemia

Treatments

1. Antibiotics, such as Penicillin, Azithromycin.
2. Diuretics to reduce edema.
3. Vasodilators to decrease blood pressure.
4. Corticosteroids to decrease the inflammatory response.
5. Dialysis

Nursing Care

1. Monitor vital signs, monitor intake and output, weigh daily.
2. Observe for common fluid and electrolyte disturbances.
3. Assess extremities for edema.
4. Give emotional support.
5. Educate patient and family about prescribed treatment plan.
6. If long-term dialysis is needed, teach the patient and family about the procedure.

Renal Calculi

Kidney stones, also known as renal calculi or nephrolithiasis. Is the presence of calculi (stones) in the urinary tract. The patient may not have any symptoms from kidney stones until the stone attempts to move down the ureter towards the bladder. The majority types of stones are composed of (Calcium Phosphate or Calcium Oxalate, Uric Acid).

Signs and Symptoms

1. Hematuria
2. Unilateral spasms of pain in the flank area (renal colic) Extreme flank pain that comes slowly or quickly
3. Sever pain may radiate to lower abdomen, groin, scrotum or labia
4. Nausea, vomiting, and sweating
5. Elevated blood pressure

Lab. Tests and Diagnosis

1. Urinalysis shows red blood cells.
2. Ultrasound shows stones.
3. X-ray of kidneys, ureters, and bladder (KUB) shows stones.
4. CT, MRI scan shows stones.

Complications

1. Obstruction-A stone may block the passage of urine into the kidney, ureter, or bladder.
2. Hydronephrosis occurs when a stone has blocked a portion of the urinary tract.

Treatment

1. Analgesics (morphine, diclofenac acid).
2. Antispasmodics drugs, Antibiotics .
3. Increase fluid intake to flush through the urinary tract.
4. Surgical removal of stone.
5. Chemolysis (stone dissolution).
6. Stones fragmented with use of laser.

Nursing Care

1. Administer prescribed medications.
2. Save all urine to check for passage of the stone and save the stone for laboratory analysis.
3. Encourage increased oral intake to 3 L/day unless contraindicated.
4. Administer IV fluids as prescribed.
5. Encourage ambulation to promote passage of the stone.
6. Monitor for pain status, intake and output.
7. Provide preoperative and postoperative care

Post-Test

1. Who are more susceptible to kidney stones?

- A. Men in the third and fourth decades of life
- B. Women in the third and fourth decades of life
- C. Children
- D. Adult

2. What causes kidney stones?

- A. Faulty diet
- B. Metabolic diseases
- C. Urinary tract infections
- D. Family history of stones
- E. All of the above

Unit 9

Targeted Population The students in the first stage for nursing department

Rational This unit designed to learn:

The role of the renal and urinary systems and their effects on other body systems

Techniques for assessing renal and urologic function

Causes, signs and symptoms, diagnostic tests, and nursing interventions for common renal and urologic disorders.

Central Ideas

- Renal Failure

Objectives after studying this unit, you'll learn:

Techniques for assessing renal and urologic function

Causes, signs and symptoms, diagnostic tests, and nursing interventions for common renal and urologic disorders.

Pre-Test

1. Agents that damage the kidney tissue are called:

- A. Nephrons
- B. Nephrotoxins
- C. Antibodies
- D. Enterotoxins

2. Acute renal failure is generally identified by oliguria (urine output <_____ mL/day).

- A. 100
- B. 50
- C. 325
- D. 400

Week 9**Renal Failure**

A decrease in renal function can occur in an acute (sudden) or a chronic (progressive) manner. Acute renal failure can be broken down into pre-renal, renal, and post-renal. Chronic renal failure is an irreversible disease due to damaging effects on the kidneys.

Signs and Symptoms

1. Weight loss, Anemia
2. Peripheral edema
3. Decreased urinary output
4. Uremic pruritis

Treatment; objectives are to restore normal chemical balance and prevent complications until renal tissues are repaired and renal function is restored.

1. Administer intravenous fluids to correct hypovolemia.
2. Administer antibiotics.
3. Catheter to allow for drainage of urine if blockage present.
4. Dialysis.
5. Treat anemia.
6. Restrict potassium, phosphate, sodium, and protein in diet.
7. Monitor electrolyte levels.
8. Control blood pressure, control blood glucose levels.

Nursing Care

1. Monitor vital signs for changes in heart rate or blood pressure.
2. Monitor intake and output.
3. Assess intravenous site for redness, swelling, or pain.
4. Check dialysis access site for signs of infection.
5. Monitor patient very closely.

Post-Test

1. The only purpose of the kidneys is to filter blood.

A. T

B. F

2. A doctor who specializes in kidney diseases is called a _____.

A. Urologist

B. Endocrinologist

C. Nephrologist

D. Immunologist

Unit 10

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

The dialysis process.

Types of dialysis.

Why dialysis.

Central Ideas

- Dialysis
- Peritoneal Dialysis

Objectives after studying this unit, you'll learn:

Techniques for Dialysis and Peritoneal Dialysis.

Causes, signs and symptoms, diagnostic tests, and nursing interventions for patients under Dialysis.

Pre-Test

1. Dialysis is washing

A. Stomach.

B. Lung

C. Heart

D. Kidney

2. There are ____types of Dialysis ?

A. 1

B. 2

C. 3

D. 4

Week 10**Dialysis**

The patient with increasing symptoms of renal failure is referred to a dialysis and transplantation center early in the course of progressive renal disease. Dialysis is usually initiated when the patient cannot maintain a reasonable lifestyle with conservative treatment. Dialysis can sustain life for patients who have both acute and chronic renal failure.

Functions of dialysis

1. Rids the body of excess fluid and electrolytes
2. Achieves acid-base balance
3. Eliminates waste products
4. Restores internal homeostasis by osmosis, diffusion, and ultrafiltration

Types of Dialysis

1. Peritoneal dialysis
2. Hemodialysis

Peritoneal Dialysis

peritoneal dialysis removes toxins from the blood of a patient with acute or chronic renal failure that doesn't respond to other treatments. Unlike hemodialysis, it uses the patient's peritoneal membrane as a semipermeable dialyzing membrane.

Indications

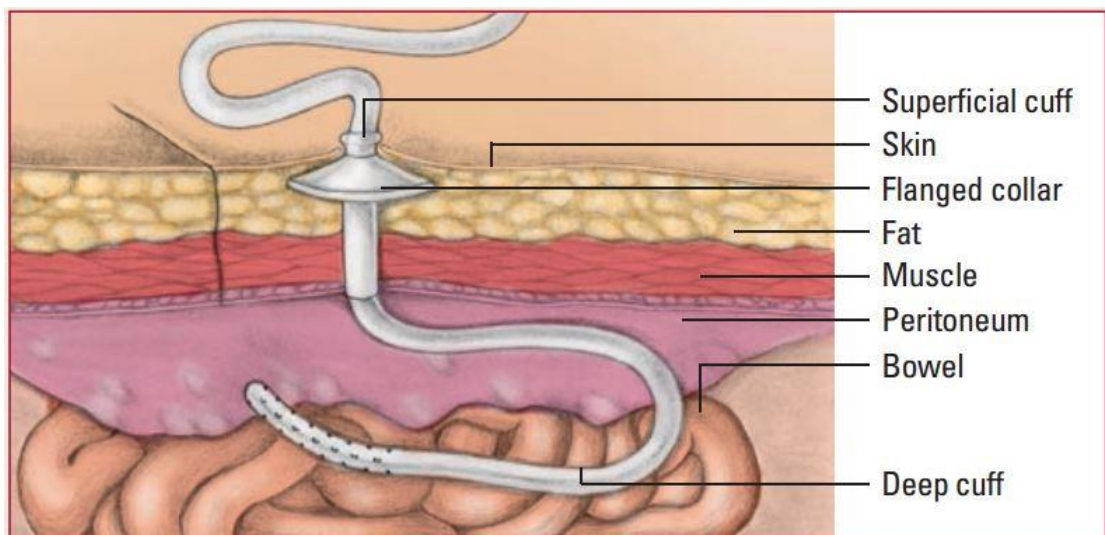
1. Peritoneal dialysis is the treatment of choice for the older adult.
2. Peritoneal dialysis is indicated for patients requiring dialysis who:
 - a) Are unable to tolerate anticoagulation.
 - b) Have difficulty with vascular access.
 - c) Have chronic infections or are unstable.

Complications

1. Mechanical
2. Cardiovascular
3. Pulmonary
4. Neurologic
5. Metabolic

Nursing Care

1. Before dialysis, explain the purpose of the treatment,
2. After dialysis, change the catheter dressing every 24 hours, watch closely for developing complications.



Post-Test

1. A nurse is providing teaching to a patient who has chronic kidney disease and is to start hemodialysis. Which of the following information should the nurse include in the teaching?

- A. Hemodialysis restores renal function.
- B. Hemodialysis replaces hormonal function of the renal system.
- C. Hemodialysis allows an unrestricted diet.
- D. Hemodialysis returns a balance to serum electrolytes.

2. A nurse is planning care for a patient who is having peritoneal dialysis. Which of the following are appropriate nursing actions? (Select all that apply.)

- A. Monitor serum glucose levels.
- B. Report cloudy dialysate return.
- C. Warm the dialysate in a microwave.
- D. Assess for shortness of breath.

Unit 11&12

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

The dialysis process.

Types of dialysis.

Why dialysis.

Central Ideas

- Hemodialysis Dialysis
- Events happened suddenly during Hemodialysis

Objectives after studying this unit, you'll learn:

Techniques for Hemodialysis Dialysis.

Causes, signs and symptoms, diagnostic tests, and nursing interventions for patients under Dialysis.

Pre-Test

1. Hemodialysis removes _____ and other impurities from the blood of a patient with renal failure.

- A. Fluids
- B. Water
- C. Toxic wastes
- D. Food

2. Hemodialysis is washing the ____ of the body

- A. blood
- B. muscles
- C. brain
- D. bones

Week 11&12**Haemodialysis**

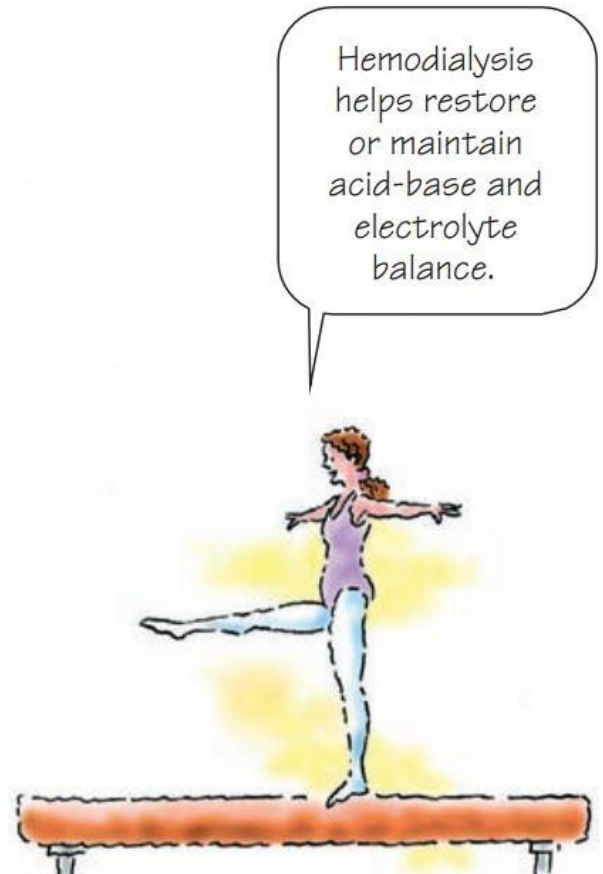
Hemodialysis removes toxic wastes and other impurities from the blood of a patient with renal failure. In this technique, the blood is removed from the body through a surgically created access site, pumped through a dialyzing unit to remove toxins, and then returned to the body.

Indications

1. Renal insufficiency
2. Acute kidney injury
3. Chronic kidney disease
4. Drug overdose
5. Persistent hyperkalemia

Complications

1. Hypotension
2. Itching
3. Fever and chills
4. Muscle Cramps
5. Nausea and Vomiting, Headache
6. Chest pain and back pain

**Nursing Care**

1. Before hemodialysis, explain its purpose of hemodialysis, assess the access site.
2. After hemodialysis, Monitor the vascular access site for bleeding, make sure that the arm used for vascular access isn't used for any other procedure, assess circulation at the access site.

Events happened suddenly during Hemodialysis

(A) **Arrhythmia:** Arrhythmias during dialysis are especially common in patients receiving digitalis.

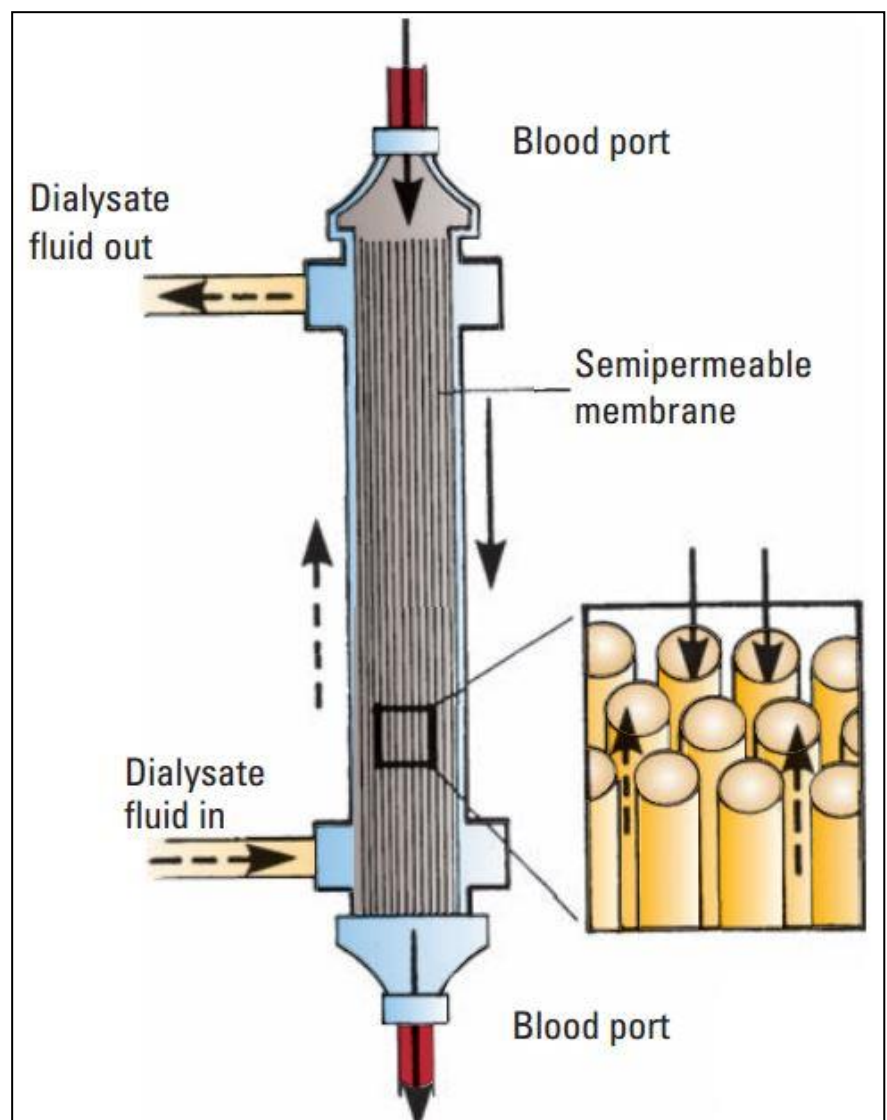
(B) **Cardiac tamponed:** Unexpected or recurrent hypotension during dialysis may be a sign of pericardial effusion or impending tamponed.

(C) **Intracranial bleeding:** Underlying vascular disease and hypertension combined with heparin administration can sometimes result in intracranial bleeding.

(D) **Seizures:** This occur more often in children

(E) **Haemolysis:** Acute haemolysis during dialysis may be a medical emergency

(F) **Air embolism:** It is a potential catastrophe that can lead to death if not quickly detected and treated.



Post-Test

1. A nurse is planning post procedure care for a patient who received hemodialysis. Which of the following should the nurse include in the plan of care? (Select all that apply.)
 - A. Check BUN and serum creatinine.
 - B. Administer medications held prior to dialysis
 - C. Observe for signs of hypovolemia
 - D. Assess the access site for bleeding.
 - E. Evaluate blood pressure on side of AV access.

2. A nurse is preparing to initiate hemodialysis for a patient who has acute kidney injury and has been hospitalized. Which of the following are appropriate nursing actions? (Select all that apply.)
 - A. Review the client's current medication history.
 - B. Assess the client's arteriovenous fistula for a bruit.
 - C. Calculate the client's total urine output during the shift.
 - D. Obtain the client's weight.

Unit 13

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:
Kidney Transplant.

Central Ideas

- Kidney Transplant
- Surgical procedure of transplant

Objectives after studying this unit, you'll learn:

Techniques for Kidney Transplant.

Causes, signs and symptoms, diagnostic tests, and nursing interventions for patients who need Kidney Transplant.

Pre-Test

1. A nurse who is a member of the transplant team is assessing information on a patient who has end-stage kidney disease. Which of the following patient indications should the nurse expect to find?

- A. Anuria
- B. Marked azotemia
- C. Crackles in the lungs
- D. Increased calcium level

2. A nurse is planning postoperative care for a patient who had kidney transplant surgery. Which of the following should the nurse include in the plan of care? (Select all that apply.)

- A. Obtain daily weights
- B. Assess dressings for bloody drainage
- C. Replace hourly urine output with IV fluids
- D. Position in semi-Fowler's

Week 13**Kidney Transplant**

End-stage of kidney disease, when the kidney can no longer function, may be treated with a kidney transplant.

The Recipient-Donor Characteristics

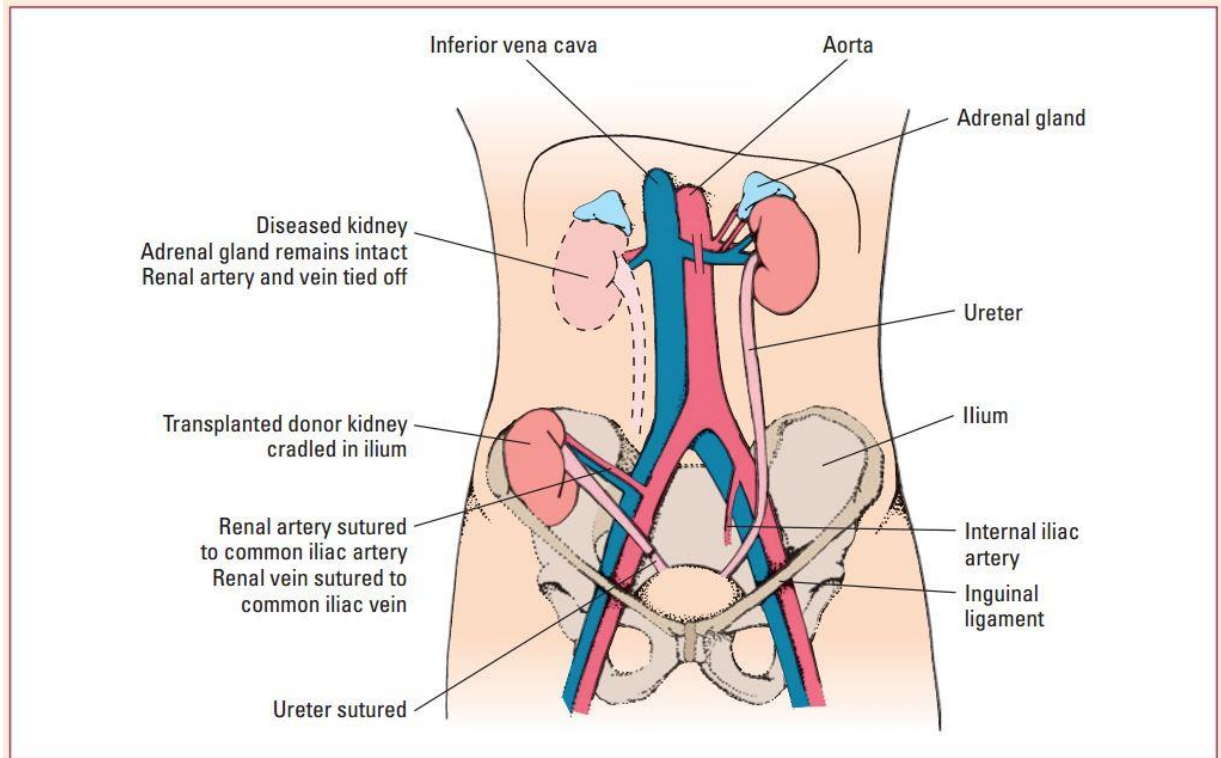
1. Donor for kidney transplantation may be living, non-heart-beating, or corpse donor.
2. Tissue typing includes assessment of blood type (ABO) compatibility and histocompatibility.
3. Patients receiving a donor kidney from a living, related donor-with matching tissue type-have the greatest chance of graft survival.

Complications

1. Organ rejection.
2. Acute tubular necrosis; A delay in transplanting the donor kidney after harvesting may result in hypoxic injury of the donor kidney.
3. Renal Artery Stenosis.
4. Thrombosis; A blood clot may form in a major vessel of the transplanted kidney.
5. Infection; Infection is the most common cause of fist-transplant-year morbidity and mortality.

Kidney Transplantation Procedure

With kidney transplantation, the donated kidney is implanted in the iliac fossa. The organ's vessels are then connected to the common iliac vein and common iliac artery, as shown below. Unless it will cause infection or high blood pressure, the diseased kidney is left in place.



Post-Test

1. A nurse is teaching diet recommendations to a patient who had a kidney transplant and is taking cyclosporine (Neoral). Which of the following recommendations should the nurse include in the teaching?
 - A. Decrease protein rich foods
 - B. Drink grapefruit juice
 - C. Take a magnesium supplement
 - D. Restrict intake of bananas and raisins

2. A nurse is providing information to a patient who has chronic rejection of a transplanted kidney. Which of the following statements should the nurse include?
 - A. "Immediate removal of the donor kidney is planned."
 - B. "Monitoring electrolytes frequently determines kidney status."
 - C. "Scheduled kidney biopsies determine kidney status."
 - D. "Restarting dialysis depends on marked azotemia."

Unit 14

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Anatomy and physiology of the hematologic system

Techniques for assessing the hematologic system

Causes, pathophysiology, diagnostic tests, and interventions for common hematologic and lymphatic disorders.

Central Ideas

- Blood
- Anemia
- Leukemia

Objectives after studying this unit, you'll learn:

Techniques for assessing the hematologic system

Causes, pathophysiology, diagnostic tests, and interventions for common hematologic and lymphatic disorders.

Pre-Test

1. A nurse is reviewing the laboratory findings of a patient who has a WBC count of 20,000/mm³. Based on these findings, the nurse should conclude that the patient has which of the following?

- A. Neutropenia
- B. Leukocytosis
- C. Hemolysis
- D. Leukopenia

2. A nurse is teaching a patient who has a new prescription for ferrous sulfate (Feosol). Which of the following should be included in the teaching?

- A. Stools will be dark red in color.
- B. Take with a glass of milk if gastrointestinal distress occurs.
- C. Foods high in vitamin C will promote absorption.
- D. Take for 14 days.

Week 14Blood

Because the hematologic system affects every body system, caring for a patient with a hematologic disorder can be especially challenging. The hematologic system consists of blood — the major body fluid tissue —and the bone marrow. Blood delivers oxygen and nutrients to all tissues, removes wastes, and performs many other tasks.

Blood consists of various formed elements, or blood cells, suspended in a fluid called plasma, formed elements of the blood include:

- Red Blood Cells (RBCs), or erythrocytes
- White Blood Cells (WBCs), or leukocytes
- Platelets (thrombocytes)

Anemia

Anemia is an abnormally low amount of circulating RBCs, Hgb concentration, or both.

Anemias are due to:

1. Blood loss.
2. Inadequate RBC production.
3. Increased RBC destruction (hemolytic).
4. Deficiency of necessary components such as folic acid, iron, erythropoietin, and/or vitamin B12.

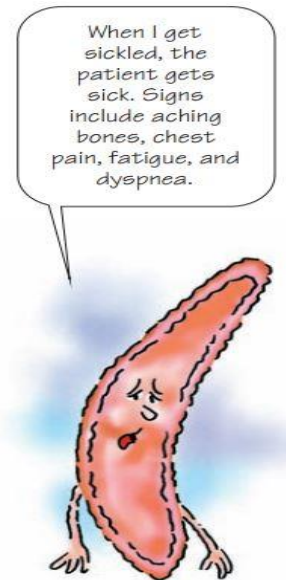
Types ; there are many types for anemia, the common types:

1. ***Iron-Deficiency Anemia***; results when the intake of dietary iron is inadequate for hemoglobin synthesis.
2. ***Pernicious Anemia***; The body is unable to absorb Vitamin B12, which is needed to make RBC, resulting in a decreased RBC count.

3. **Aplastic Anemia**; results from injury to or destruction of stem cells in the bone marrow.
4. **Hemolytic Anemia**; develops when red blood cells are destroyed faster than bone marrow can replace them, Sickle cell anemia and Thalassemia.

Signs and Symptoms

1. Fatigue, weakness
2. Bone pain
3. Headache
4. Pallor, Jaundice
5. Tachycardia and palpitations
6. Dyspnea
7. Angina
8. Angular stomatitis (ulceration of the corner of the mouth)



Medical Management

Management of anemia is directed toward correcting or controlling the cause of the anemia; if the anemia is severe, the erythrocytes that are lost or destroyed may be replaced with a transfusion of packed RBCs (PRBCs).

Leukemia

Leukemia are cancers of white blood cells or of cells that develop into white blood cells. the white blood cells are not functional. They invade and destroy bone marrow, and they can metastasize to the liver, spleen, lymph nodes, testes, and brain. Leukemia are divided into acute and chronic. The exact cause of leukemia is unknown. Its 2 types **acute** and **chronic**.

Acute Leukemia

1. Acute Lymphoblastic Leukemia (ALL).
2. Acute Myelogenous Leukemia (AML).
3. Acute Monocytic Leukemia.

Chronic Leukemia

1. Chronic Lymphocytic Leukemia
2. Chronic Myelogenous Leukemia

Signs and Symptoms

weakness and fatigue, bleeding, petechiae, pain, headache, vomiting, fever, and infection, hepatomegaly, splenomegaly, enlarged lymph nodes.

Nursing Care

1. Monitor for bleeding.
2. Monitor for infection.
3. Monitor pain control.
4. Small, frequent meals.
5. Teach patients about infection control: avoid others with infection.
6. Explain to the patient: Use an electric razor and soft toothbrush.



Post-Test

1. A nurse is planning care for a patient who has a Hgb of 7.5 and a Hct of 21.5. Which of the following should the nurse include in the plan of care? (Select all that apply.)

- A. Provide assistance with ambulation.
- B. Monitor oxygen saturation.
- C. Weigh the patient weekly.
- D. Obtain stool specimen for occult blood.

2. Erythrocyte is another name for a:

- A. Red Cell
- B. White Cell
- C. Platelet

Unit 15

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Anatomy and physiology of the heart and vascular system

History and physical assessment techniques that target cardiac function

Appropriate treatments to promote cardiac health

Common cardiovascular disorders

Central Ideas

- Cardiovascular diagnostic procedures

Objectives after studying this unit, you'll learn:

Anatomy and physiology of the heart and vascular system

History and physical assessment techniques that target cardiac function

Pre-Test

1. Cardiovascular diagnostic procedures that nurses should be familiar with include:

- A. Cardiac enzymes and lipid profile
- B. Echocardiogram
- C. Stress testing
- D. Hemodynamic monitoring
- E. All above

Week 15**Cardiovascular diagnostic procedures**

Cardiovascular diagnostic procedures evaluate the functioning of the heart by monitoring for enzymes in the blood; using ultrasound to visualize the heart; determining the heart's response to exercise; and using catheters to determine blood volume, perfusion, fluid status, how the heart is pumping, and degree of artery blockage.

Cardiovascular diagnostic procedures that nurses should be familiar with include:

1. Cardiac enzymes and lipid profile
2. Echocardiogram
3. Stress testing
4. Hemodynamic monitoring
5. Angiography
6. Vascular Access

Cardiac Enzymes And Lipid Profile

Cardiac enzymes are released into the bloodstream when the heart muscle suffers ischemia. A lipid profile provides information regarding cholesterol levels and is used for early detection of heart disease.

Echocardiogram

An echocardiogram is an ultrasound of the heart, which is used to diagnose valve disorders and cardiomyopathy.

Stress Testing

The cardiac muscle is exercised by the client walking on a treadmill. This provides information regarding the workload of the heart. Once the client's heart rate reaches a certain rate, the test is discontinued.

Hemodynamic Monitoring

Hemodynamic monitoring involves special indwelling catheters, which provide information about blood volume and perfusion, fluid status, and how well the heart is pumping.

Angiography

A coronary angiogram, also called a cardiac catheterization, is an invasive diagnostic procedure used to evaluate the presence and degree of coronary artery blockage.

Vascular Access

The site and type of vascular access is determined by the characteristics of the prescribed therapy (medication type, pH and osmolality, length of time for therapy). The goal is to minimize the number of catheter insertions and the risk for adverse reactions.

Indications

1. Angina
2. Myocardial Infarction (MI)
3. Heart disease
4. Hyperlipidemia
5. Unstable angina and ECG changes (T wave inversion, ST segment elevation, depression).
6. Confirm and determine location and extent of heart disease.
7. Dysrhythmia
8. Cardiomyopathy

Post-Test

1. An echocardiogram is an _____ of the heart, which is used to diagnose valve disorders and cardiomyopathy.

A. Light

B. Radiation

C. Ultrasound

Unit 16&17

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Anatomy and physiology of the heart and vascular system
History and physical assessment techniques that target cardiac function
Appropriate treatments to promote cardiac health
Common cardiovascular disorders

Central Ideas

- Congenital Heart Disease
- Valvular heart disease
- Angina Pectoris
- Myocardial Infarction (MI)

Objectives after studying this unit, you'll learn:

History and physical assessment techniques that target cardiac function
Appropriate treatments to promote cardiac health
Common cardiovascular disorders

Pre-Test

1. A nurse is admitting a patient who has a suspected myocardial infarction (MI) and a history of angina. Which of the following findings will help the nurse distinguish angina from an MI?
 - A. Angina can be relieved with rest and nitroglycerin.
 - B. The pain of an MI resolves in less than 15 min.
 - C. The type of activity that causes an MI can be identified.
 - D. Angina can occur for longer than 30 min.
2. A nurse is caring for a patient in a clinic who asks the nurse why her provider prescribed 1 aspirin per day. Which of the following is an appropriate response by the nurse?
 - A. "Aspirin reduces the formation of blood clots that could cause a heart attack."
 - B. "Aspirin relieves the pain due to myocardial ischemia."
 - C. "Aspirin dissolves clots that are forming in your coronary arteries."
 - D. "Aspirin relieves headaches that are caused by other medications."

Week16&17**Congenital Heart Disease**

Congenital heart disease occurs in approximately 8 in 1000 live births.

Although divided into cyanotic and a cyanotic.

1. Ventricular Septal Defect.
2. Atrial Septal Defect.
3. The Patent Ductus Arteriosus.
4. Fallot's Tetralogy.

**Valvular Heart Disease**

Valvular heart disease describes an abnormality or dysfunction of any of the heart's four valves: the mitral and aortic valves (left side) and the tricuspid and pulmonic valves (right side).

- ❖ Valvular heart disease can have **Congenital** or **Acquired** causes.
- ❖ Congenital valvular heart disease can affect all four valves and cause either stenosis or insufficiency.
 1. Stenosis – Narrowed opening that impedes blood moving forward.
 2. Insufficiency – Improper closure – some blood flows backward.
 - a) Mitral Stenosis
 - b) Mitral Insufficiency
 - c) Aortic Stenosis
 - d) Aortic Insufficiency
 - e) Pulmonary Stenosis
- ❖ Acquired valvular heart disease is classified as one of three types:
 1. Degenerative Disease
 2. Rheumatic Disease
 3. Infective Endocarditis

Angina Pectoris

A narrowing of blood vessels to the coronary artery, results in inadequate blood flow through blood vessels of the heart muscle, causing chest pain. Pain can occur at rest or after exertion, excitement, or exposure to cold—due to increased oxygen demands or vasospasm. Usually relieved by rest.

❖ There are three types of angina:

1. ***Stable angina***; occurs with exercise or emotional stress and is relieved by rest or nitroglycerin.
2. ***Unstable angina***; occurs with exercise or emotional stress, but it increases in occurrence, severity, and duration over time.
3. ***Variant angina*** ; is due to a coronary artery spasm, often occurring during periods of rest.

Signs and Symptoms

1. Pain may radiate to other parts of the body such as the jaw, back, or arms.
2. Difficulty breathing, shortness of breath (dyspnea).
3. Sweating.
4. Tachycardia.
5. A feeling of weakness or numbness in the arms, wrists, and hands.

Treatment

The goal of treatment is to deliver sufficient oxygen to the heart muscle to meet its need. When suspecting chest pain, always give oxygen as the first line of defense, Nitroglycerin—sublingual tablets, Aspirin, Analgesic.

Myocardial Infarction (MI)

Blood supply to the myocardium is interrupted for a prolonged time due to the blockage of coronary arteries. This results in insufficient oxygen reaching cardiac muscle, causing cardiac muscles to die (necrosis). MI is commonly known as a heart attack.

Signs and Symptoms

1. Chest pain that is unrelieved by rest or nitroglycerin, unlike angina.
2. Pain that radiates to arms, jaw, back and/or neck.
3. Shortness of breath.
4. Nausea or vomiting possible.
5. Heart rate >100 (tachycardia), Variable blood pressure.
6. Restlessness.
7. Pale, sweating.
8. Sudden death due to arrhythmia usually occurs within first hour.
9. Maybe asymptomatic, known as a **Silent MI**, which is more common in diabetic patients.

Medical Management

The goals of medical management are to minimize myocardial damage, preserve myocardial function, and prevent complications such as lethal dysrhythmias and cardiogenic shock.

Nursing Care

1. Monitor vital signs every 15 min until stable, then every hour, respiration, pulse, BP, ECG.
2. Administer oxygen
3. Vasodilators (Nitroglycerin)
4. Analgesics (Morphine)
5. Antidysrhythmic and Antihypertensive (Lopressor)

6. Thrombolytic agents (Streptokinase)
7. Antiplatelet agents (Aspirin)
8. Anticoagulants (Heparin)
9. Teach patient about, Smoking cessation, Limit activities, Stress reduction, Diet changes.

ANGINA	MYOCARDIAL INFARCTION
› Precipitated by exertion or stress	› Can occur without cause, often in the morning after rest
› Relieved by rest or nitroglycerin	› Relieved only by opioids
› Symptoms last less than 15 min	› Symptoms last more than 30 min
› Not associated with nausea, epigastric distress, dyspnea, anxiety, diaphoresis	› Associated with nausea, epigastric distress, dyspnea, anxiety, diaphoresis

Post-Test

1. A nurse is presenting a community education program on recommended lifestyle changes to prevent angina and myocardial infarction. Which of the following changes should the nurse recommend be made first?

- A. Diet modification
- B. Relaxation exercises
- C. Smoking cessation
- D. Taking omega-3 capsules

2. Congenital heart disease include

- A. Ventricular Septal Defect.
- B. Atrial Septal Defect.
- C. The Patent Ductus Arteriosus.
- D. Fallot's Tetralogy.
- E. All

Unit 18

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Important and definition of Intensive Care Unit (ICU).

Types and Equipment and System of the unit

Central Ideas

- Intensive Care Unit (ICU).
- Types

Objectives after studying this unit, you'll learn:

Important and definition of Intensive Care Unit (ICU).

Types and Equipment and System of the unit

Pre-Test

1. Intensive Care Unit shortcut is

- A. CCU
- B. ACU
- C. DIB
- D. ICU

Week 18Intensive Care Unit (ICU)

Is a special department of a hospital or health care facility that provides intensive treatment medicine, also known as (intensive therapy unit or intensive treatment unit or critical care unit).

Intensive Care Unit staffed by highly trained doctors and nurses who specialize in caring for critically ill patients, also have advanced medical equipment.

Types of ICU

1. Neonatal Intensive Care Unit (NICU)
2. Pediatric Intensive Care Unit (PICU)
3. Coronary Care Unit (CCU), also Known Cardiac Intensive Care Unit (CICU) or Cardiovascular Intensive Care Unit (CVICU).

Equipment and System

1. Mechanical Ventilator
2. Cardiac Monitors with Defibrillators (DC Shock)
3. Dialysis Equipment
4. Feeding Tubes, Endotracheal Tubes, Nasogastric Tubes,
5. Different Drugs, Intravenous Lines and syringes.



Post-Test

1. Types of ICU is
 - A. Neonatal Intensive Care Unit (NICU)
 - B. Pediatric Intensive Care Unit (PICU)
 - C. Coronary Care Unit (CCU),
 - D. All

Unit 19

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Important and definition of Cardiac Care Unit (CCU).

Types and Equipment and System of the unit

Central Ideas

- Cardiac Care Unit (CCU).
- Unit Design and Components

Objectives after studying this unit, you'll learn:

Important and definition of Cardiac Care Unit (CCU).

Types and Equipment and System of the unit

Pre-Test

1. Cardiac Care Unit shortcut is

- A. CCU
- B. ACU
- C. DIB
- D. ICU

Week 19**Cardiac Care Unit**

It's a special unit in the hospital established for care of acute and chronic heart diseases, myocardial infraction, dysrhythmias, which need intensive care and continuous monitoring. This unit equipped with best electronic devices and work in this unit a nursing staff with long experience in nursing of cardiovascular diseases.

Unit Design

Unit location and design must be in separate parameter, quiet, stabile temperature and have electronic devices beside every patient and these devices connected to a monitor in nursing station.

Unit Components

1. Defibrillator
2. Ventilator
3. Oxygen device
4. Tray with intubation devices, Endotracheal tubes, Laryngoscope
5. Anesthesia drugs, lidocaine (Xylocaine)
6. Cardiopulmonary emergency drugs

Post-Test

1. Cardiac Care Unit Components

A. Defibrillator

B. Ventilator

C. Oxygen device

D. All

Unit 20

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Important and definition of Electrocardiography (ECG)

Components of ECG Device

Central Ideas

- Important and definition of Electrocardiography (ECG)
- Components of ECG Device
- ECG problems

Objectives after studying this unit, you'll learn:

Important and definition of Electrocardiography (ECG)

Components of ECG Device

Pre-Test

1. Electrocardiography shortcut is

A. ECG

B. ECU

C. CCU

D. ICU

Week 20**Electrocardiography (ECG) (EKG)**

The contraction and relaxation of cardiac muscle results from the depolarization and repolarization of myocardial cells. These electrical changes are recorded via electrodes placed on the limbs and chest wall and are transcribed on to graph paper to produce an electrocardiogram (commonly known as an ECG).

The ECG is a graphic representation of the electrical activity of the heart.

A valuable diagnostic test that's now a routine part of every cardiovascular evaluation.

The Goal

Electrocardiography is a fundamental part of cardiovascular assessment. It is an essential tool for investigating cardiac arrhythmias and is also useful in diagnosing cardiac disorders such as myocardial infarction.

Components of ECG Device

It consist of Small pads containing electrodes are placed on the surface of the skin to detect the hearts electrical signal. Each electrode is connected with wires to an electrocardiograph, which draws up to 12 different graphical representation of the electrical signal.

❖ There are twelve electrodes used in a typical ECG:

bipolar limb leads I, II, and III; augmented limb leads AVR, AVL, and AVF; and precordial chest leads V1 through V6.

The six chest lead positions include:

V1 – 4th intercostal space, right sternal border

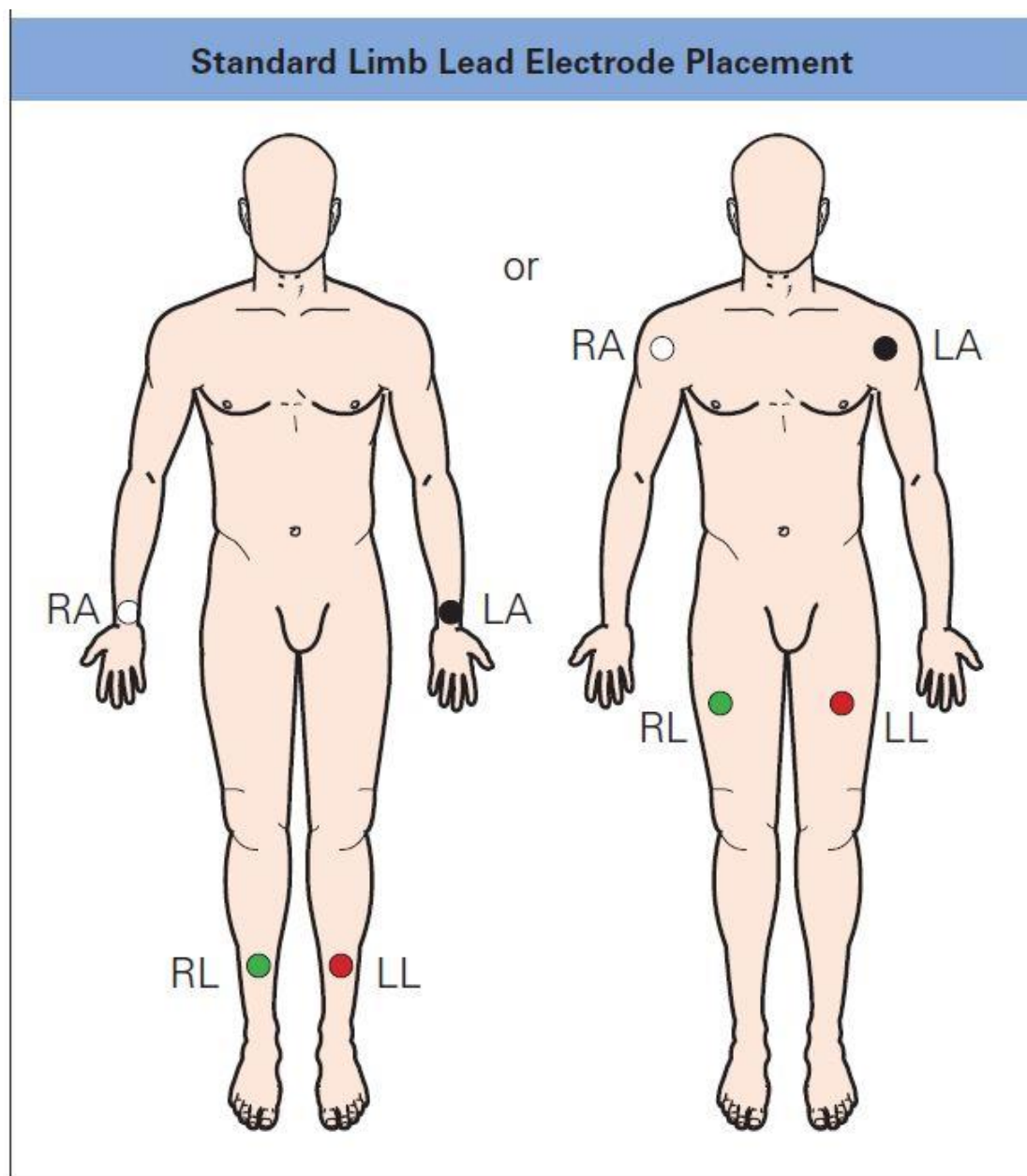
V2 – 4th intercostal space, left sternal border

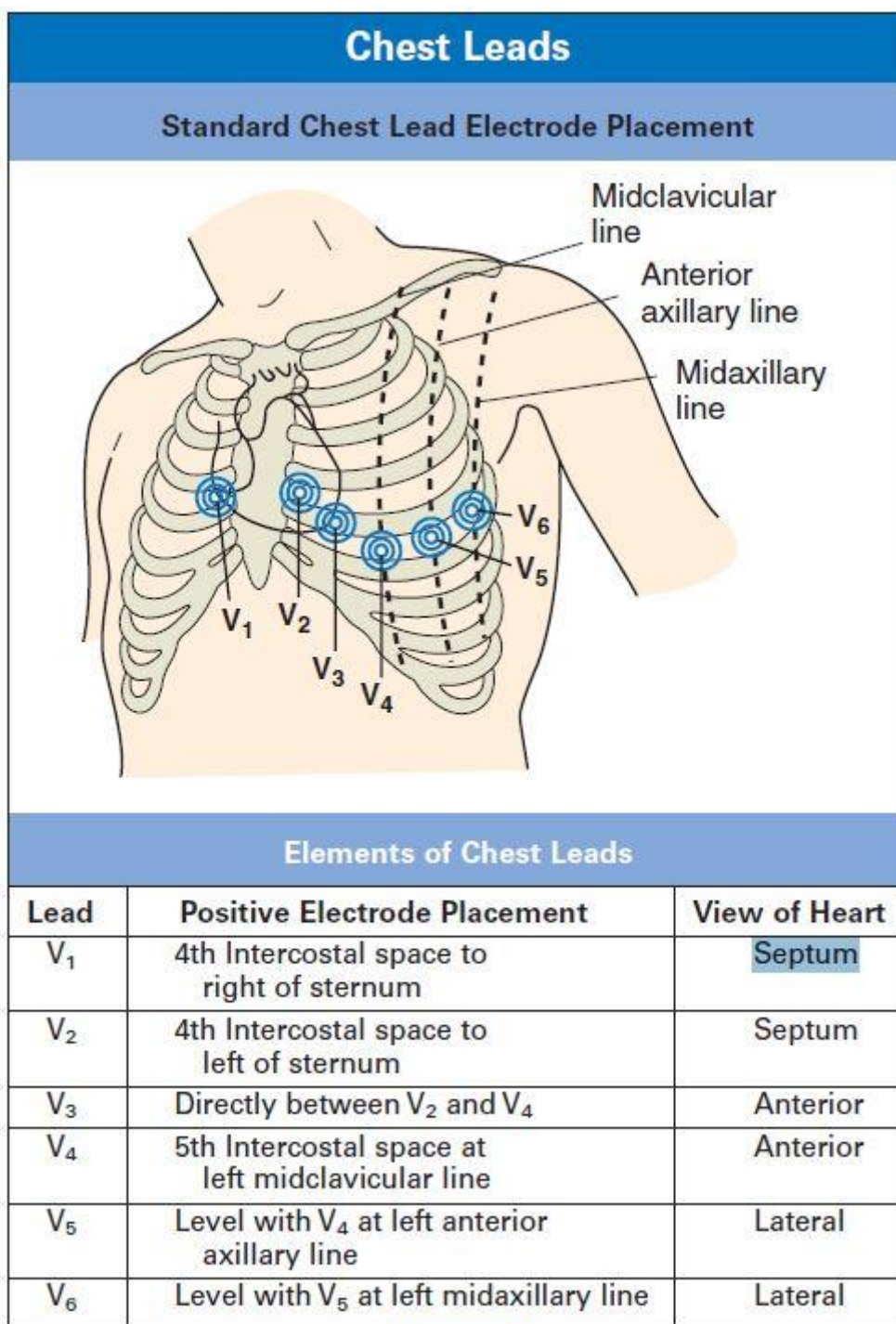
V3 – midway between V2 and V4

V4 – 5th intercostal space, left mid-clavicular line

V5 – 5th intercostal space, left anterior axillary line

V6 – 5th intercostal space, left mid-axillary line



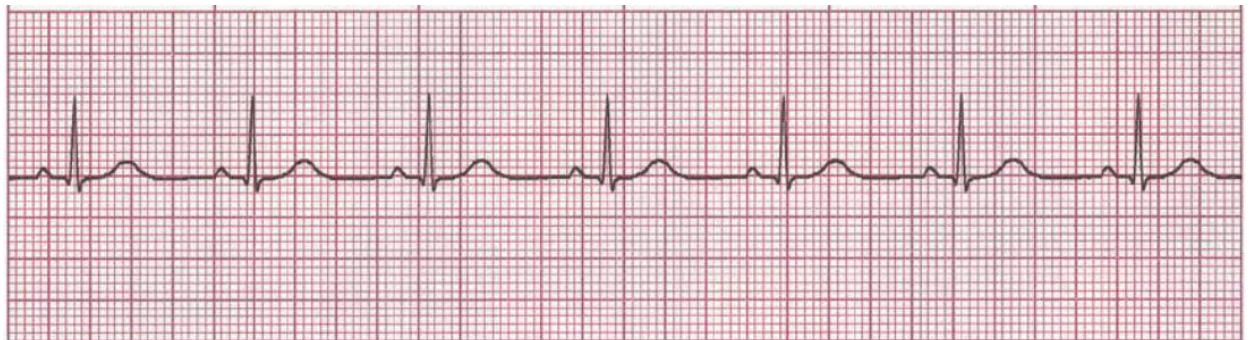


ECG problems

Many problems may be encountered during cardiac monitoring. The most common problems are related to patient movement, interference from equipment in or near the patient's room, weak ECG signals, poor choice of monitor lead or electrode placement, and poor contact between the skin and electrode-lead attachments.

Medical Conditions ECG can use to detect:

1. Acute Chest Pain
2. Acute Heart Failure
3. Angina Pectoris, MI
4. Palpitation
5. Hypertension

Normal ECG

Unit 21

Post-Test

1. ECG can use to detect medical conditions as
 - A. Acute Chest Pain
 - B. Acute Heart Failure
 - C. Angina Pectoris, MI
 - D. Palpitation
 - E. All

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Important and definition of Cardiopulmonary Resuscitation (CPR)

Important of Cardiac Arrest

Central Ideas

- Cardiopulmonary Resuscitation (CPR)
- Cardiac Arrest

Objectives after studying this unit, you'll learn:

Important and definition of Cardiopulmonary Resuscitation (CPR)

Important of Cardiac Arrest

Pre-Test

1. Primary ABC survey include

A. Airway

B. Breathing

C. Circulation

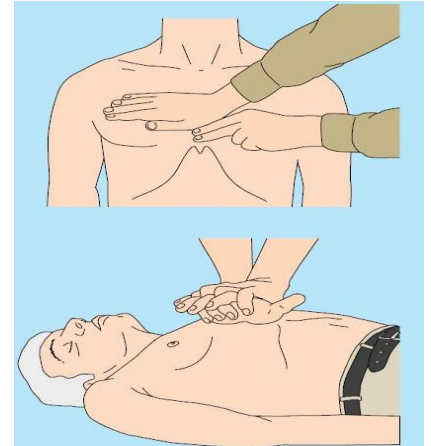
D. All

Week 21**Cardiopulmonary Resuscitation (CPR)**

Basic life support is the maintenance of an airway and the support of breathing and the circulation without using equipment other than a simple airway device or protective shield. A combination of expired air ventilation (rescue breathing) and chest compression is known as cardiopulmonary resuscitation (CPR), which forms the basis of modern basic life support.

Primary ABC survey

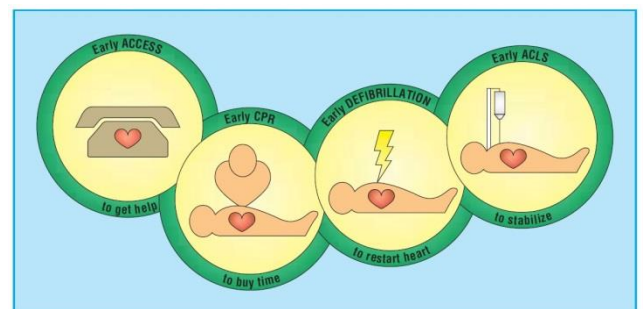
- ✓ **Airway:** Open the airway
- ✓ **Breathing:** Provide positive-pressure ventilations
- ✓ **Circulation:** Give chest compressions

**Cardiac Arrest**

Cardiac arrest occurs when the heart stops to produce an effective pulse and circulate blood.

Clinical Manifestations

1. Unresponsiveness
2. Pulselessness
3. Shallow, gasping respirations may persist for a few minutes
4. The pupils of the eyes begin dilating within 45 seconds



Chain of survival

Management

These steps are known as the “Chain of Survival”

1. Recognition of early warning signs
2. Activation of the Emergency Medical System (EMS)
3. Rapid initiation of basic (CPR)
4. Rapid Defibrillation (DC Shock)
5. Advanced Cardiovascular Life Support (ACLS), including airway management and intravenous (IV) medications.

Post-Test

1. _____ occurs when the heart stops to produce an effective pulse and circulate blood.

A. Headache

B. Bleeding

C. Cardiac Arrest

Unit 22

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Important and definition of Artificial Respiration

Important of Oxygen Administration and Therapy

Central Ideas

- Artificial Respiration
- Oxygen Administration and Therapy

Objectives after studying this unit, you'll learn:

Important and definition of Artificial Respiration

Important of Oxygen Administration and Therapy

Pre-Test

1. _____ It's the process of air pushing in to the lung in a mechanical way.

A. Cardiac Arrest

B. Headache

C. Artificial Respiration

D. Bleeding

2. Oxygen Delivery Devices

A. Oxygen mask

B. Oxygen nasal cannula

C. All

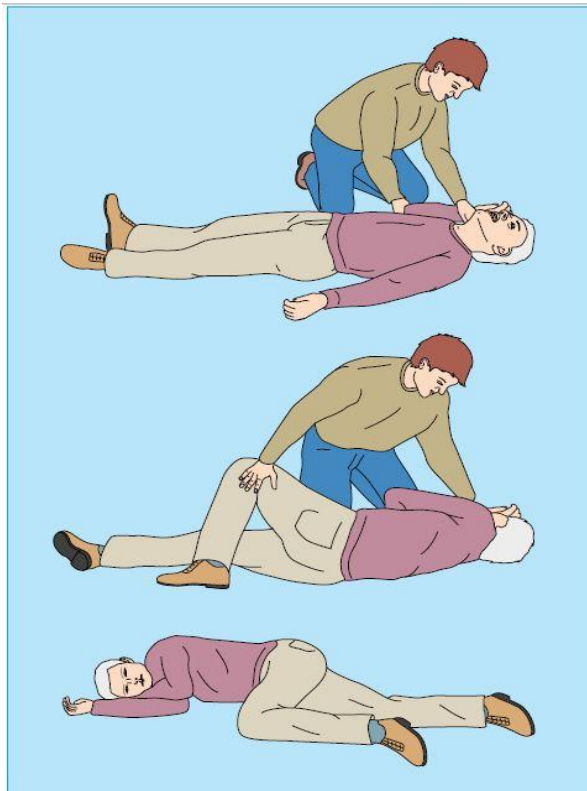
Week 22Artificial Respiration

It's the process of air pushing in to the lung in a mechanical way (ventilation by paramedic exhalation) or blowing from mouth to mouth or mouth to nose, this process done when lungs can't work in normal function for any reason.

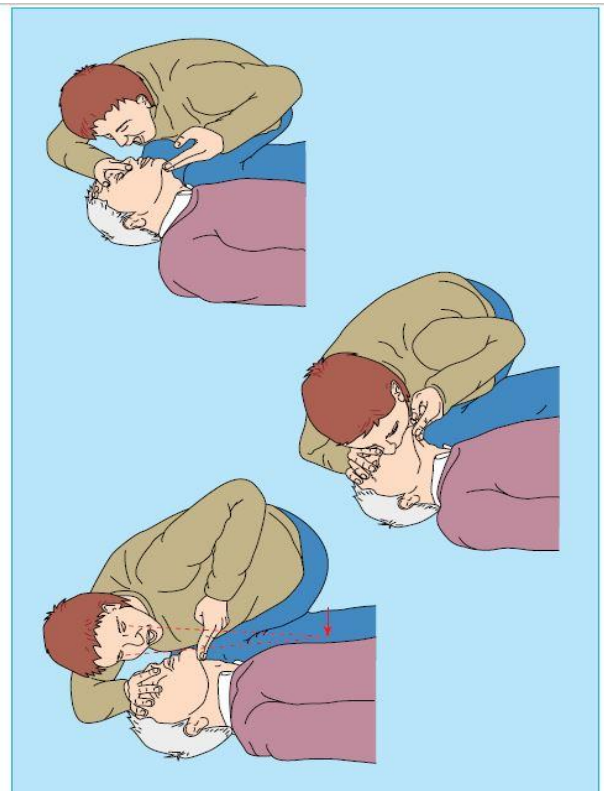
- ❖ The respiration disturbed if there is obstruction in the respiratory tract (airway), this obstruction could be external like suicide by hanging or internal like presence of blood or vomiting or mucus and this type happened in car accidents and if not treated immediately the injured may lead to death.

Types of Artificial Respiration

1. Mouth to mouth or mouth to nose.
2. Schafer's method
3. Pushing chest method (Holger Nelson)



Turning casualty into the recovery position



Expired air resuscitation

Oxygen Administration and Therapy

Oxygen is used to maintain adequate cellular oxygenation. It is used in the treatment of many acute and chronic respiratory problems. Oxygen is administered for therapeutic purposes in its deficiency in the body. The lack of oxygen in the body or body part is referred to as **hypoxia**; low partial pressure in arterial blood is referred to as **hypoxemia**. The brain is totally dependent on oxygen.

Sources of Oxygen:

Therapeutic oxygen is available from two sources

1. Wall Outlets(Central supply)
2. Oxygen cylinders

Oxygen Delivery Devices

1. Oxygen mask
2. Oxygen nasal cannula



Post-Test

1. Sources of Oxygen are

A. Wall Outlets

B. Oxygen cylinders

C. All

2. You stop doing Artificial Respiration after the two minutes are up, even if they are breathing or not.

A. True

B. False

Unit 23&24

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Structures and functions of the respiratory system

Techniques for assessing the respiratory system

Central Ideas

- Respiratory failure
- Endotracheal (ET) Tube And Endotracheal Intubation

Objectives after studying this unit, you'll learn:

Structures and functions of the respiratory system

Techniques for assessing the respiratory system

Pre-Test

1. which is not a Signs and Symptoms of Respiratory failure

- A. Difficulty breathing, coughing
- B. Fatigue, sweating
- C. Cyanosis
- D. Bleeding

2. A nurse is planning care for a patient who has respiratory failure . Which of the following should not be included in the plan of care for this client?

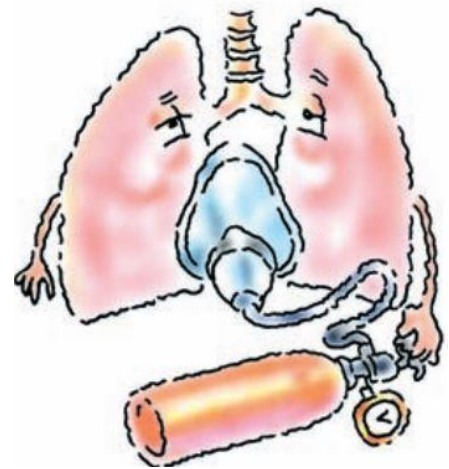
- A. Providing supplemental oxygen
- B. Administration of antiviral medications
- C. Administration of bronchodilators
- D. Maintaining ventilatory support

Week 23&24**Respiratory failure**

The lungs are unable to adequately exchange oxygen and carbon dioxide because of insufficient ventilation.

Causes

1. CNS depression - head trauma or injudicious use of sedatives, narcotics.
2. Cardiovascular disorders - MI, heart failure.
3. Airway irritants - smoke or fumes.
4. Endocrine and metabolic disorders.
5. Thoracic abnormalities - chest trauma.

**Signs and Symptoms**

1. Difficulty breathing, coughing
2. Fatigue, sweating
3. Respiration greater than 20 breaths per minute
4. Cyanosis
5. Anxiety due to air hunger and lack of oxygenation

Nursing Care

1. Observe the patient closely for respiratory arrest.
2. In an intubated patient, suction the airways as required
3. Maintain a patent airway.
4. Closely monitor airway patency and oxygen supply.
5. Administer oxygen at appropriate concentrations

Endotracheal (ET) Tube And Endotracheal Intubation

- ❖ A tube is inserted through the client's nose or mouth into the trachea. This allows for emergency airway management of the patient.
- ❖ Mouth intubation is the easiest and quickest form of intubation and is often performed in the emergency department.
- ❖ Nasal intubation is performed when the patient has facial or oral trauma.

Placement

1. Intubation is typically performed by a nurse anesthetist, anesthesiologist, or pulmonologist.
2. A chest x-ray verifies correct placement of the ET tube.
3. ET tubes may be cuffed or not. The cuff on the tracheal end of an ET tube is inflated to ensure proper placement and the formation of a seal between the cuff and the tracheal wall. This prevents air from leaking around the ET tube.
4. The seal ensures that an adequate amount of tidal volume is delivered by the mechanical ventilator when attached to the external end of the ET tube.

Nursing Actions

1. Have resuscitation equipment to include a manual resuscitation bag with a face mask at the bedside at all times.
2. Monitor the patient's vital signs and check tube placement.

Post-Test

1. What test verifies correct placement of the ET tube?
 - A. Chest x-ray
 - B. MRI
 - C. Ultrasound

2. Which of the following are indications for emergency intubation?
 - A. Respiratory failure and cool peripheries.
 - B. Respiratory failure and oliguria.
 - C. Respiratory failure and severe illness of any cause.
 - D. Respiratory failure and low intracranial pressure.

Unit 25&26

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Nursing diagnoses appropriate for respiratory disorders

Common respiratory disorders and treatments

Central Ideas

- Acute Bronchitis
- Chronic Bronchitis
- Asthma
- Pneumonia

Objectives after studying this unit, you'll learn:

Structures and functions of the respiratory system

Techniques for assessing the respiratory system

Pre-Test

1. Which of the following clients have an increased risk for developing pneumonia? (Select all that apply.)

A. Patient who has dysphagia

B. Patient who has AIDS

C. Patient who was vaccinated for pneumococcus and influenza 6 months ago

D. Patient who has a closed head injury and is receiving ventilation

2. A nurse is assessing a patient with asthma. Which of the following is a risk factor associated with this disease?

A. Gender

B. Environmental allergies

C. Alcohol use

D. Race

Week 25&26**Acute Bronchitis**

Its caused by infection and airborne irritants that block the airway, blockage of the airways is reversible, generally self-limited and with eventual complete healing and return of function,. most prevalent in winter, is generally part of an acute URI.

Signs and Symptoms

1. Malaise
2. Chilliness
3. Slight Fever
4. Back and Muscle Pain
5. Sore Throat
6. Dry Non-productive Cough

Treatment

1. The patient should rest until fever subsides.
2. Oral fluids
3. An antipyretic analgesic
4. Antibiotics
5. Oxygen and Nebulizer using

Chronic Bronchitis

The presence of cough and sputum production for at least 3 months in each of two consecutive years lead to block the airway, where blockage is not reversible.

Signs and Symptoms

1. Cough
2. Shortness of breath
3. Fever
4. Productive
5. Weight gain due to edema
6. Wheezing

Medical Management

1. Smoking cessation.
2. Bronchodilators
3. Corticosteroids
4. Antibiotic
5. Mucolytic, Antitussive Agents
6. Oxygen Therapy

Nursing care

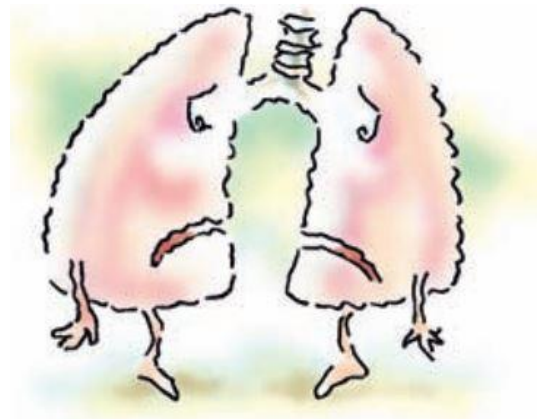
1. Monitor respirations looking at rate, skin color; listen to breath sounds.
2. Weigh the patient daily.
3. assessing the dyspnea and making sure that it has lessened.
4. Encourage patient to eliminate or reduce all pulmonary irritants, particularly cigarette smoking.
5. Instruct patient to avoid extremes of heat and cold and air pollutants
Assess patient for complications

Asthma

Asthma is a chronic inflammatory disease of the airways characterized by secretions production, bronchospasm.

Signs and Symptoms

1. Wheezing
2. Difficulty breathing (dyspnea)
3. Respiration greater than 20 breaths per minute (tachypnea)
4. Tightness in the chest
5. Cough
6. Tachycardia

**Treatment**

1. Oxygen
2. Bronchodilator with nebulizer
3. Steroids to decrease inflammation (Hydrocortisone)
4. Aminophylline
5. Antibiotics

Nursing Care

1. Monitor respiration: rate, skin color, breath sounds.
2. Place patient in high Fowler's position (90°) to ease respirations.
3. Monitor vital signs, look for changes in BP, tachycardia, tachypnea.
4. Explain to the patient:
 - a) How to use the inhaler
 - b) Avoid exposure to allergen.
 - c) How to recognize the early signs of asthma.

Pneumonia

is an acute infection of the lung parenchyma that commonly impairs gas exchange, could occur due to bacteria, viruses, parasites, or irritating agents.

Signs and Symptoms

1. Coughing
2. Sputum Production
3. Pleuritic Chest Pain
4. Shaking Chills
5. Fever (38.5° - 40.5°)
6. Rhonchi

Aspiration pneumonia is more likely to occur in elderly patients.

Lab. Tests and Diagnosis

1. Sputum culture
2. Elevated WBC count
3. Chest x-ray

Treatment

1. Supplemental Oxygen
2. Antibiotics (Penicillin's, Cephalosporin's)
3. Antipyretics
4. Antitussive, Antihistamines
5. Bed Rest



Nursing Care

1. Improving Airway Patency
2. Promoting Rest and Conserving Energy
3. Promoting Fluid Intake and Maintaining Nutrition
4. Promoting Patients' Knowledge
5. Monitoring and Preventing Potential Complications
6. Teaching Patients Self-Care

Post-Test

1. A nurse in a clinic is caring for a patient who was brought to the clinic by her partner. The partner states the patient woke up this morning, did not recognize him, and did not know where she was. The patient reports chills and chest pain that is worse upon inspiration. Which of the following is the priority nursing action?

- A. Obtain baseline vital signs and oxygen saturation.
- B. Obtain a sputum culture.
- C. Obtain a complete history from the client.
- D. Provide a pneumococcal vaccination.

2. A nurse is completing discharge teaching with a patient who has a new prescription for prednisone (Deltasone) for asthma. Which of the following patient statements indicates a need for further teaching?

- A. "I will drink plenty of fluids while taking this medication."
- B. "I will tell the doctor if I have black, tarry stools."
- C. "I will take my medication on an empty stomach."
- D. "I will monitor my mouth for canker sores."

Unit 27

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Neurologic structures and functions

Components of a neurologic assessment

Diagnostic tests, nursing diagnoses, and treatments for common neurologic disorders.

Central Ideas

- Parkinson's Disease
- Epilepsy
- Bell's palsy

Objectives after studying this unit, you'll learn:

Components of a neurologic assessment

Diagnostic tests, nursing diagnoses, and treatments for common neurologic disorders.

Pre-Test

1. A nurse is caring for a patient who just experienced a generalized seizure.

Which of the following actions should the nurse perform first?

- A. Keep the patient in a side-lying position.
- B. Monitor the client's vital signs.
- C. Reorient the patient to the environment.
- D. Check the patient for injuries.

2. A nurse is caring for a patient who displays signs of stage 3 Parkinson's disease. Which of the following actions should the nurse include in the plan of care?

- A. Recommend a community support group.
- B. Integrate a daily exercise routine.
- C. Provide a walker for ambulation.
- D. Consultation with a dietitian.

Week 27**Parkinson's Disease**

is a slowly progressive degenerative neurologic disorder affecting the brain centers that are responsible for control and regulation of movement.

Parkinson's disease may appear at any age; however, it's rare in people younger than age 30 and risk increases with age, its most commonly affects men.

Causes

The cause of the disease is mostly unknown but research suggests several causative factors (eg, genetics, atherosclerosis, viral infections, head trauma).

Signs and Symptoms

1. Tremor, Resting Tremors
2. Rigidity
3. Abnormally Slow Movements (Bradykinesia)
4. Position Instability
5. Depression, Dementia, Delirium, and Hallucinations
6. Dysphonia

Nursing Care

1. Monitor neurological status for changes
2. Monitor respiratory status for changes
3. Encourage self-care, allow patient extra time
4. Encourage exercise
5. Weigh patient
6. Record food intake
7. Explain to the patient how reduce risk of falls at home

Epilepsy

Epilepsy are a symptom complex of several disorders of brain function characterized by recurring seizures. Epileptic seizures are currently classified into Partial and Generalized.

- ❖ In most cases, the cause is unknown. Often follow many medical disorders, traumas, and drug or alcohol intoxication, brain tumors.

Diagnostic Procedures

1. Electroencephalogram (EEG)
2. Magnetic Resonance Imaging (MRI)
3. Computed Tomography Imaging (CT)

Nursing Care

1. Protect the patient privacy and patient the from injury
2. Position patient to provide a patent airway.
3. Be prepared to suction oral secretions.
4. Turn the patient to the side to decrease the risk of aspiration.
5. Do not attempt to open jaw or insert airway during seizure activity

Bell's palsy

Bell's palsy (facial paralysis) is due to peripheral involvement of the seventh cranial nerve on one side, which results in weakness or paralysis of the facial muscles. The cause is unknown, but possible causes may include viral disease (herpes simplex, herpes zoster), autoimmune disease, the disorder is more common in diabetic patients.

Treatment

1. Administer Corticosteroids to decrease inflammation (prednisone).
2. Administer artificial tears to maintain moisture within eyes.
3. Electrical stimulation applied to the face to prevent muscle atrophy.

Post-Test

1. A nurse is completing discharge teaching to a patient who has seizures and received a vagal nerve stimulator to decrease seizure activity. Which of the following information should the nurse include in the teaching?
 - A. The use of a microwave to heat food is permitted.
 - B. Inform a provider to order only a MRI when a scan is needed.
 - C. Place a magnet over the implantable device when an aura occurs.
 - D. The use of ultrasound diathermy for pain management is recommended.

2. A nurse is developing a plan of care for the nutritional needs of a patient who has stage 4 Parkinson's disease. Which actions should the nurse include in the plan of care? (Select all that apply.)
 - A. Provide three large balanced meals daily.
 - B. Record diet and fluid intake daily.
 - C. Add thickener to liquids.
 - D. Offer nutritional supplements between meals.

Unit 28

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Structures and functions of the ear, nose, and throat

Techniques for assessing the ear, nose, and throat

Nursing diagnoses appropriate for ear, nose, and throat disorders

Common ear, nose, and throat disorders and treatments.

Central Ideas

- Acute pharyngitis
- Chronic pharyngitis
- Laryngitis
- Otitis media
- Sinusitis

Objectives after studying this unit, you'll learn:

Techniques for assessing the ear, nose, and throat

Nursing diagnoses appropriate for ear, nose, and throat disorders

Common ear, nose, and throat disorders and treatments

Pre-Test

1. During an otoscopic examination, the nurse should pull the superior posterior auricle of an adult patient's ear:

- A. up and back.
- B. up and forward.
- C. down and back.
- D. down and forward.

2. To assess the frontal sinuses, the nurse should palpate:

- A. the forehead.
- B. below the cheekbones.
- C. over the temporal areas.
- D. over the preauricular areas.

Week 28**Acute 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.

Signs and Symptoms

1. Redness of Pharyngeal Membrane and Tonsils.
2. Lymph Nodes Enlarged and Tender
3. Fever, Malaise, and Sore Throat.
4. Hoarseness.

**Nursing Care**

1. Encourage bed rest during febrile stage of illness
2. Examine skin for possible rash
3. Administer warm saline gargles or irrigations
4. Apply an ice collar for symptomatic relief.
5. Perform mouth care to prevent fissures of lips

Chronic Pharyngitis

is common in adults who work or live in dusty surroundings, use their voice to excess, suffer from chronic cough, and habitually use alcohol and tobacco.

Signs and Symptoms

1. Constant sense of irritation or fullness in the throat
2. Mucus that collects in the throat and is expelled by coughing
3. Difficulty in swallowing

Nursing Care

1. Avoid contact with others until fever has disappear
2. Avoid alcohol, tobacco, exposure to cold, and pollutants
3. Encourage patient to drink plenty of fluids, and encourage
4. Gargling with warm salt water

Laryngitis

Laryngitis is an inflammation of the vocal cords. Acute laryngitis may occur as an isolated infection or as part of a generalized bacterial or viral upper respiratory tract infection. Repeated attacks of acute laryngitis cause inflammatory changes associated with chronic laryngitis.

- ❖ Acute laryngitis results from infection, excessive use of the voice, inhalation of smoke or fumes, or aspiration of caustic chemicals. Chronic laryngitis results from upper respiratory tract disorders, mouth breathing, smoking, alcohol abuse, or cancer of the larynx.

Signs and symptoms

1. Hoarseness (Persistent Hoarseness in Chronic Laryngitis)
2. Changes in the Character of the Voice
3. Pain (especially when swallowing or speaking)
4. Dry Cough, Fever, Malaise, Dyspnea, throat clearing.

Treatment

1. Resting the voice
2. Analgesic
3. Antibiotic
4. Elimination Cause



Otitis media

Otitis media, or inflammation of the middle ear, may be acute, chronic, or serous. The infection appears suddenly and typically lasts only a short time. Its incidence rises during the winter months.

Signs and Symptoms

1. severe, deep, throbbing pain
2. upper respiratory tract infection
3. hearing loss
4. sensation of blockage in the ear, dizziness, nausea, and vomiting
5. purulent drainage in the ear canal

Treatment

1. Antibiotic (ampicillin, amoxicillin)
2. Acetaminophen (paracetamol) or ibuprofen to help control pain and fever

Sinusitis

Sinusitis is an inflammation of the mucous membranes of one or more of the sinuses. Swelling of the mucosa can block the drainage of secretions, which may cause a sinus infection.

Signs and Symptoms

1. Fever
2. Nasal congestion
3. Pain over the cheeks and upper teeth, eyes and eyebrows
4. Nasal discharge (possibly purulent)

Treatment

Antibiotic. A vasoconstrictor may reduce the amount of nasal secretions. Antihistamine, Corticosteroids.

Post-Test

1. After a tonsillectomy and adenoidectomy, the nurse should perform all of the following interventions except:

- A. use a flashlight to check the throat.
- B. watch for frequent swallowing.
- C. allow the patient to use a straw and other utensils.
- D. provide an ice collar for comfort.

2. Pain elicited by palpating the patient's tragus or auricle indicates:

- A. sinusitis.
- B. pharyngitis.
- C. otitis media.
- D. otitis externa.

Unit 29 & 30

Targeted Population The students in the first stage for nursing department

Rational this unit designed to learn:

Appropriate nursing diagnoses for eye disorders

Techniques for assessing the skin and its appendages

Causes, pathophysiology, diagnostic tests, and nursing interventions for common skin disorders.

Central Ideas

- Cataract
- Glaucoma
- Skin Diseases and Disorders
- Geriatrics Care

Objectives after studying this unit, you'll learn:

Common eye disorders and treatments.

Techniques for assessing the skin and its appendages

Causes, pathophysiology, diagnostic tests, and nursing interventions for common skin disorders.

Pre-Test

1. A nurse is assessing a patient following cataract surgery. The patient reports nausea and severe eye pain. Which of the following actions should the nurse take?

- A. Notify the provider.
- B. Administer an analgesic.
- C. Administer an antiemetic.
- D. Turn the patient onto the operative side.

2. Functions of the skin include:

- A. protection, regulation of temperature, prevention of water and electrolyte loss, and excretion.
- B. sensory perception, immunity, and blood pressure regulation.
- C. regulation of temperature, blood pressure, and respirations; protection.
- D. vitamin C synthesis, sensory perception, and immunity

Week 29&30**Cataract**

A is a lens opacity or cloudiness. Cataracts can develop in one or both eyes and at any age.

Signs and Symptoms

1. Blurred vision
2. Diplopia – double vision
3. Glare and light sensitivity
4. Halo around lights

Glaucoma

Is a disturbance of the functional or structural integrity of the optic nerve. Glaucoma affects people of all ages but is more prevalent with increasing age (above 40 years). There is no cure for glaucoma, but the disease can be controlled.

Nursing Care

1. Encourage annual eye examinations and good eye health, especially adults over the age of 40.
2. Educate patients about the disease process and early indications of glaucoma, such as reduced vision and mild eye pain.

Skin Diseases and Disorders

Pruritus (itching)

Pruritus, commonly known as itching, is a sensation exclusive to the skin. It may be defined as "the sensation that produces the desire to scratch".

- ❖ Itching may be caused by many normally occurring stimuli, such as light touch, temperature change, and emotional stress. Chemical, mechanical, and electrical stimuli.
- ❖ General guidelines for therapy of the itchy patient include keeping cool, and avoidance of hot baths or showers and of wool clothing.

Wheals

Wheals are itching, pink or pale swellings of the superficial dermis that may have an initial flare around them. Lesions may be a few millimeters in diameter or as large as a hand, and numerous or single. The hallmark of wheals is that individual lesions come and go rapidly, by definition, within 24 hours.



Eczema

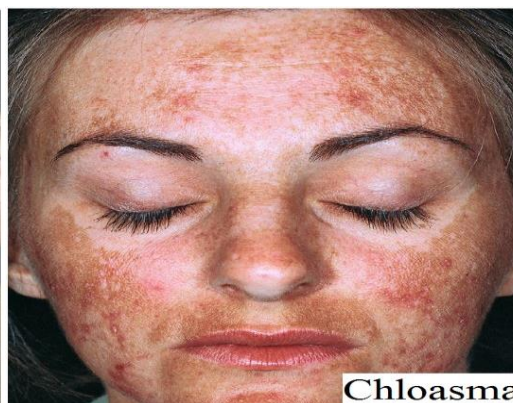
is the most common inflammatory skin disease, which is can caused by contact with specific allergens and chemicals. There are three stages of eczema (Acute, Sub-acute and Chronic) . Most eczematous diseases, if left alone resolve in time without complication.

Herpes Simplex

Also called (Cold sore), it's a viral infection, Infections can occur anywhere on the skin. the psychological factors, extreme exposure to cold or heat can increase the incidence. present clinically with grouped vesicles arising on skin or mucous membrane.

Pigmentary Disorders

the color of skin may be altered by many diseases and agents, the vast majority of patients have either an increase (hyperpigmentation (Chloasma)) or decrease (hypopigmentation (vitiligo)) in pigment secondary to some inflammatory disease such as acne or atopic dermatitis.



Nursing Care

1. Bath, choosing the suitable materials for cleaning and using soft towels.
2. Dressing, using wet dressing with saline fluids to prevent wound damage.
3. Control itching by using local creams or antihistamine.
4. Teach patients to dress cotton cloths not wool cloths.
5. Using cold water bath and sponge to decrease redness and itching.
6. Teach patients not to eat irritants food

Geriatrics Care

It's the care provided for elderly. People age (65) and older require health care services more often than any other age-group. Attitudes about aging are improving among the general public and health care professionals too.

- ❖ With aging comes the loss of some body cells and reduced metabolism in others. These changes lead to altered body composition and reductions in certain body functions.

Elderly Needs

Older adults have special health needs that require skilled, knowledgeable care, some of the basic needs are:

1. **Hygiene:** body hygiene very important so the nurse duty is to encourage old people to take bath and change cloths.
2. **Exercises:** older people need to do simple physical activities as they can.
3. **Diets:** good food rich with vitamins and protein
4. **Movement:** nurse role is to help elder to wake and move his body from one place to another.
5. **Psychological status:** helping elder and family to accept the situation.

Medical Problems for Elderly

1. Hearing Loss, Vision Loss
2. Weight Loss
3. Parkinson Disease
4. Scabies
5. Falls
6. Dementia

Nursing Care

1. Early discovering elderly specials problems.
2. Provide nursing care, preventive and health services.
3. Provide measures to relieve pain and discomfort, give an analgesic if ordered.
4. Follow-up of patients with special needs.
5. Rehabilitation.



Post-Test

1. A nurse is caring for a patient who has a new diagnosis of cataracts. Which of the following clinical manifestations should the nurse expect to find?
 - A. Eye pain
 - B. Floating spots
 - C. White pupils
 - D. Bilateral red reflexes

2. Which nursing diagnosis is most likely to be applicable to a patient with a skin disorder?
 - A. Risk for imbalanced nutrition: More than body requirements
 - B. Ineffective tissue perfusion
 - C. Risk for infection
 - D. Impaired physical mobility

3. The term geriatric refers to what type of adult patient?
 - A. Those in nursing homes
 - B. Nursing home patients over 65
 - C. Any adult patient 65 or older
 - D. Adult patients 85 or older

Medical-Surgical Nursing



	Answer Keys			
	Pre-test		Post-test	
Unit 1	1. D	2. A	1. C	2. B
Unit 2&3	1. C	2. D	1. D	2. C
Unit 4	1. B	2. D	1. B	2. A
Unit 5	1. C	2. C	1. C	2. D
Unit 6&7	1. D	2. C	1. B	2. C
Unit 8	1. B	2. B	1. A	2. E
Unit 9	1. B	2. D	1. E	2. C
Unit 10	1. D	2. B	1. A	2. C
Unit 11&12	1. C	2. A	1. E	2. C
Unit 13	1. D	2. D	1. C	2. A
Unit 14	1. B	2. C	1. C	2. A
Unit 15	1. E		1. C	
Unit 16&17	1. A	2. A	1. C	2. E
Unit 18	1. D		1. D	
Unit 19	1. A		1. D	
Unit 20	1. A		1. E	
Unit 21	1. D		1. C	
Unit 22	1. C	2. C	1. C	2. B
Unit 23&24	1. D	2. B	1. A	2. C
Unit 25&26	1. C	2. B	1. A	2. C
Unit 27	1. A	2. C	1. C	2. A
Unit 28	1. A	2. A	1. C	2. D
Unit 29&30	1. A	2. A	1. C	2. C

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