

2021-2022

Nursing

Florence Nightingale, who wrote in 1858 that the goal of nursing was “to put the patient in the best condition for nature to act upon him”

Nursing: is an art and a science.

American Nurses Association (ANA) defined nursing as the diagnosis and treatment of human responses to health and illness.

The ANA identifies the following phenomena as the focus for nursing care and research:

- Self-care processes.
- Physiologic and pathophysiologic processes such as rest, sleep, respiration, circulation, reproduction, activity, nutrition, elimination, skin, sexuality, and communication.
- Comfort, pain, and discomfort.
- Emotions related to health and illness.
- Meanings ascribed to health and illnesses.
- Decision making and ability to make choices.
- Transitions across the lifespan, such as birth, growth, development, and death.
- Environmental systems.

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Nursing Care

- Nurses in hospitals care for patients who are older and sicker and require more nursing services.
- Community nurses care for patients who have been discharged earlier and need high-technology acute care services as well as long-term care.
- Discharge planning, along with utilization review and quality improvement is important
- Nurses in acute care settings must work with other health care team members to maintain quality care while facing pressures to discharge patients earlier and decrease costs



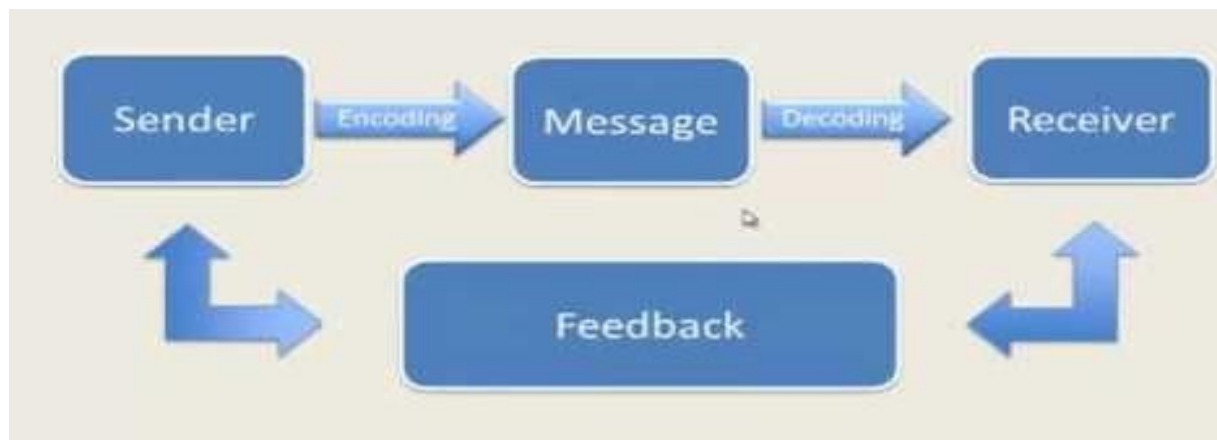
Maslow's hierarchy of human needs

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Communication

A process in which people affect one another through exchange of information, ideas, and feelings.

Include both oral and written exchange of information between caregivers.



Modes of Communication

1. Verbal Communication - Uses spoken or written words.
2. Non-verbal Communication - Uses gestures, facial expression, posture/gait, body movements, physical appearance (also body language), eye contact, tone of voice.

Characteristics of Communication

- **Simplicity** - commonly understood words, brevity, and completeness
- **Clarity** - exactly what is meant
- **Timing and Relevance** - appropriate time and consideration of client's interest and concerns
- **Adaptability** - adjustment – depending on moods and behavior

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➤ **Credibility** - worthiness of belief

Documenting & Reporting

- **Documentation** - Serves as a permanent record of client information and care.
- **Reporting** - takes place when two or more people share information about client care

Documentation/Recording is a vital aspect of nursing practice.

NURSING DOCUMENTATION: the charting of documents, the professional surveillance of the patient, the nursing action taken in the patient's behalf, and the patient's programs with regards to illness.

Purposes of Client's Record /Chart

1. Communication
2. Legal Documentation
3. Research
4. Statistics
5. Education
6. Audit and Quality Assurance
7. Planning Client Care

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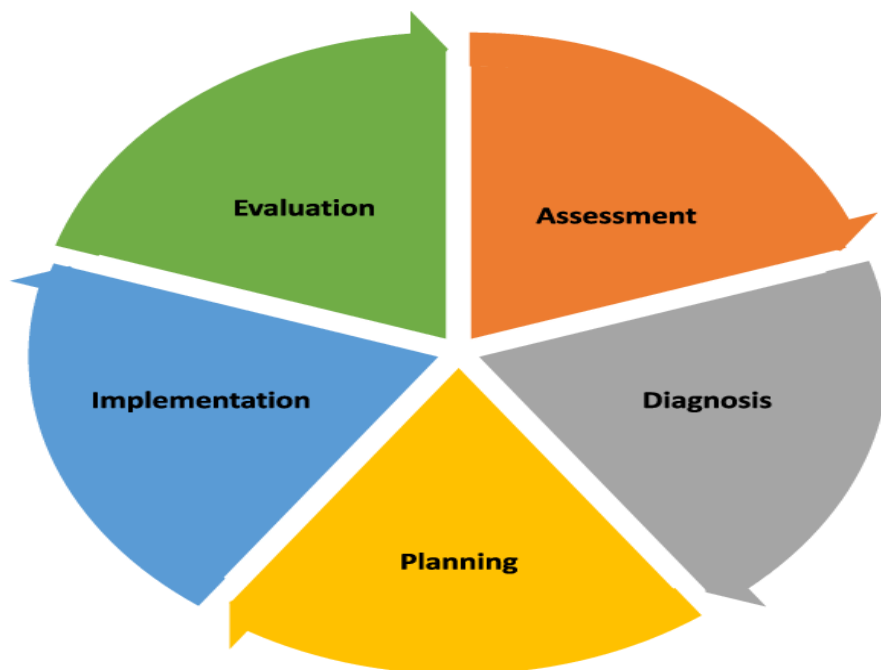
The Nursing Process

Process: It is a series of planned actions or operations directed towards a particular result or goal.

Nursing Process: It is a systematic, rational method of planning and providing individualized nursing care.

Purpose of Nursing Process

- To identify a client's health status
- Actual or potential health care problems or needs.
- To establish plans to meet the identified needs.
- To deliver specific nursing interventions to meet those needs.
- It was developed as a specific method for applying a scientific approach or a problem solving approach to nursing practice.



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1st step: Assessment (data collection)

Purpose of assessment

- To organize a data base regarding a client's physical , psychological , and emotional health so that:
- Health promoting behaviors
- Actual & or potential health problems are identified

Types of assessment

- 1) A comprehensive assessment.
- 2) A focused assessment (is limited to potential health care risks)
- 3) Ongoing assessment (includes systematic monitoring of specific problems, follow-up

Sources of collection of data

1. Primary source :

- A. patient (the major provider)
- B. Interview
- C. Physical examination skills (Inspection , Percussion , Auscultation , palpitation)

2. Secondary sources :

- A. Family members
- B. Other health care providers
- C. Medical records
- D. Diagnostic reports

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Types of collection of data

1. **Subjective data:** from client's point of view; feelings, perceptions, concerns. (Method : interview)
2. **Objective data :** observable & measurable data (Method : physical examination, Lab & diagnostic testing)

2nd step: Diagnosis:

A clinical judgment about individual, family, or community responses to actual or potential health problems.

Types of Nursing Diagnosis

1. Actual problems
2. Potential problems (possible problems due to risk factors)
3. Wellness conditions
4. Collaborative problems

Nursing diagnosis Examples:

- Knowledge deficit
- Powerlessness
- Grieving
- Body image disturbance
- Individual coping, ineffective

3rd step: Planning & Outcome identification

Types of planning

1. Initial planning.
2. Ongoing planning.

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3. Discharge planning
4. Developing specific nursing interventions

Examples:

- Elevate edematous legs
 - Assist client with physical therapy exercises
 - Dependent nursing interventions Require an order
- Administering of medications

4th step: Implementation

Execution of the nursing care plan

5th step: Evaluation

Determining whether the client's goals have been met, partially met or not met.

Benefits of Nursing Process for the Nurse

- Helps nurses in arriving at decisions and in predicting and evaluating consequences.
- Self confidence
- Job satisfaction
- Professional growth

Nursing diagnosis examples:

1. Breathing patterns, ineffective.
2. Activity intolerance
3. Pain
4. Body image disturbance

medical diagnosis

1. Chronic obstructive pulmonary disease
2. Cerebrovascular accident
3. Appendectomy
4. Amputation

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Rehabilitation

A person is considered to have a disability, such as a restriction in performance or function in everyday activities, if he or she has difficulty talking, hearing, seeing, walking, climbing stairs, lifting or carrying objects, performing activities of daily living, doing schoolwork, or working at a job.

The disability is severe if the person cannot perform one or more activities, uses an assistive device for mobility, or needs help from another person to accomplish basic activities. The purpose of adaptive devices and assistive devices is to maximize independence and thereby promote access.

Activities of Daily Living (ADLs):

***Activities related to personal care**

- Bathing
- Showering
- Dressing
- Getting in or out of bed or a chair
- Using the toilet
- Eating

Independent Activities of Daily Living (IADLs):

***Skills for independent living**

- Cooking
- Cleaning
- Shopping
- Doing laundry
- Managing personal finances
- Developing social and recreational skills
- Handling emergencies

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Impairment: defined as abnormality of structure or function of the body or an organ.

Disability: is defined as restriction or lack of ability as a result of the impairment.

Handicap: is defined as a social disadvantage faced by an individual resulting from either impairment or disability.

Rehabilitation: A dynamic process in which a disabled person is helped to achieve optimum physical, emotional, psychological, social, or vocational potential in order to maintain dignity and self-respect in a life that is as independent and self-fulfilling as possible.

Objectives of Rehabilitation

The goal of rehabilitation is to restore mental and physical abilities lost because disease to function in a normal or near-normal way.

- Preventing the secondary disability.
- Improving the Patient's body function.
- Returning the patients to their former functioning state.
- Assisting patients to adapt to a new state of functioning.
- Promote a quality of life.

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Principles of Rehabilitation

- Rehabilitation should begin during the initial contact with the patient.
- Increasing independence would be the first step in rehabilitation process.
- Improvement of capabilities and competence of patients with psychiatric problems.
- Maximum use must be made of residual capacities.
- Motivates the patient and helps him to attain social independence.
- Patient's active participant is very essential.
- Skill development, therapeutic environment are fundamental interventions for a successful rehabilitation process.
- Every patient has a right to the rehabilitation services

The Rehabilitation Team

Rehabilitation is a creative, dynamic process that requires a team of professionals working together with patients and families.

The team members represent a variety of disciplines, with each health professional making a unique contribution to the rehabilitation process. In addition to nurses, members of the rehabilitation team may include physicians, nurse practitioners, psychiatrists, physical therapists, occupational therapists, recreational therapists, speech-language therapists, psychologists, psychiatric liaison nurses, spiritual advisors, social workers, vocational counselors, and sex counselors.

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Rehabilitation focus on:

- Achieving as full a physical and psychological recovery as possible.
- Improving quality of life through gaining life management skills, a sense of direction for the future and resilience.
- Rebuilding social connectedness to family and community.
- Finding a new valued role within the community.
- Learning to understand and self-manage physical and mental health conditions to the best of the person's ability.
- Assisting the person to return to safe and meaningful work at the earliest possible time to minimize harm to physical and mental health and wellbeing through long term absence.
- Reducing the human and economic cost of disability.

Nursing Diagnosis:

- Self-Care Deficits in Activities of Daily Living
- Impaired Physical Mobility
- Impaired Skin Integrity
- Altered Elimination Patterns

Cancer

Madenate Al-elem University College- Nursing Department

Adult nursing / 2nd stage – first semester

L. Dr. Anmar H.

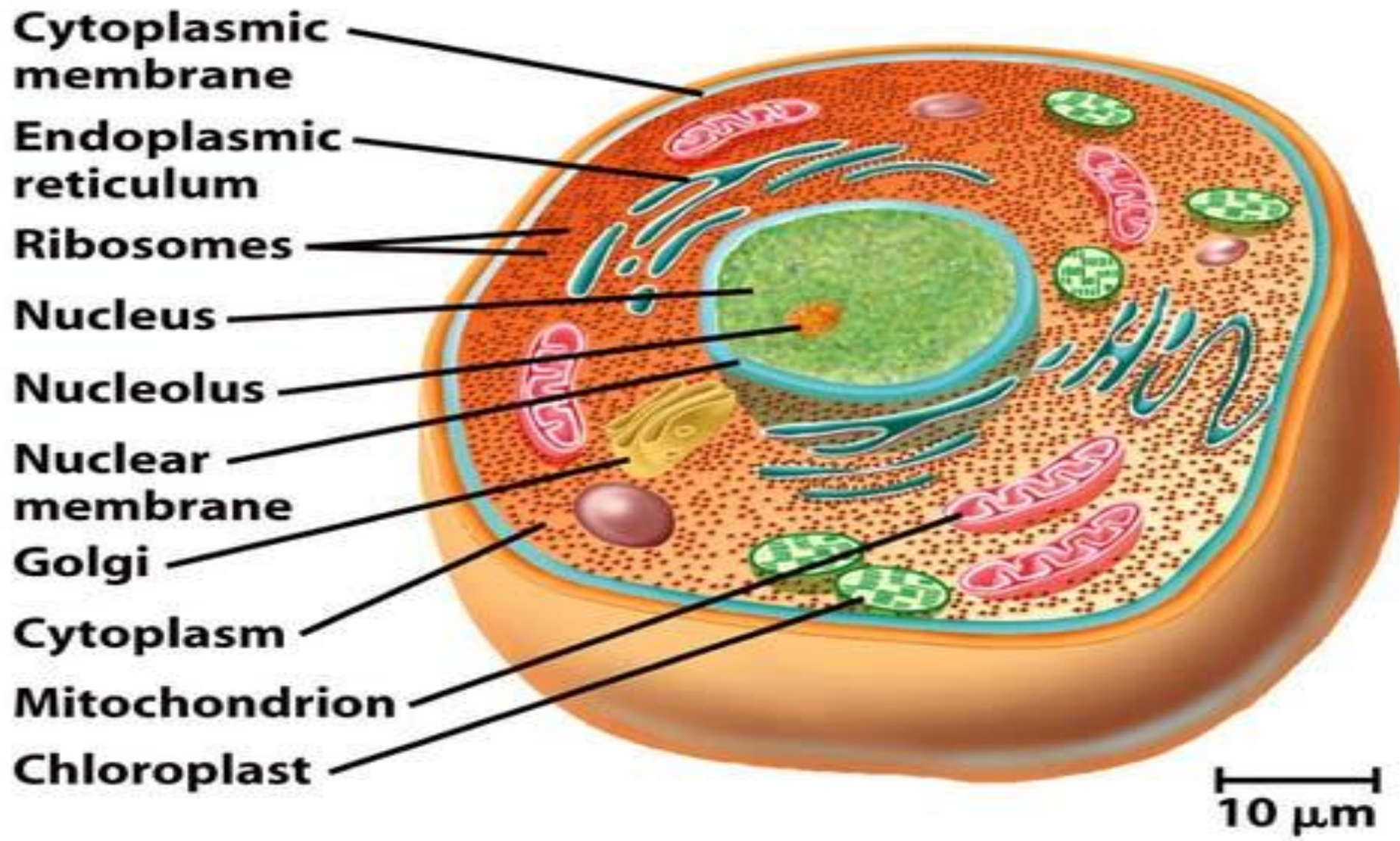
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- **Cell structures**

Cells are the smallest living structural and functional subunits of the body. Although human cells vary in size, shape, and certain metabolic activities.

- **Cell Cycle**

The cell cycle involves a series of changes through which a cell progresses, starting from the time it develops until it reproduces itself.



Oncology is the branch of medicine dealing with tumors. Oncology nursing is also called cancer nursing; it is an important component of medical-surgical nursing care.

- **Cancer:**

Is a group of cells that grows out of control, taking over the function of the affected organ.

Cancer cells are poorly constructed, loosely formed, and disorganized. A simplistic definition is “confused cell.” An organ with a cancerous tumor eventually ceases to function.

- Is a disease process that begins when an abnormal cell is transformed by the genetic mutation of the cellular DNA.

Types of cancer

- **Benign Tumors:** Cells that reproduce abnormally result in neoplasms.

A benign tumor is a cluster of cells that is not normal to the body but is noncancerous. Benign tumors grow more slowly than malignant ones and have cells that are the same as the original tissue. An organ containing a benign tumor usually continues to function normally. A neoplastic growth is difficult to detect until it contains about 500 cells and is about 1 cm in diameter.

- **Malignant:** a term often used to describe cancer, means that the tumor resists treatment and tends to worsen and threaten life.

Benign Tumors

- Small
- Slow-growing
- Non-invasive
- Well-differentiated
- Stay localized
 - Stay where they are.
 - Can't invade or metastasize.

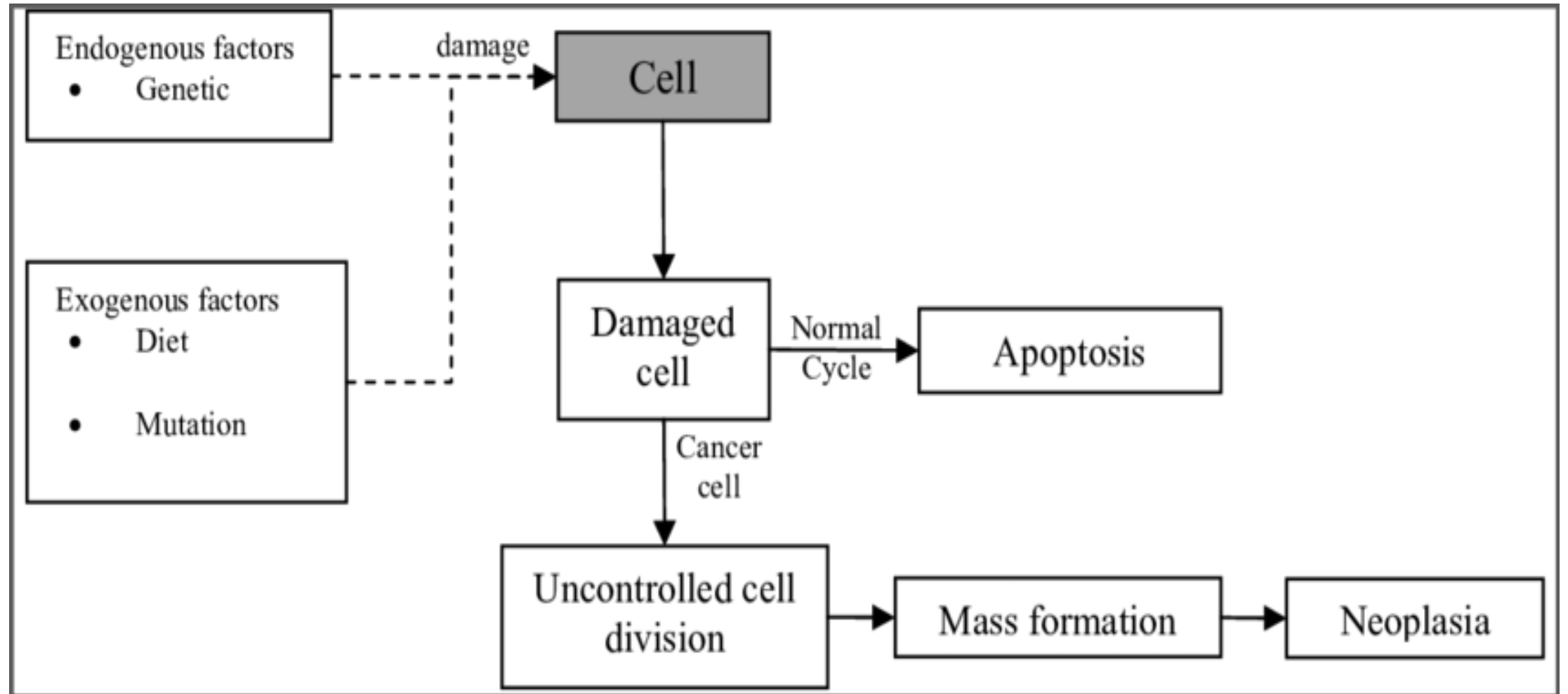
Malignant Tumors

- Large
- Fast-growing
- Invasive
- Poorly-differentiated
- Metastasize
 - Infiltrate, invade, destroy surrounding tissue.
 - Then metastasize to other parts of body.

Pathophysiology

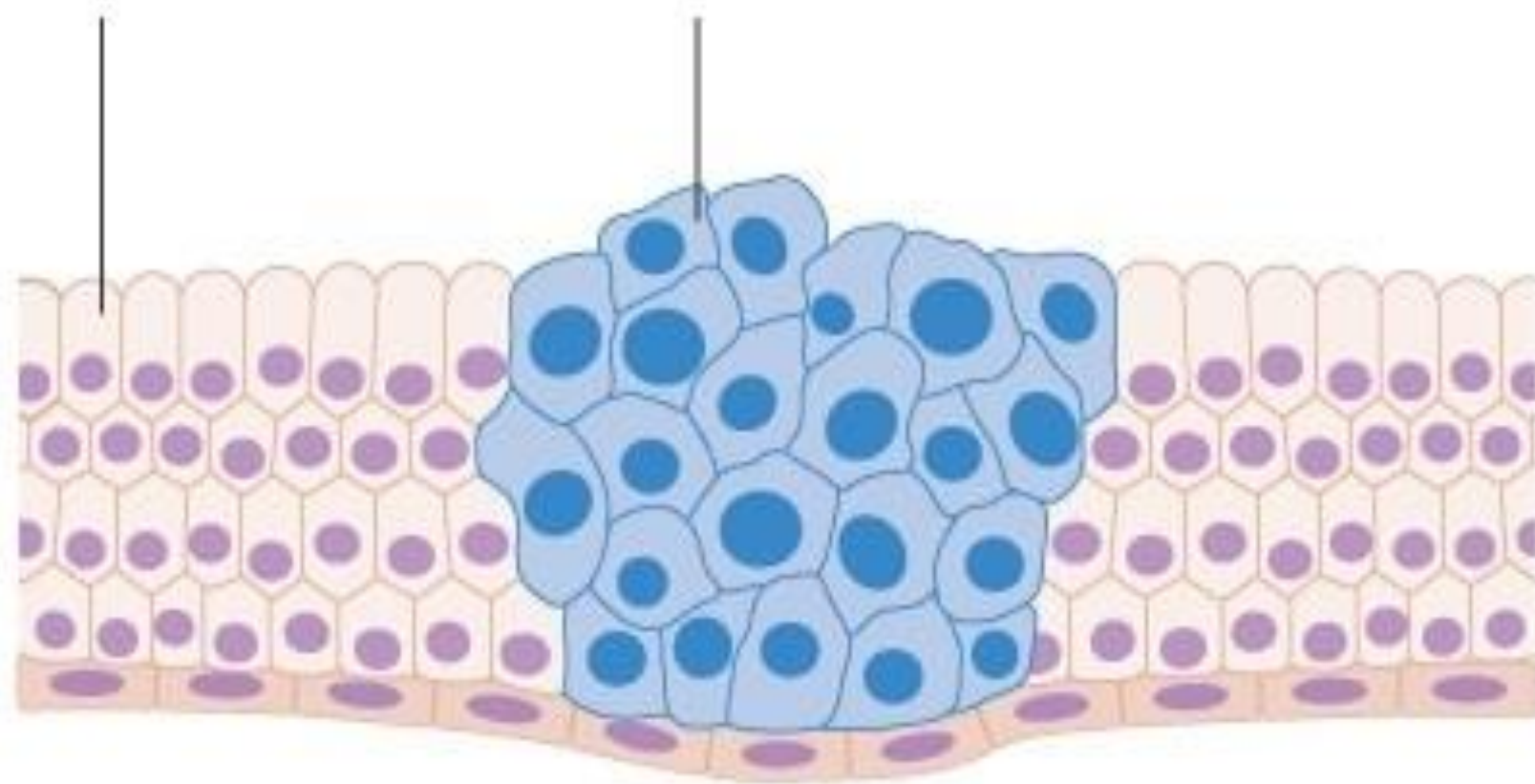
- Cancer is not one disease but many diseases with different causes, manifestations, treatments, and prognoses.
- There are more than 100 types of cancer caused by mutation of cellular genes.
- Normal cells are limited to about 50 to 60 divisions before they die.

Pathophysiology



Normal cells

Cancer cells



Risk Factors

Increased risk of cancer is linked to many environmental factors.

- Viruses
- Exposure to radiation, chemicals, and irritants;
- Genetics
- Diet
- Hormones
- General immunity.

Early Warning Signs for Cancer

- Cancer 7 early warning signs (CAUTION)
 - Change in bowel or bladder habits.
 - Asore that does not heal.
 - Unusual bleeding or discharge.
 - Thickening or lump in breast or scrotum.
 - Indigestion or difficulty in swallowing
 - Obvious change in a mole or wart.
 - Nagging cough or hoarseness.

Diagnostic tests

1. A physical examination is important with careful and thorough assessment of the patient's, medical and surgical histories, and family history should be completed.
2. **BIOPSY:** Accurate identification of a cancer can be made only by biopsy. Microscopic examination of a sample of suspected tissue.

3. RADIOLOGICAL PROCEDURES:

- **X-ray** examination is a valuable diagnostic tool in detecting cancer of the bones and hollow organs.
- **Chest x-ray Mammography** is a reliable and noninvasive low-radiation x-ray procedure for detecting breast masses.
- **Contrast media x-ray** studies are used to detect abnormalities of bone and the GI and urinary systems
- **Computed tomography** (CT) scans are important in the diagnosis and staging of malignancies and can detect minor variations in tissue thickness.

4. NUCLEAR IMAGING PROCEDURES: Nuclear medicine imaging involves camera imaging of organs or tissues containing radioactive media. These studies are highly sensitive.

5. ULTRASOUND PROCEDURES: Ultrasonography helps detect tumors of the pelvis and breast.

6. MAGNETIC RESONANCE IMAGING (MRI) is valuable in the detection, localization, and staging of malignant tumors in the central nervous system, spine, head, and musculoskeletal system.

7. ENDOSCOPIC PROCEDURES. An endoscopic examination allows the direct visualization of a body cavity or opening. And used to detect lesions of the throat, esophagus, stomach, colon, and lungs.

8. LABORATORY TESTS: For normal values for the following laboratory tests, (Blood, serum, and urine tests, and learn the number, size, and shape of RBCs, WBCs, and platelets).

9. CYTOLOGICAL STUDY: Cytology is the study of the formation, structure, and function of cells.

Treatment for Cancer:

- Treatment options offered to cancer patients should be based on realistic and achievable goals for each specific type of cancer.
- The range of possible treatment goals may include complete eradication of malignant disease (**cure**)
- prolonged survival and containment of cancer cell growth (**control**),
- or relief of symptoms associated with the disease (**palliation**).

Multiple modalities are commonly used in cancer treatment.

There are three main types of treatment for cancer:

- **Surgery:** Surgery can be curative when it is possible to remove the entire tumor.
- **Radiation therapy:** Radiation is used commonly in cancer control and palliation, and it can be curative if the disease is localized.
- **Chemotherapy:** Chemotherapy is chemical therapy that uses cytotoxic drugs to treat cancer. Cytotoxic drugs can be used for cure, control, or palliation of cancerous tumors.

Nursing Diagnosis:

1. Risk for Ineffective Coping related to the diagnosis and treatment of cancer as evidenced by behaviors such as denial, isolation, anxiety, and depression.
2. Acute Pain or Chronic Pain related to tissue injury from disease process and treatment.
3. Risk for Infection related to diminished immunity and bone marrow suppression as a result of chemotherapy or radiation.



NURSING DIAGNOSIS: Risk for infection related to inadequate defenses related to myelosuppression secondary to radiation or antineoplastic agents

GOAL: Prevention of infection

Nursing Interventions

1. Assess patient for evidence of infection:
 - a. Check vital signs every 4 hours.
 - b. Monitor white blood cell (WBC) count and differential each day.
 - c. Inspect all sites that may serve as entry ports for pathogens (intravenous sites, wounds, skin folds, bony prominences, perineum, and oral cavity).
2. Report fever ($\geq 38.3^{\circ}\text{C}$ [101°F] or $\geq 38^{\circ}\text{C}$ [100.4°F] for longer than 1 hour), chills, diaphoresis, swelling, heat, pain, erythema, exudate on any body surfaces. Also report change in respiratory or mental status, urinary frequency or burning, malaise, myalgias, arthralgias, rash, or diarrhea.
3. Obtain cultures and sensitivities as indicated before initiation of antimicrobial treatment (wound exudate, sputum, urine, stool, blood).

Rationale

1. Signs and symptoms of infection may be diminished in the immunocompromised host. Prompt recognition of infection and subsequent initiation of therapy will reduce morbidity and mortality associated with infection.
2. Early detection of infection facilitates early intervention.
3. Tests identify the organism and indicate the most appropriate antimicrobial therapy. Use of inappropriate antibiotics enhances proliferation of additional flora and encourages growth of antibiotic-resistant organisms.

Expected Outcomes

- Demonstrates normal temperature and vital signs.
- Exhibits absence of signs of inflammation: local edema, erythema, pain, and warmth.
- Exhibits normal breath sounds on auscultation.
- Takes deep breaths and coughs every 2 hours to prevent respiratory dysfunction and infection.
- Exhibits absence of pathologic bacteria on cultures.
- Avoids contact with others with infections.
- Avoids crowds.
- All personnel carry out hand hygiene after each voiding and bowel movement.
- Excoriation and trauma of skin are avoided.
- Trauma to mucous membranes is avoided (avoidance of rectal thermometers, suppositories, vaginal tampons, perianal

4. Initiate measures to minimize infection.
- Discuss with patient and family
 - (1) Placing patient in private room if absolute WBC count $<1000/\text{mm}^3$.
 - (2) Importance of patient avoiding contact with people who have known or recent infection or recent vaccination.
 - Instruct all personnel in careful hand hygiene before and after entering room.
 - Avoid rectal or vaginal procedures (rectal temperatures, examinations, suppositories; vaginal tampons).
 - Use stool softeners to prevent constipation and straining.
 - Assist patient in practice of meticulous personal hygiene.
 - Instruct patient to use electric razor.
 - Encourage patient to ambulate in room unless contraindicated.
 - Avoid fresh fruits, raw meat, fish, and vegetables if absolute WBC count $<1000/\text{mm}^3$; remove fresh flowers and potted plants.
 - Each day: change water pitcher, denture cleaning fluids, and respiratory equipment containing water.

4. Exposure to infection is reduced.
- Preventing contact with pathogens helps prevent infection.
 - Hands are significant source of contamination.
 - Incidence of rectal and perianal abscesses and subsequent systemic infection is high. Manipulation may cause disruption of membrane integrity and enhance progression of infection.
 - Minimizes trauma to tissues.
 - Prevents skin irritation.
 - Minimizes skin trauma.
 - Minimizes chance of skin breakdown and stasis of pulmonary secretions.
 - Fresh fruits and vegetables harbor bacteria not removed by ordinary washing. Flowers and potted plants are sources of organisms.
 - Stagnant water is a source of infection.

vaginal tampons, perianal trauma).

- Uses recommended procedures and techniques if participating in management of invasive lines or catheters.
- Uses electric razor.
- Is free of skin breakdown and stasis of secretions.
- Adheres to dietary and environmental restrictions.
- Exhibits no signs of septicemia or septic shock.
- Exhibits normal vital signs, cardiac output, and arterial pressures when monitored.
- Demonstrates ability to administer colony-stimulating factor.



PLAN OF NURSING CARE

The Patient With Cancer (Continued)

Nursing Interventions

5. Assess intravenous sites every day for evidence of infection:
 - a. Change peripheral short-term intravenous sites every other day.
 - b. Cleanse skin with povidone-iodine before arterial puncture or venipuncture.
 - c. Change central venous catheter dressings every 48 hours.
 - d. Change all solutions and infusion sets every 72–96 hours.
 - e. Follow Infusion Nursing Society guidelines for care of peripheral and central venous access devices.
6. Avoid intramuscular injections.
7. Avoid insertion of urinary catheters; if catheters are necessary, use strict aseptic technique.
8. Teach patient or family member to administer granulocyte (or granulocyte-macrophage) colony-stimulating factor when prescribed.
9. Advise patient to avoid exposure to animal excreta; discuss dental procedures with physician; avoid vaginal douche; and avoid vaginal or rectal manipulation during sexual contact during period of neutropenia (Marrs, 2006; Zitella, et al., 2006).

Rationale

5. Nosocomial staphylococcal septicemia is closely associated with intravenous catheters.
 - a. Incidence of infection is increased when catheter is in place >72 hours.
 - b. Povidone-iodine is effective against many gram-positive and gram-negative pathogens.
 - c. Allows observation of site and removes source of contamination.
 - d. Once introduced into the system, microorganisms are capable of growing in infusion sets despite replacement of container and high flow rates.
 - e. Infusion nursing society collaborates with other nursing subspecialties in determining guidelines for intravenous access care.
6. Reduces risk for skin abscesses.
7. Rates of infection greatly increase after urinary catheterization.
8. Granulocyte colony-stimulating factor decreases the duration of neutropenia and the potential for infection.
9. Minimizes exposure to potential sources of infection and disruption of skin integrity.

Expected Outcomes

Prevention

CHART
16-2



HEALTH PROMOTION

American Cancer Society (ACS) Guidelines on Nutrition and Physical Activity for Cancer Prevention

ACS Recommendations for Individual Choices

- Maintain a healthy weight throughout life
 - Balance caloric intake with physical activity
 - Avoid excessive weight gain throughout the life cycle
 - Achieve and maintain a healthy weight if currently overweight or obese
- Adopt a physically active lifestyle
 - Adults: engage in at least 30 minutes of moderate to vigorous physical activity, above usual activities, on 5 or more days of the week; 45 to 60 minutes of intentional physical activity are preferable
 - Children and adolescents: engage in at least 60 minutes per day of moderate to vigorous physical activity at least 5 days per week
- Consume a healthy diet, with an emphasis on plant sources
 - Choose foods and beverages in amounts that help achieve and maintain a healthy weight
 - Eat five or more servings of a variety of vegetables and fruits each day

- Choose whole grains in preference to processed (refined) grains
- Limit consumption of processed and red meats

If you drink alcoholic beverages, limit consumption. Drink no more than one drink per day for women or two per day for men.

ACS Recommendations for Community Action

- Public, private, and community organizations should work to create social and physical environments that support the adoption and maintenance of healthful nutrition and physical activity behaviors
- Increase access to healthful foods in schools, worksites, and communities
- Provide safe, enjoyable, and accessible environments for physical activity in schools, and for transportation and recreation in communities

Breast Cancer

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Adult nursing / 2nd stage – first semester

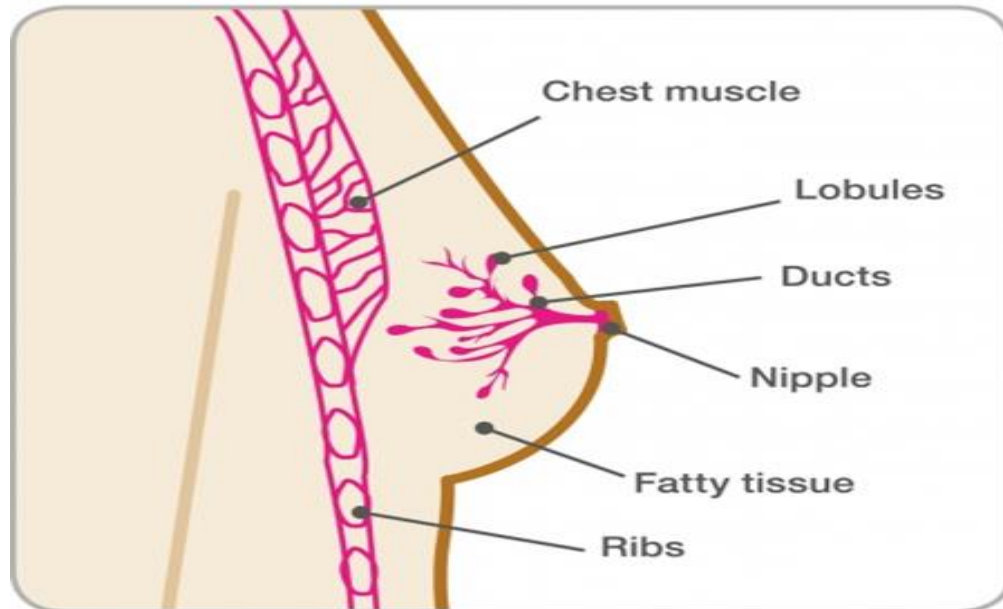
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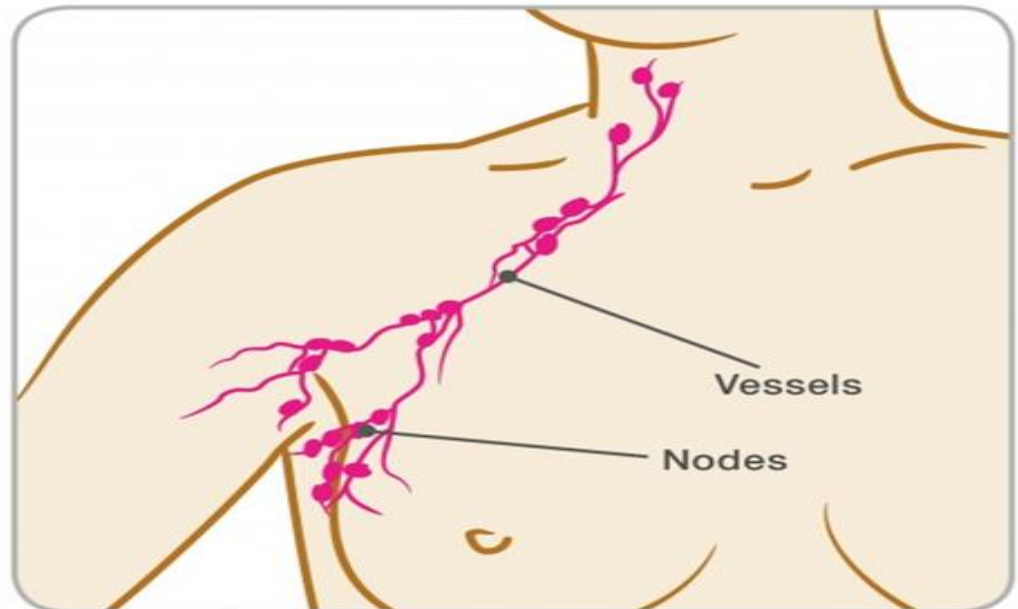
Breast cancer

- Breast cancer is an abnormal growth of breast cells.
- It can arise from the milk producing glands, the ductal system, or the fatty and connective tissues of the breast.

The breast



The lymph nodes



Risk Factors

- Gender: female gender 99% of cases occur in women
- Race: more common in whites
- Age: increases as a woman gets older.
- History of cancer: uterus, cervix, ovary
- Family history with breast cancer
- Genetics mutation

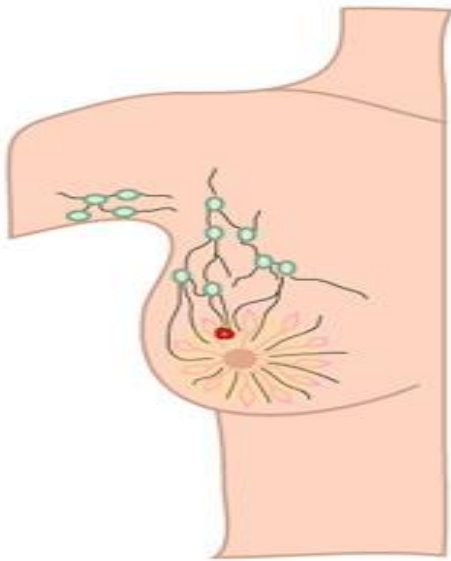
- Menstrual history :early onset or late menopause and Childbirth After the age of 30 or having no children at all.
- Obesity
- Fatty diet or Drinking Alcohol
- Lack of Physical Activity ; Stress
- Radiation Exposure
- Hormones: estrogens in Hormone replacement therapy & Birth control pills

Symptoms of Breast Cancer

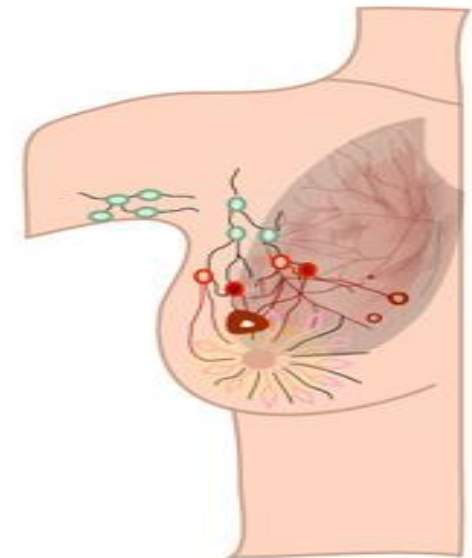
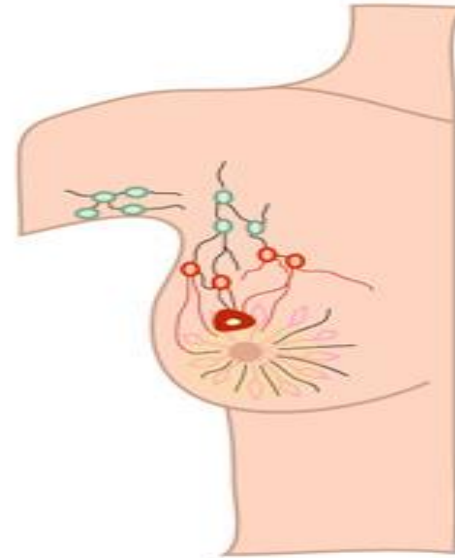
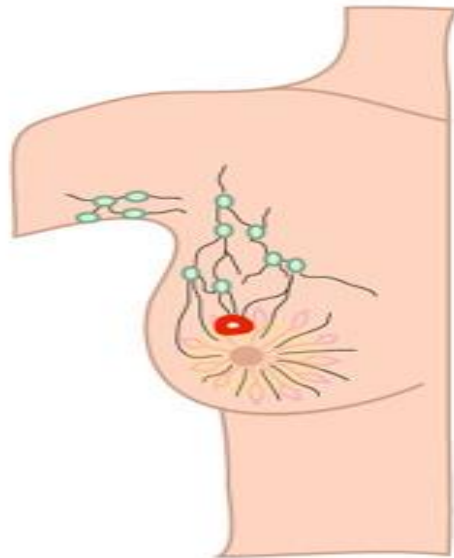
- Early breast cancer may not have symptoms.
- A lump or thickening of breast tissue (redness Palpable lumps).
- change in the shape or contour of a breast can indicate breast cancer.
- A tumor can also cause dimpling of the overlying skin or retraction of the nipple.
- Leakage of fluid/blood from nipple
- Swelling.
- Tenderness
- discoloration of the breast can indicate inflammatory breast cancer.
- Pain in any area of the breast.

Staging Breast Cancer

- The spread (metastasis) of cancerous cells from the primary site to other areas of the body by way of the blood or lymph is denoted by staging classifications 0 to 4.



Early stage



Late stage

Diagnosis tests:

- Self Awareness or **Brest self examination (BSE)** Monthly.
- Clinical Breast Examination (CBE)
- Mammograms (women is 40 years of age and older should have a MAMMOGRAM every year).
- Excisional/fine-needle biopsy

Treatment for Breast Cancer

1. Surgery

- **Lumpectomy**: removes just the tumor and a margin around it.
- **Mastectomy** may be:
 - partial** (removing only part of the breast)
 - simple** (removing the breast tissue of one or both breasts)
 - radical** (removing breast tissue, underlying muscle, and surrounding lymph nodes).
- The amount of tissue removed varies depending on the size, nature, and invasiveness of the cancer.

2. Radiation Therapy : Radiation can be administered externally or internally to attack the rapidly dividing cells of a tumor.

It is usually used after surgery to reduce the risk of cancer recurrence or spread.

3. Chemotherapy : Chemotherapy kills all rapidly dividing cells, not just breast cancer cells, which leads to many side effects. This therapy may be used alone or in combination with other therapies.

4. Hormonal Therapy: Hormone therapy may be used to deprive cancer cells of hormones that stimulate their growth.

Preventing breast cancer

- maintain a healthy weight
- exercise regularly
- have a low intake of saturated fat
- do not drink alcohol

Nursing Diagnosis

Preoperative Nursing Diagnoses

- Deficient knowledge about the planned surgical treatments
- Anxiety related to the diagnosis of cancer
- Fear related to specific treatments and body image changes
- Risk for ineffective coping (individual or family) related to the diagnosis of breast cancer and related treatment options

Postoperative Nursing Diagnoses

- Pain and discomfort related to surgical procedure
- Disturbed sensory perception related to nerve irritation in affected arm, breast, or chest wall
- Disturbed body image related to loss or alteration of the breast
- Risk for impaired adjustment related to the diagnosis of cancer and surgical treatment
- Self-care deficit related to partial immobility of upper extremity on operative side
- Risk for sexual dysfunction related to loss of body part, change in self-image, and fear of partner's responses
- Deficient knowledge: drain management after breast surgery
- Deficient knowledge: arm exercises to regain mobility of affected extremity
- Deficient knowledge: hand and arm care after axillary lymph nodes dissection

Nursing Interventions

1. Preoperative teaching
2. Nutritional promotion pre and post operation
3. Pain control
4. Monitor for postoperative complications
5. Monitor for adverse effects of radiation therapy such as fatigue, sore throat, dry cough, nausea, anorexia.
6. Monitor for adverse effects of chemotherapy; bone marrow suppression, nausea and vomiting, alopecia, weight gain or loss, fatigue, stomatitis, anxiety, and depression.
7. Provide psychological support to the patient throughout the diagnostic and treatment process

8. Involve the patient in planning and treatment.
9. Describe surgical procedures to decrease fear.
10. Administer antiemetic's prophylactically, as directed, for patients receiving chemotherapy.
11. Administer I.V. fluids and hyperalimentation as indicated.
12. Help patient identify and use support persons or family or community.
13. Suggest to the patient the psychological interventions may be necessary for anxiety, depression, or sexual problems.
14. Teach all women the recommended cancer-screening procedures.

Discharge and Home Patient Teaching

Instruct the patient to do the following:

1. empty the drainage receptacle twice a day and record the amount on a flow sheet.
2. report symptoms of infection or excess drainage on the dressing.
3. sponge bathe until the sutures and drains are removed
4. continue with daily lower arm ROM exercises until the surgeon orders more strenuous exercises.
5. avoid caffeinated foods and drinks, nicotine, and secondary smoke for 3 weeks postoperatively.

6. Teach precautions to prevent lymphedema after node dissection:

- Request no blood pressure or blood samples from affected arm.
- Do not carry packages, hand bags with the affected arm
- avoid elastic cuffs.
- Protect the hand and arm from burns, sticks, and cuts by wearing gloves during housework.
- Report swelling, pain, or heat in the affected arm immediately.
- Put the arm above the head and pump the fist frequently throughout the day.

Digestive System (Gastrointestinal tract)

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Adult nursing / 2nd stage – first semester

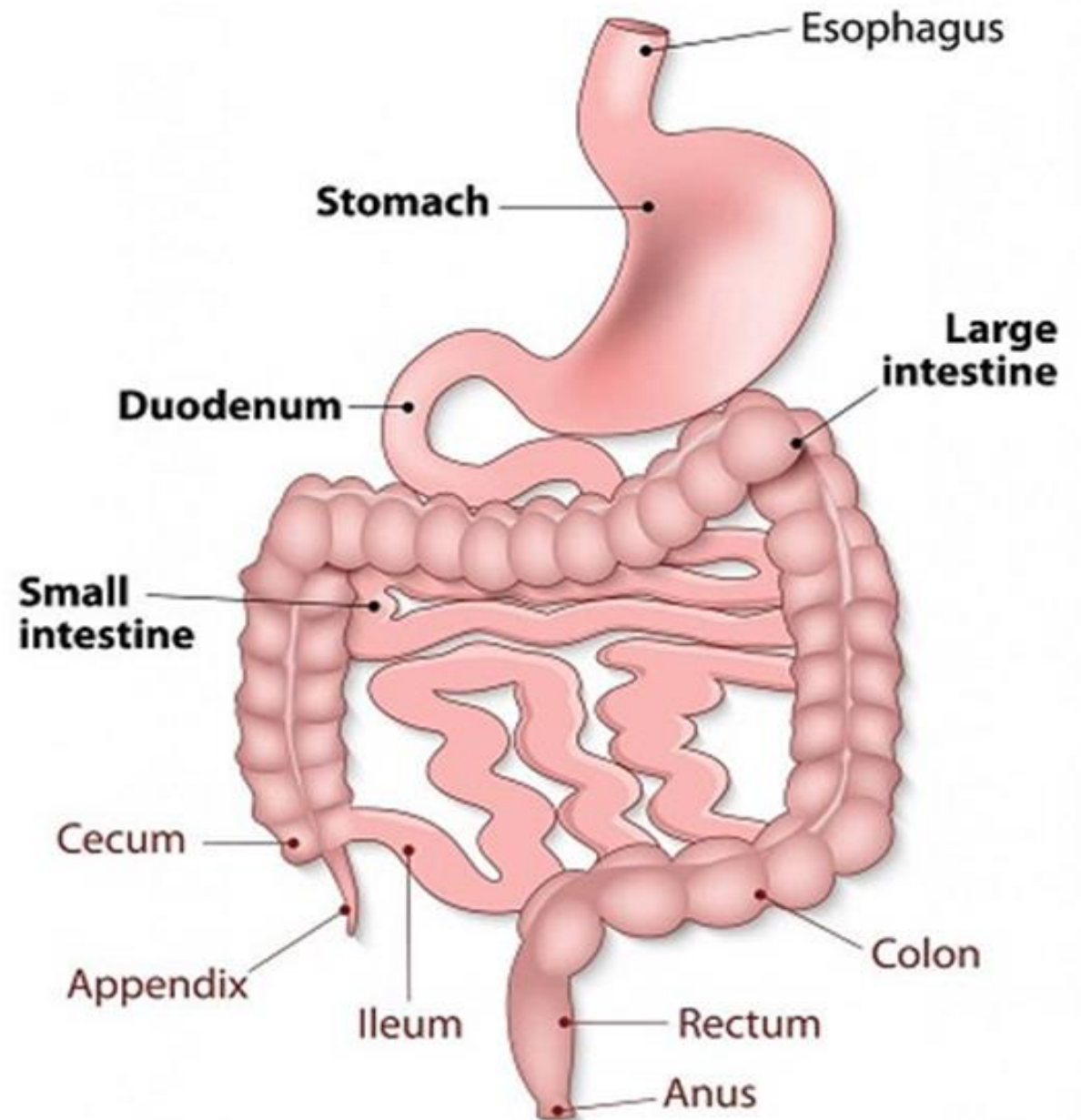
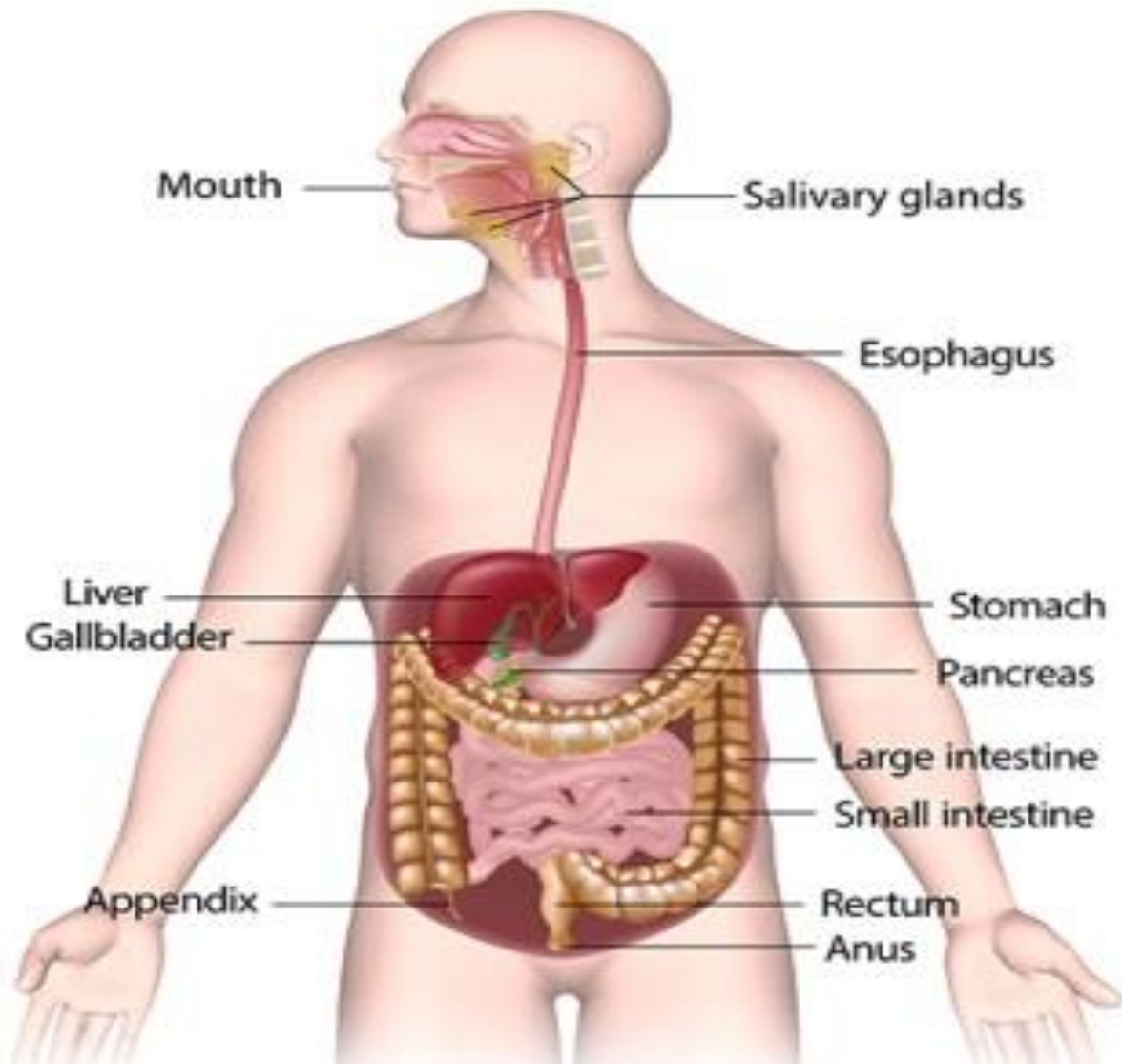
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2021-2022

Digestive System (Gastrointestinal tract)

- The gastrointestinal (GI) tract is part of the digestive system.
- Digestion begins in the oral cavity and continues in the stomach and small intestine.
- Most absorption of nutrients takes place in the small intestine.
- The large intestine is where the majority of water is reabsorbed.
- **Accessory organs** include teeth, tongue, salivary glands, liver, gall bladder, and pancreas.

The Digestive System



Function of digestive system

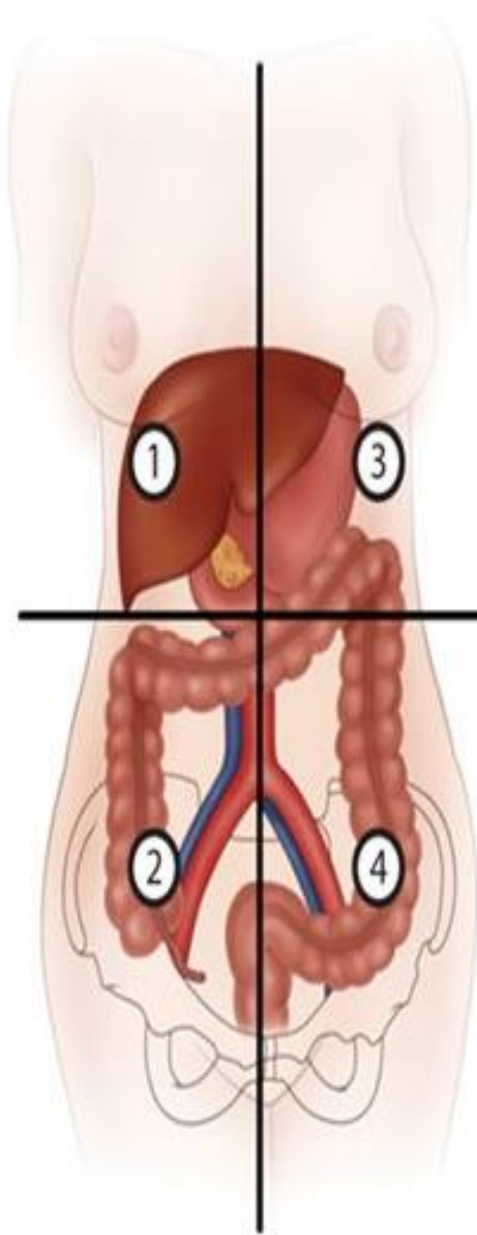
- All cells of the body require nutrients.
- These nutrients are derived from the intake of food that contains proteins, fats, carbohydrates, vitamins, minerals, and cellulose fibers and other vegetable matter, some of which has no nutritional value.

Functions of the GI tract are the following:

- The breakdown of food particles into the molecular form for digestion.
- The absorption into the bloodstream of small nutrient molecules produced by digestion.
- The elimination of undigested unabsorbed foodstuffs and other waste products.

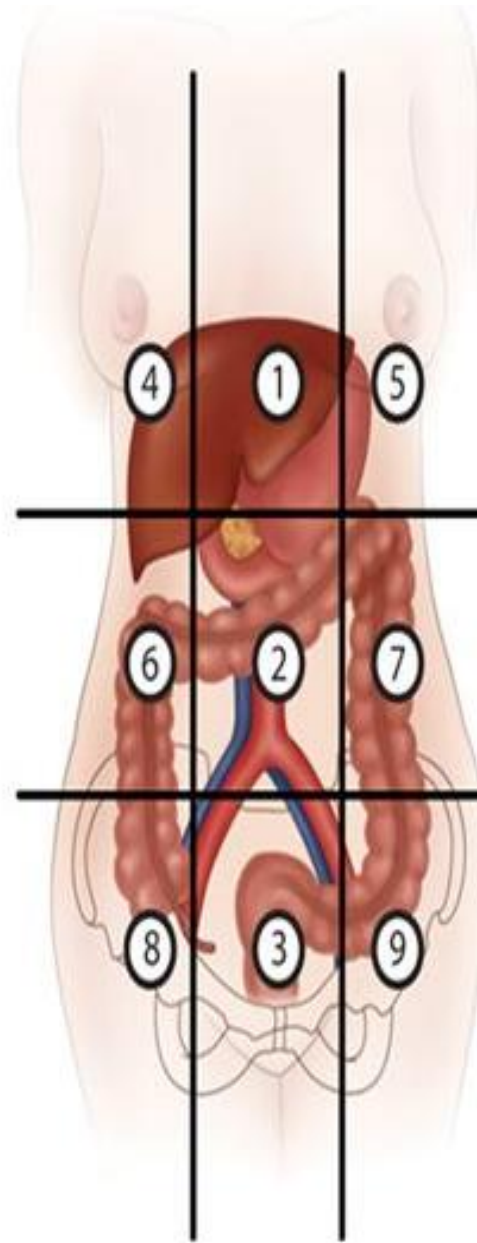
Common Symptoms

- Pain
- Dyspepsia
- Intestinal Gas
- Nausea and Vomiting and Anorexia
- Change in Bowel Habits and Stool Characteristics



Four quadrants

- 1 - right upper quadrant (RUQ)
- 2 - right lower quadrant (RLQ)
- 3 - left upper quadrant (LUQ)
- 4 - left lower quadrant (LLQ)



Nine regions

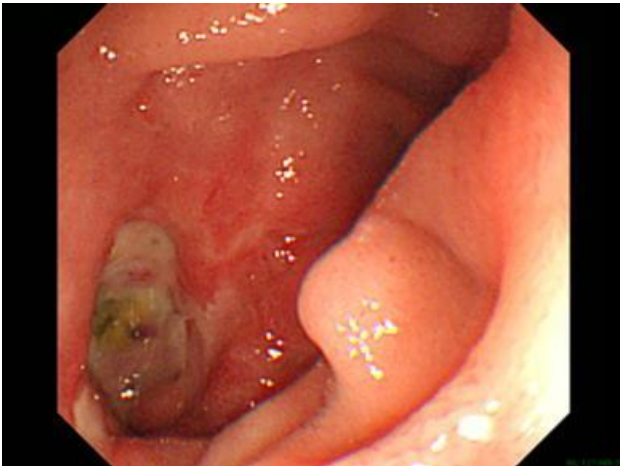
- 1 - epigastric region
- 2 - umbilical region
- 3 - hypogastric or suprapubic region
- 4 - right hypochondriac region
- 5 - left hypochondriac region
- 6 - right lumbar region
- 7 - left lumbar region
- 8 - right inguinal region
- 9 - left inguinal region

Diagnostic measures

- Serum laboratory studies
- Stool tests
- Breath tests
- Abdominal ultrasonography
- Image tests, X-ray , computed tomography (CT) and magnetic resonance imaging (MRI).
- Endoscopic procedures

Peptic Ulcer Disease

- A peptic ulcer may be referred to as a gastric, duodenal, or esophageal ulcer, depending on its location.
- A peptic ulcer is an excavation (hollowed-out area) that forms in the mucosal wall of the stomach.



Pathophysiology

- Peptic ulcers occur mainly in the gastroduodenal mucosa because this tissue cannot withstand the digestive action of gastric acid (HCl) and pepsin.
- The erosion is caused by the increased concentration or activity of acid—pepsin or by decreased resistance of the mucosa.
- A damaged mucosa cannot secrete enough mucus to act as a barrier against HCl.

Etiology

- Stress.
- Diet habits and alcohol or caffeine ingestion and smoking.
- Infection with the Gram-negative bacterium *H. pylori*. This bacterium is responsible for 80% of gastric ulcers and more than 90% of duodenal ulcers

Signs and Symptoms

Symptoms vary with the location of the ulcer

- Pain or a burning sensation in the midepigastrium or the back. Pain is usually relieved by eating.
- **Pyrosis** (heartburn): Pyrosis is a burning sensation in the stomach and esophagus that moves up to the mouth.
- Anorexia and Vomiting
- Constipation or diarrhea.
- Bleeding.

Priority Nursing Diagnoses

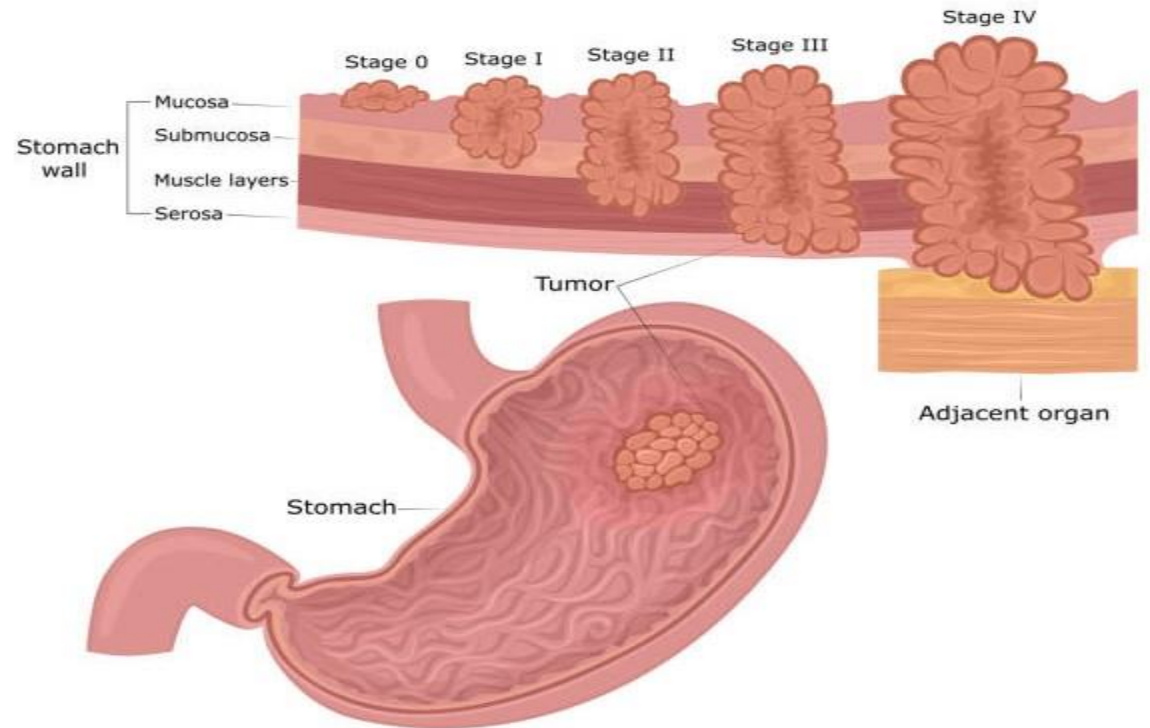
- Acute pain related to the effect of gastric acid secretion on damaged tissue
- Anxiety related to an acute illness
- Imbalanced nutrition related to changes in diet
- Deficient knowledge about prevention of symptoms and management of the condition.

Medical Management

- Medications like antibiotics to eradicate *H. pylori*
- lifestyle changes
- Surgical intervention

Gastric Cancer

- Gastric cancer refers to malignant lesions found in the stomach.
- The typical patient with gastric cancer is between 40 and 70 years of age
- Men have a higher incidence of gastric cancer than women.



Signs and Symptoms

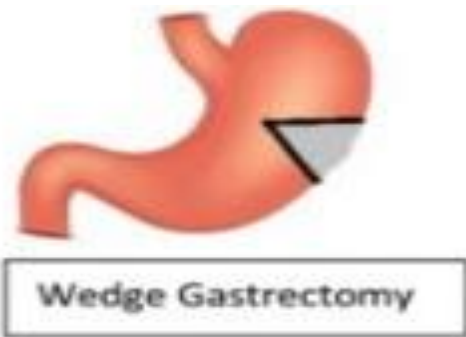
- Rarely detected during early stages
- dyspepsia (indigestion)
- weight loss
- abdominal pain just above the umbilicus
- loss or decrease in appetite
- bloating after meals
- nausea and vomiting

Priority Nursing Diagnoses

- Anxiety related to the disease and anticipated treatment
- Imbalanced nutrition, less than body requirements, related to early satiety or anorexia
- Pain related to tumor mass
- Anticipatory grieving related to the diagnosis of cancer
- Deficient knowledge regarding self-care activities

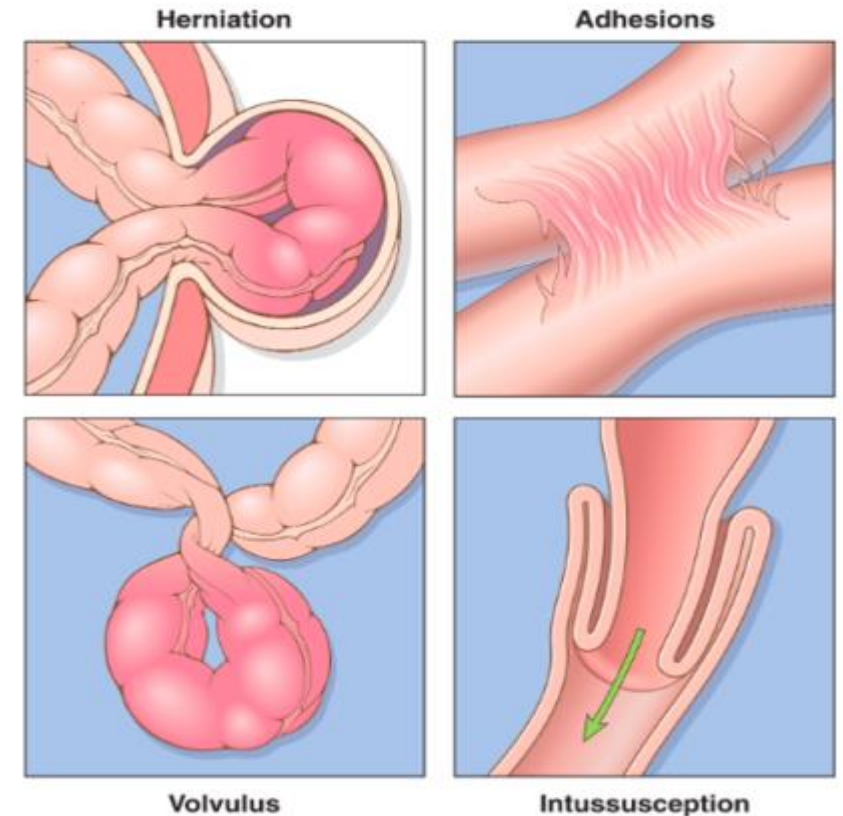
Management

- A total Gastrectomy is the best treatment.



Intestinal Obstruction

- Intestinal obstruction exists when blockage prevents the normal flow of intestinal contents through the intestinal tract.
- The severity of the obstruction depends on the area of bowel affected.
- The obstruction can be partial or complete.



Signs and Symptoms

- Abdominal pain
- Blood and mucus from rectum
- Feces and flatus cease
- Visible peristaltic waves in thin person
- Fecal vomiting
- Bowel sounds high pitched, tinkling, or absent
- Abdominal distention
- Fluid and electrolyte imbalance
- Dehydration become evident
- Drowsiness

Therapeutic Measures

- Nothing by mouth (NPO) status
- Nasogastric tube
- warrants surgical intervention
- Fluid and electrolyte replacement
- Medications: antibiotics, antiemetics, analgesics
- Surgery

Nursing Management

Nursing management of the nonsurgical patient with a small bowel obstruction includes:

- maintaining the function of the nasogastric tube.
- assessing and measuring the nasogastric output
- assessing for fluid and electrolyte imbalance
- monitoring nutritional status, and assessing improvement.
- The nurse reports
 - intake and output,
 - worsening of pain or abdominal distention,
 - increased nasogastric output.
 - If the patient's condition does not improve, the nurse prepares patient for surgery.

Liver and biliary disorders

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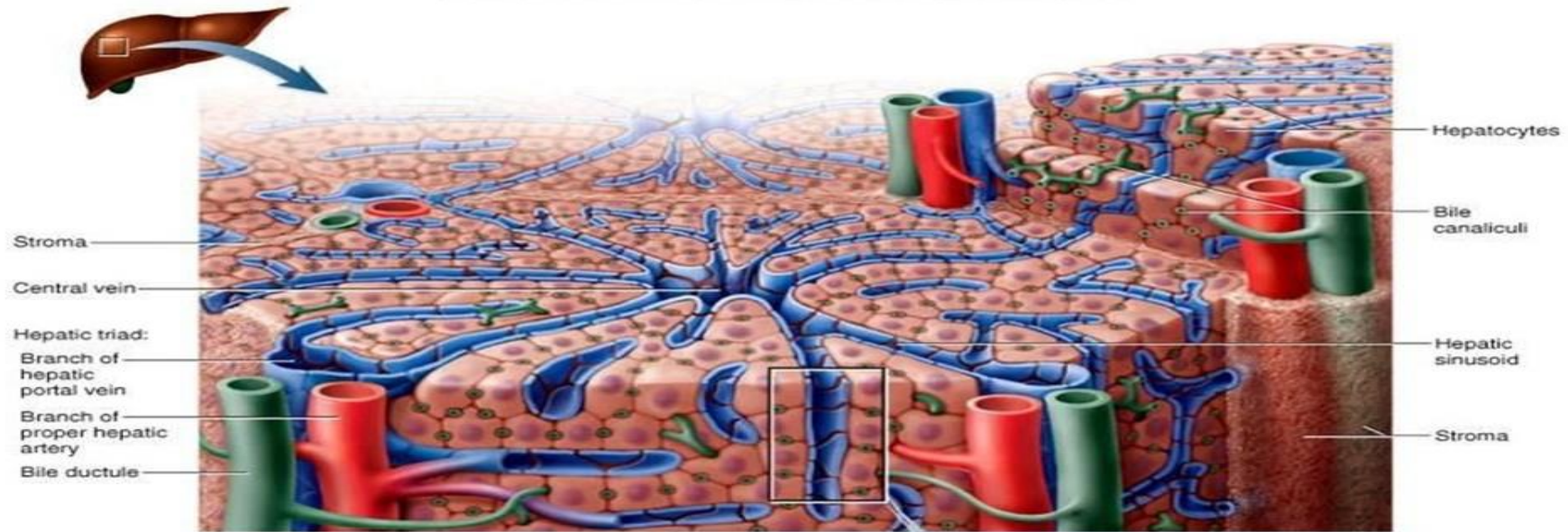
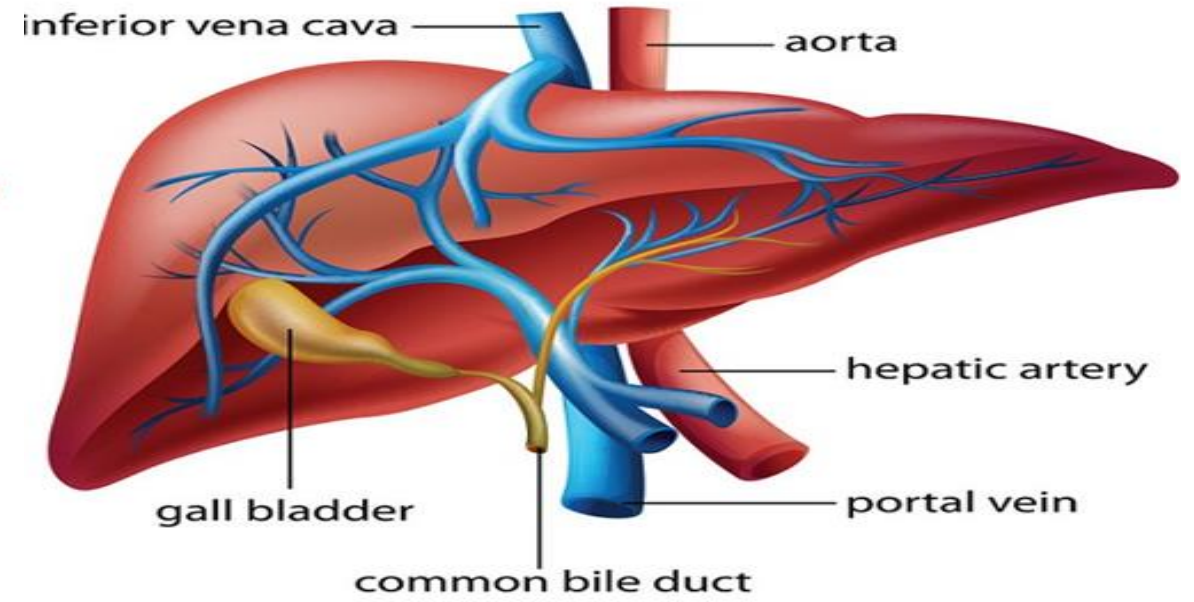
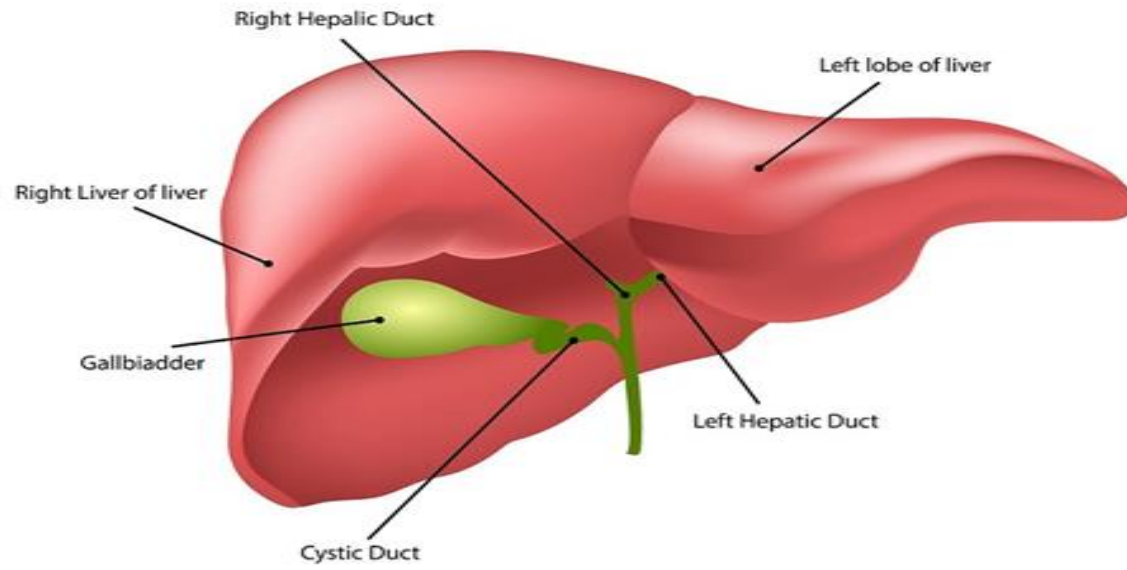
Adult nursing / 2nd stage – first semester

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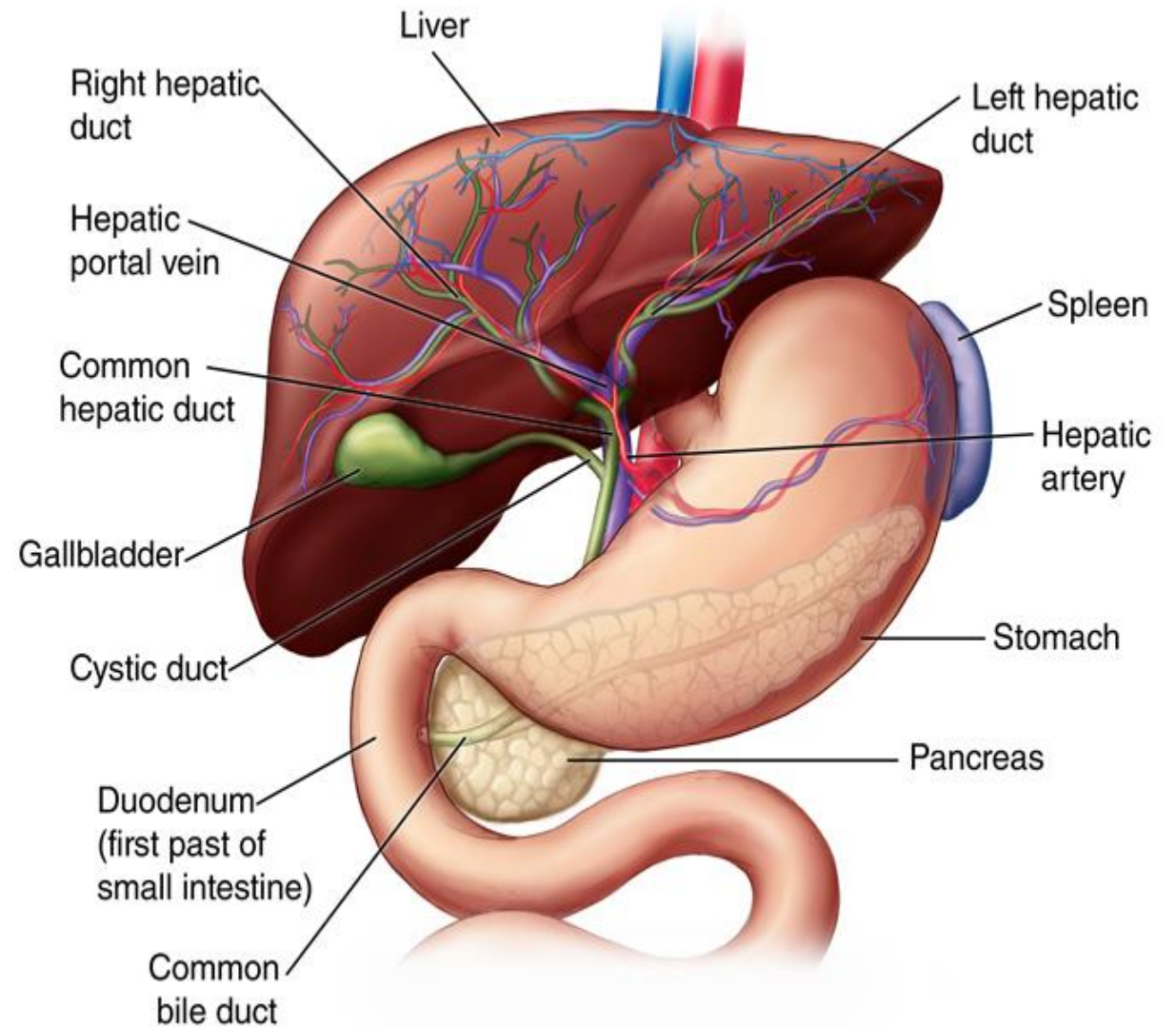
2021-2022

Liver and biliary disorders

- The liver is the largest gland of the body.
- can be considered a chemical factory that manufactures, stores, alters, and excretes a large number of substances involved in metabolism.
- highly vascular organ located behind the ribs in the upper right portion (RUQ) of the abdominal cavity.
- It weighs between 1200 and 1500 gram and is divided into four lobes.



The location of the liver is essential in this function because it receives nutrient-rich blood directly from the gastrointestinal (GI) tract and then either stores or transforms these nutrients into chemicals that are used elsewhere in the body for metabolic needs.



Functions of the liver

- The liver is the only organ in the body that can easily replace damaged cells.
- Production of bile that is required in the digestion of food
- Storing of the extra glucose or sugar as **glycogen**, and then converting it back into glucose when the body needs it for energy
- Production of blood clotting factors
- Production of amino acids

- The processing and storage of iron necessary for red blood cell production
- The manufacture of cholesterol and other chemicals required for fat transport
- The conversion of waste products of body metabolism into urea that is excreted in the urine
- Metabolizing medications into their active ingredient in the body

Signs and symptoms

- Nausea , vomiting
- right upper quadrant abdominal pain
- jaundice (a yellow discoloration of the skin due to elevated bilirubin concentrations in the bloodstream).
- Fatigue
- Weakness
- weight loss

Diagnostic tests

- **Liver Function Tests** (serum aminotransferases, alkaline phosphatase, lactic dehydrogenase) bilirubin, ammonia, clotting factors, and lipids.
- **Liver Biopsy**
- **Ultrasonography**
- **computed tomography (CT)**
- **magnetic resonance imaging (MRI).**
- **Laparoscopy** (insertion of a fiberoptic endoscope through a small abdominal incision) is used to examine the liver and other pelvic structures.

Hepatitis

- Hepatitis is an inflammation of the liver resulting from **viral or bacterial infection, drugs, alcohol, or chemicals toxic** to the liver, and metabolic or vascular disorders.

Symptoms

- no symptoms to life-threatening symptoms due to death of liver tissue.
- Many people who are infected with **hepatitis C**, are not aware of it and can live for 20 years without symptoms. Those infected can develop chronic infection, chronic liver disease, cirrhosis, or liver cancer.
- **Risk factors** for becoming infected with hepatitis C include sharing needles or other equipment to inject drugs. Also, health care providers (HCPs) who are exposed to the virus can become infected in the health care setting.

SYMPTOMS OF HEPATITIS A, B, AND C CAN INCLUDE:



Fatigue



Nausea



Mild fever



**Yellow skin
or eyes**



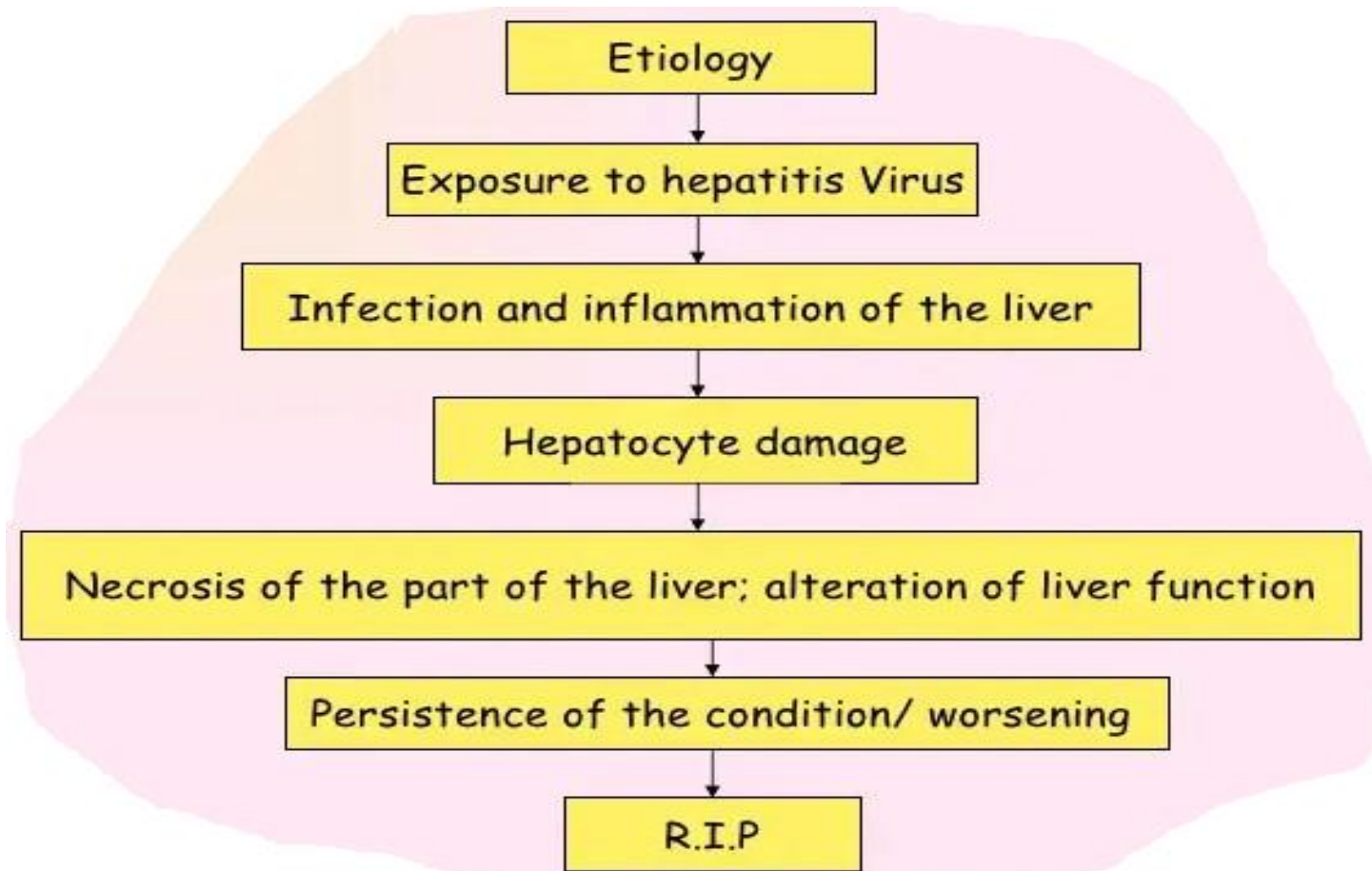
**Stomach
pain**



Dark urine

Pathophysiology and Etiology

- **Viral hepatitis is usually caused by one of five viruses:**
 - Hepatitis A virus (HAV)
 - Hepatitis B virus (HBV)
 - Hepatitis C virus (HCV)
 - Hepatitis D virus (HDV)
 - Hepatitis E virus (HEV)



Therapeutic Measures

- Treatment goals are to identify the cause of hepatitis
- monitor liver status, and provide symptom relief and supportive care.

To promote healing with acute infection

- limited activity with bathroom and adequate nutrition and fluids.
- Patients should avoid using alcohol or drugs that are known to be toxic to the liver

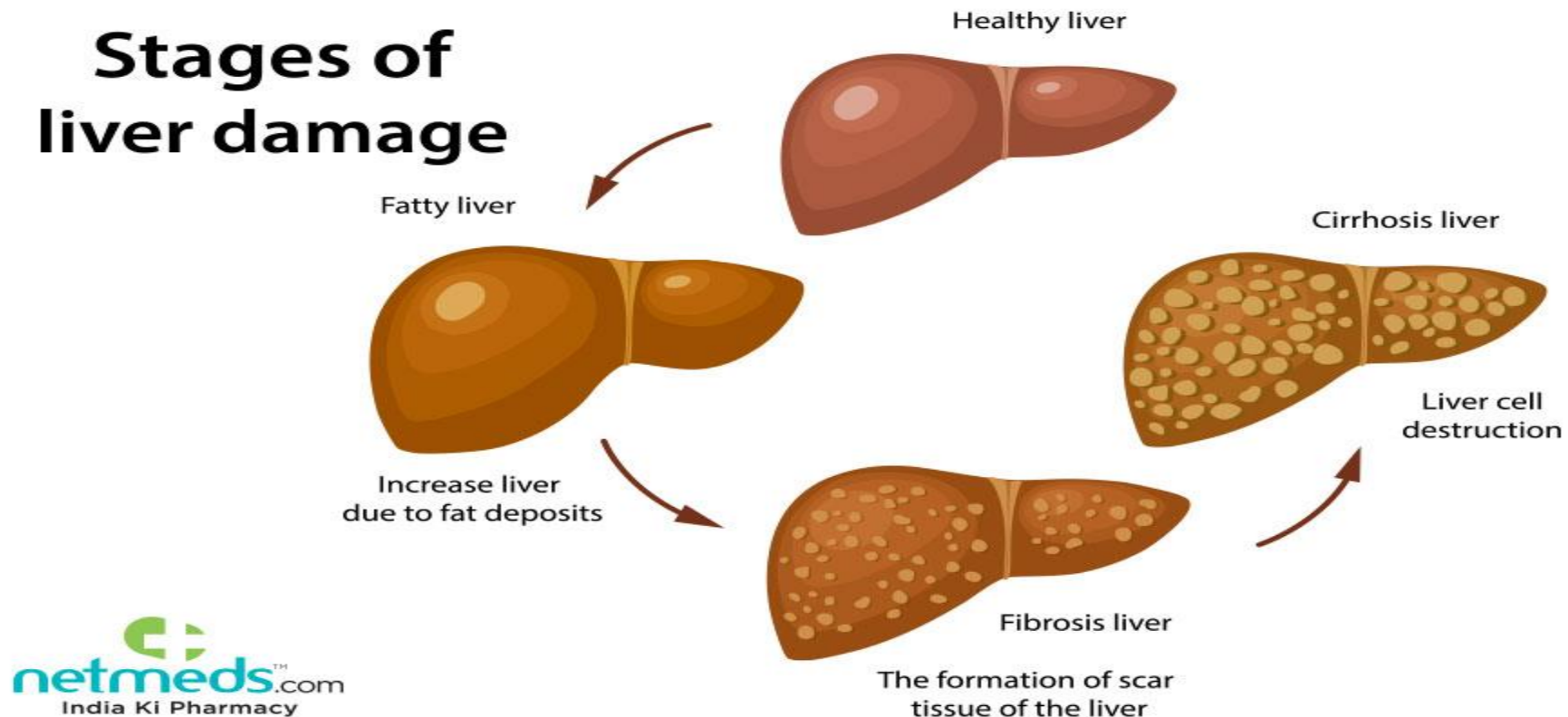
Nursing Diagnoses.

- Pain related to inflammation and enlargement of the liver
- Imbalanced Nutrition, Less Than Body Requirements related to anorexia, nausea, or vomiting

Hepatic 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.

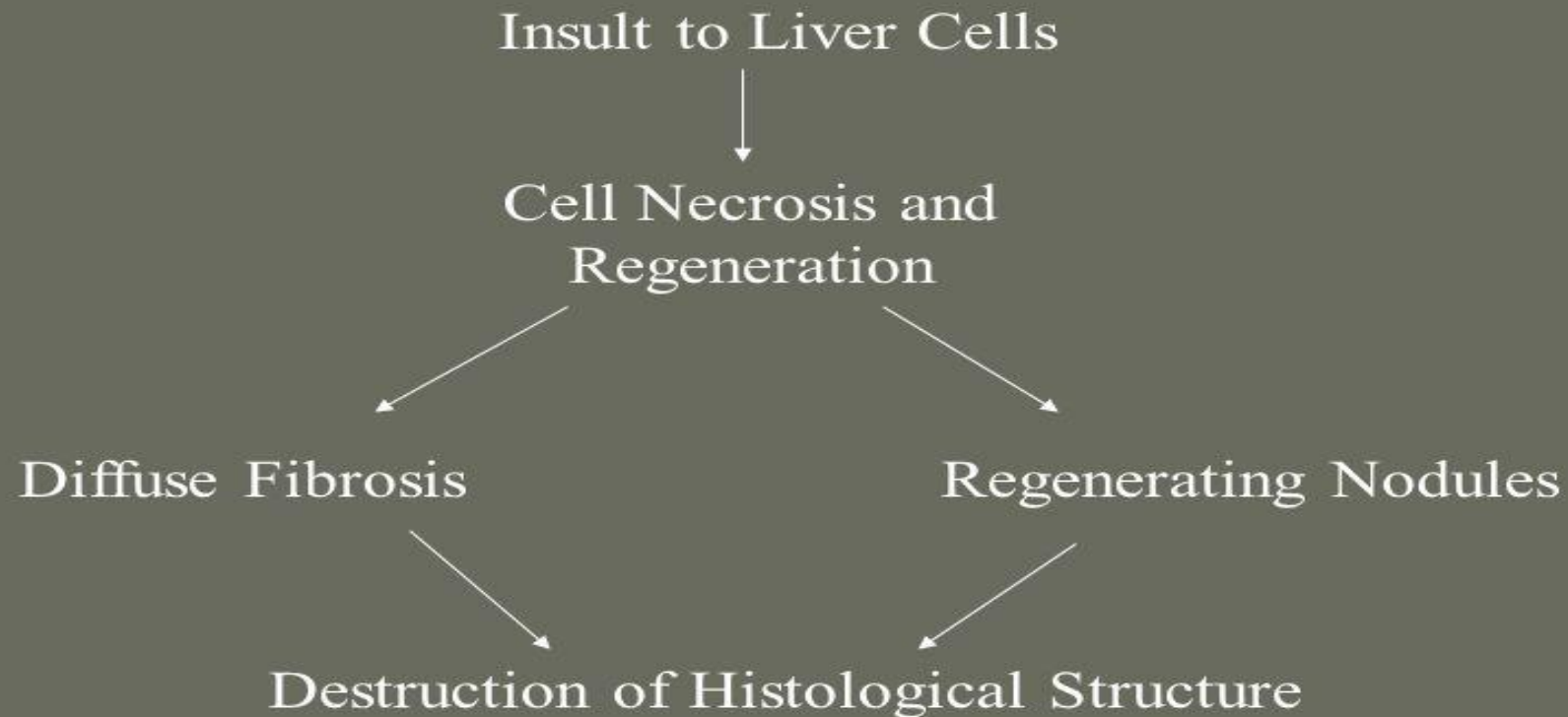
Stages of liver damage



Causes

- **Several factors have been implicated in the etiology of cirrhosis:**
- alcohol consumption. Cirrhosis occurs with greatest frequency among people with alcoholism.
- nutritional deficiency with reduced protein intake contributes to liver destruction in cirrhosis.
- However, cirrhosis has also occurred in people who do not consume alcohol and in those who consume a normal diet and have a high alcohol intake

Pathophysiology of Cirrhosis



Signs and Symptoms

- Initially symptoms are not usually seen with cirrhosis.
- liver function becomes impaired.
- anorexia, nausea, vomiting
- weight loss
- fatigue, which is due to decreased metabolic function of the liver.
- Jaundice.
- The patient's skin may be dry from bile products deposited in the skin.
pruritus (itching).
- The liver may be enlarged, firm, and tender
- Laboratory values reflect progressive loss of liver function.

Diagnostic Tests

- Elevated ALT, AST, ALP, ammonia, bilirubin, PT
- Decreased albumin
- Liver biopsy

Complications

- C: Clotting defects
- H: Hepatorenal syndrome
- E: Encephalopathy
- A: Ascites
- P: Portal hypertension

Nursing Management

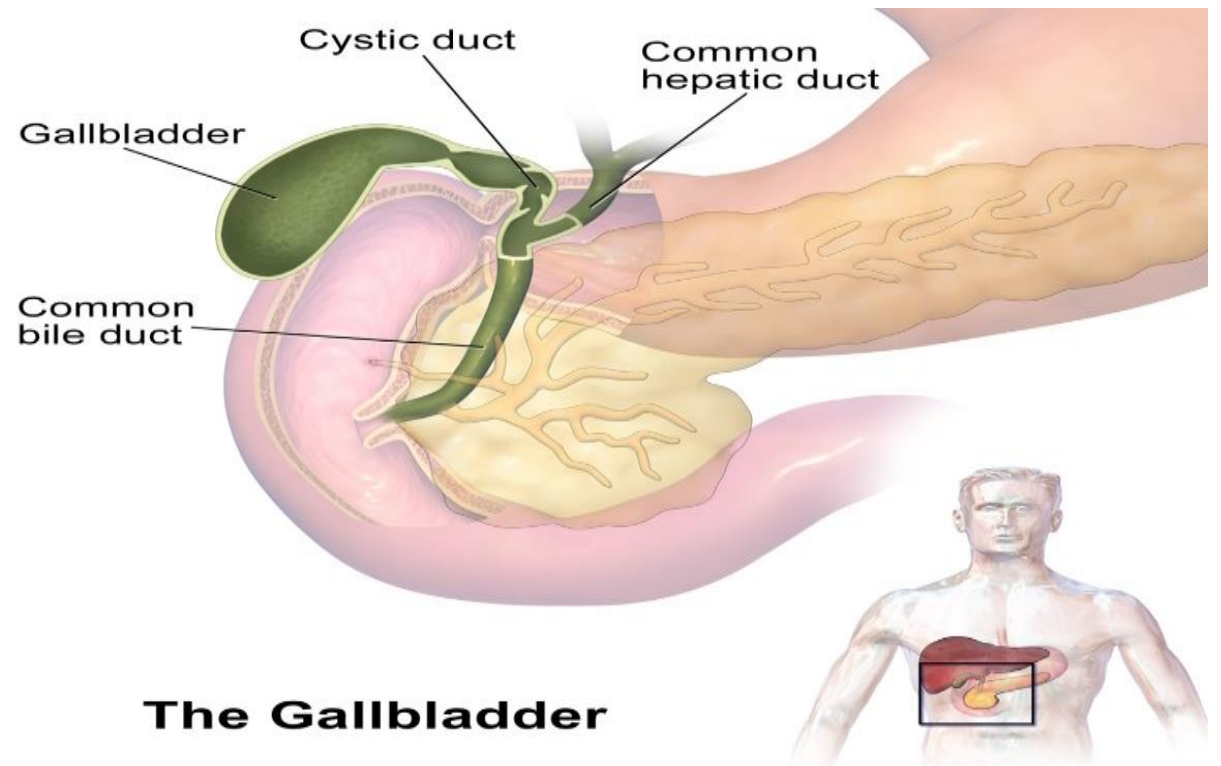
- Nursing interventions are directed toward promoting patient's rest
- improving nutritional status
- providing skin care, reducing risk of injury
- monitoring and managing potential complications.

Nursing Diagnosis:

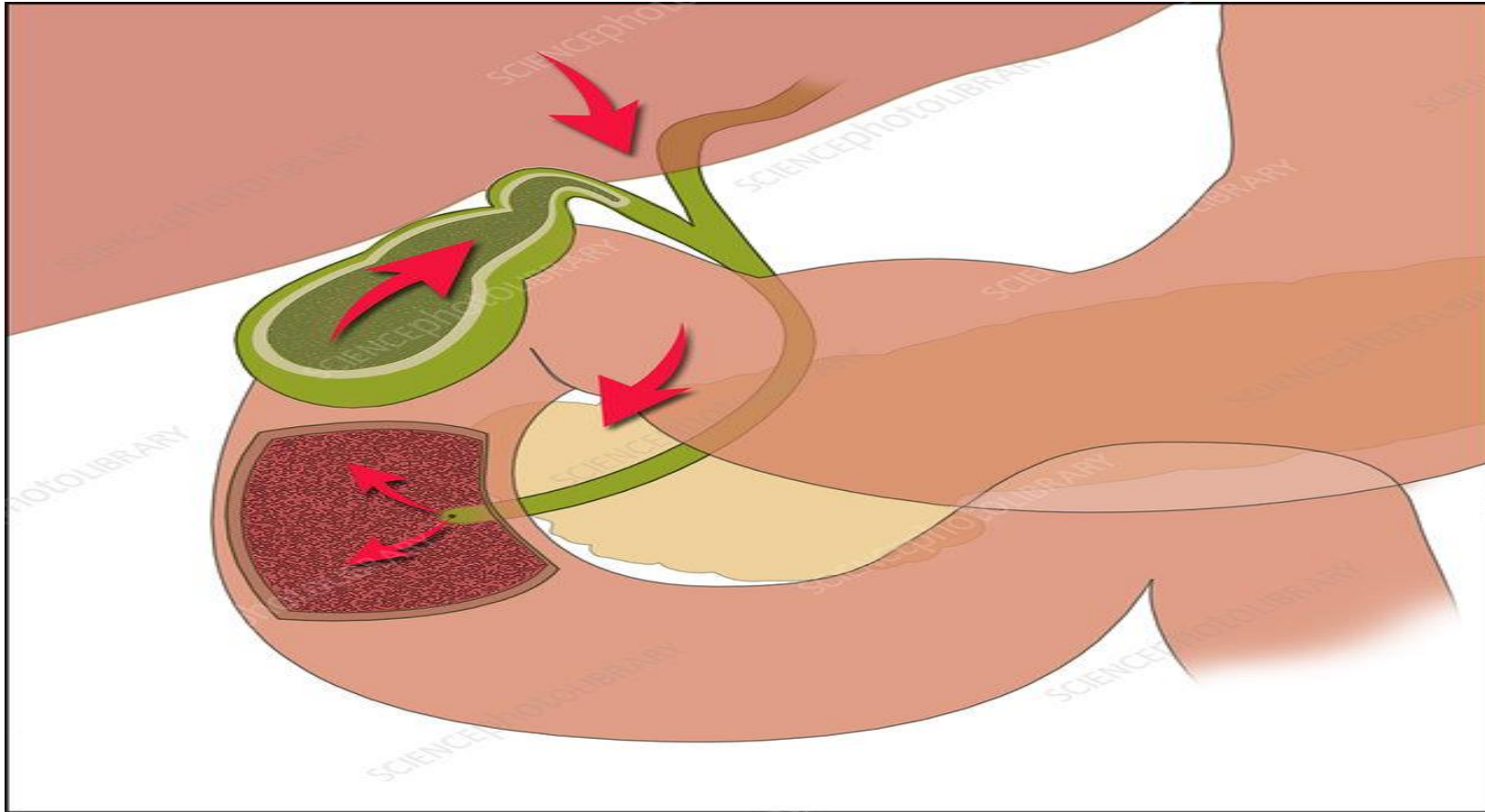
- Activity intolerance related to fatigue, lethargy, and malaise
- Imbalanced nutrition: less than body requirements, related to abdominal distention and discomfort and anorexia
- High risk for injury related to altered clotting mechanisms and altered level of consciousness

Disorders Of The Gallbladder

- The gallbladder, a pear-shaped, hollow, saclike organ, 7.5 to 10 cm (3 to 4 inch) long, lies in a shallow depression on the inferior surface of the liver, to which it is attached by loose connective tissue.
- The capacity of the gallbladder is 30 to 50 mL of bile.
- The gallbladder is connected to the common bile duct by the cystic duct



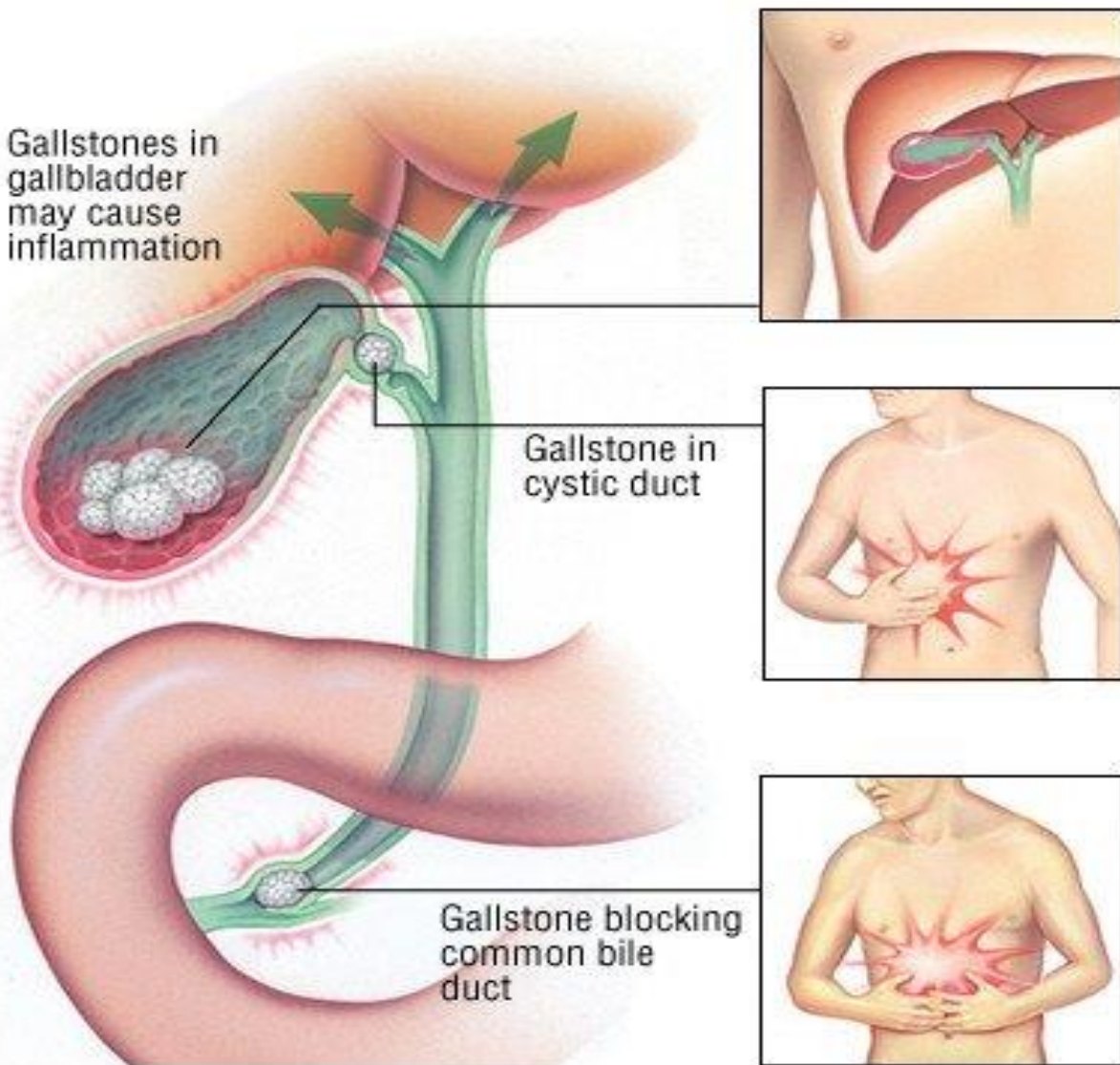
- The gallbladder functions as a storage depot for bile.



Gallstones and inflammations of the gallbladder and common bile duct are the most common disorders of the biliary system.

- **Cholecystitis** is an acute or chronic inflammation of the gallbladder. It is most often a response to obstruction of the common bile duct resulting in edema and inflammation.
- Chronic cholecystitis may be the result of repeated attacks of acute cholecystitis or chronic irritation from gallstones. The gallbladder then becomes fibrotic and thickened and does not empty easily or completely. This is a risk factor for gallbladder cancer.

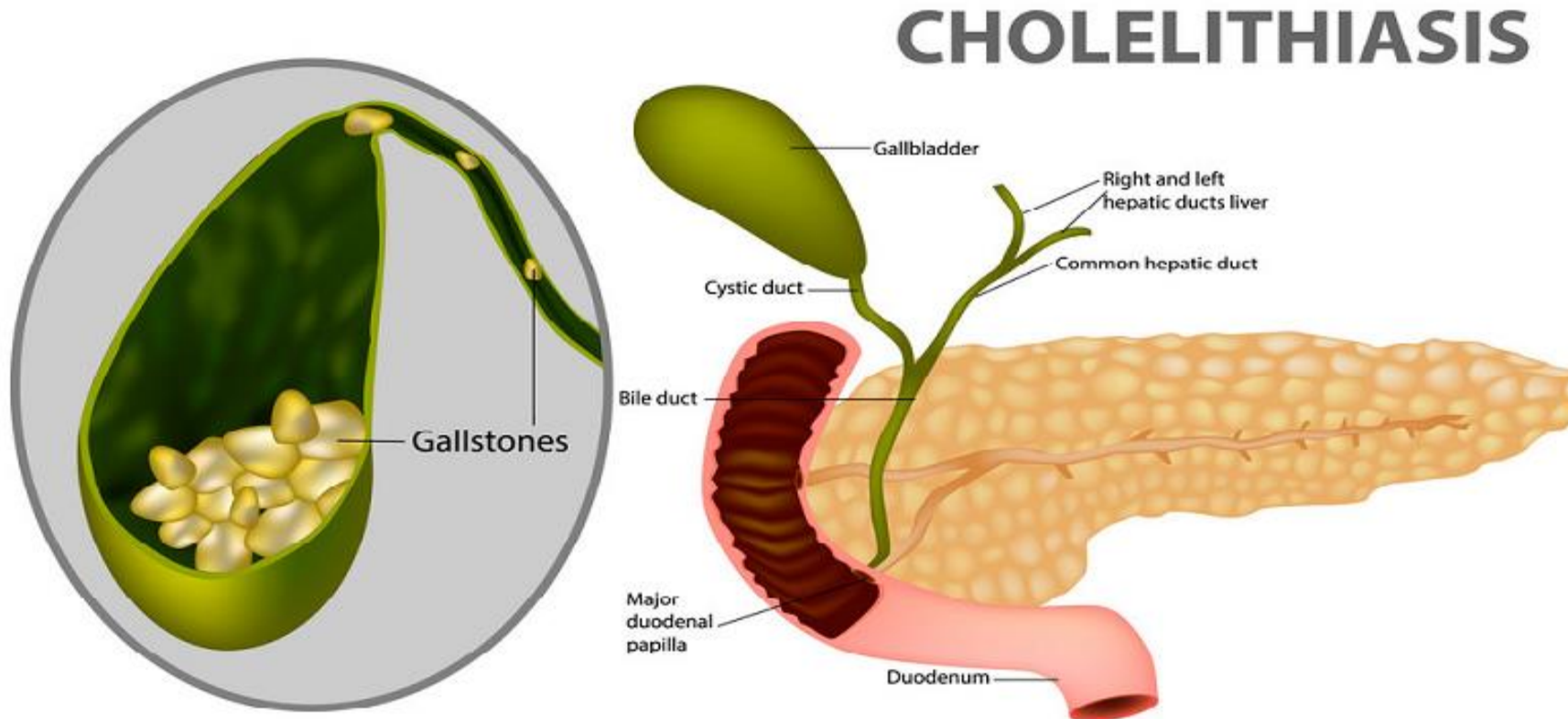
Gallstones in
gallbladder
may cause
inflammation



Gallstone in
cystic duct

Gallstone blocking
common bile
duct

- **Cholelithiasis** is the formation of gallstones in the gallbladder that are most often composed of cholesterol. They can be asymptomatic for decades.



Etiology and Incidence CHOLELITHIASIS.

- Gallstones occur most in **women, from aging, obesity, pregnancy, stasis of bile, fasting, medications, and heredity**
- a partial obstruction in the common duct.
- Excessive cholesterol intake combined with a sedentary lifestyle is linked to an increased incidence of cholelithiasis, as are hemolytic blood disorders such as sickle cell disease.

Signs and Symptoms

- Signs and symptoms of cholecystitis and cholelithiasis are similar.
Subjective symptoms include:
- **epigastric pain, RUQ tenderness, nausea, and indigestion, especially after eating foods high in fat.**
- Objective symptoms include evidence of inflammation, such as an elevated **temperature, pulse, and respirations; vomiting; and jaundice.**
- Family history of either cholecystitis or cholelithiasis, dietary habits such as high fat intake or a recent low-fat diet.

Diagnostic Tests

- ultrasound of the gallbladder
- The patient may have an elevated WBC count (normal: 5000–10,000 cells/mm³).
- bilirubin is elevated (normal: 0.3–1.2 mg/dL), its cause is likely obstruction in the biliary or liver areas.
- laparoscopy. A laparoscopic cholecystectomy is done with a laparoscope through four small puncture wounds in the abdomen.

Nursing Diagnoses

- Acute Pain related to biliary colic
- Risk for Deficient Fluid Volume related to anorexia, nausea, vomiting, or excessive tube drainage
- Risk for Impaired Skin Integrity related to surgical incision and T-tube drainage

Endocrine System

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Adult nursing / 2nd stage – first semester

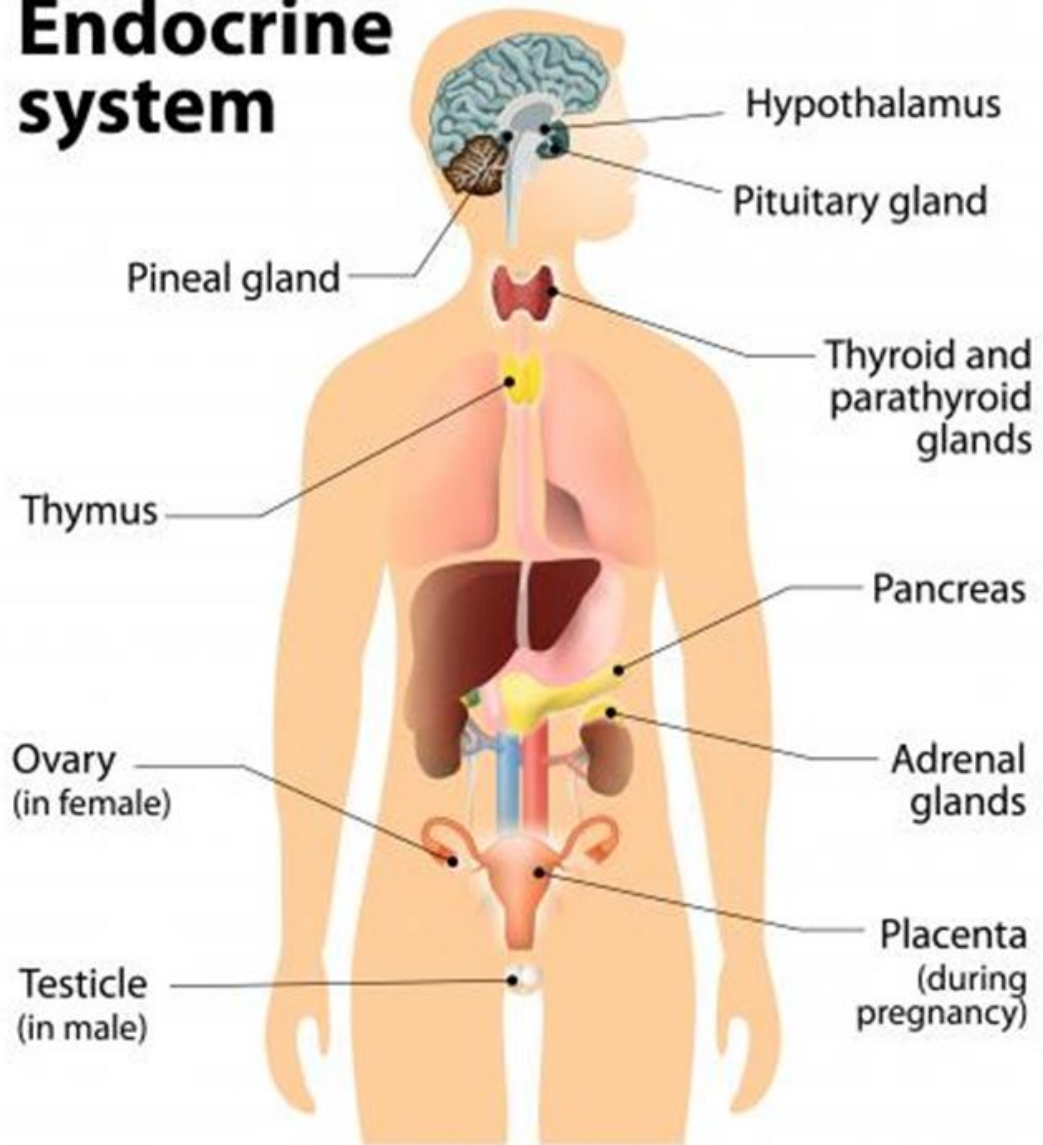
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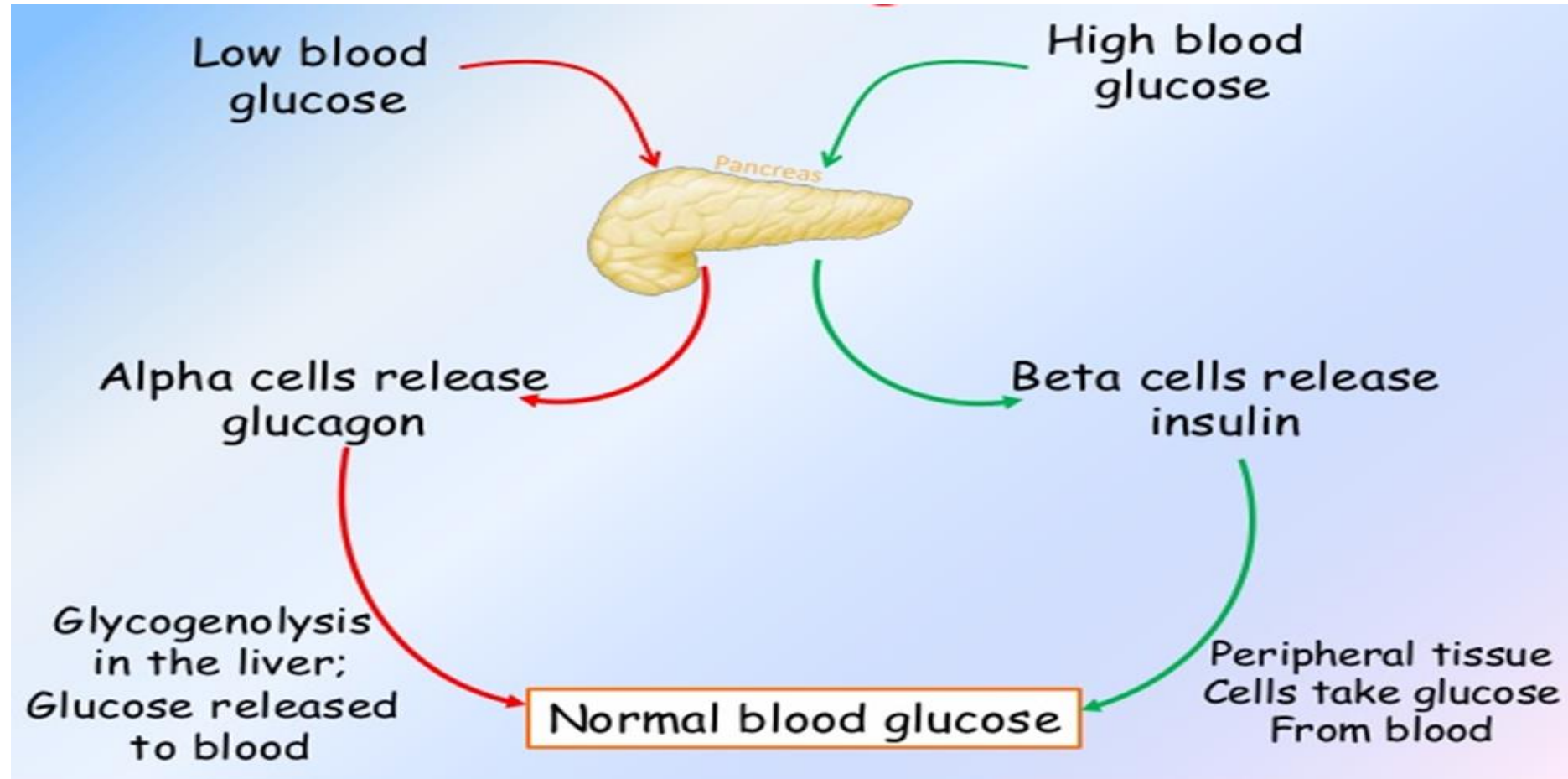
Endocrine System

- The endocrine system consists of the endocrine glands, which secrete hormones. Unlike other organ systems, the glands of the endocrine system are anatomically separate.
- Their hormones are involved in **fluid balance; metabolism, energy balance, growth, and development; contraction of smooth and cardiac muscle; glandular secretion; and reproduction.**
- Each hormone is secreted in response to a specific stimulus, is circulated by the blood, and affects target cells that have receptors for that hormone.

Endocrine system



Regulation of Blood glucose



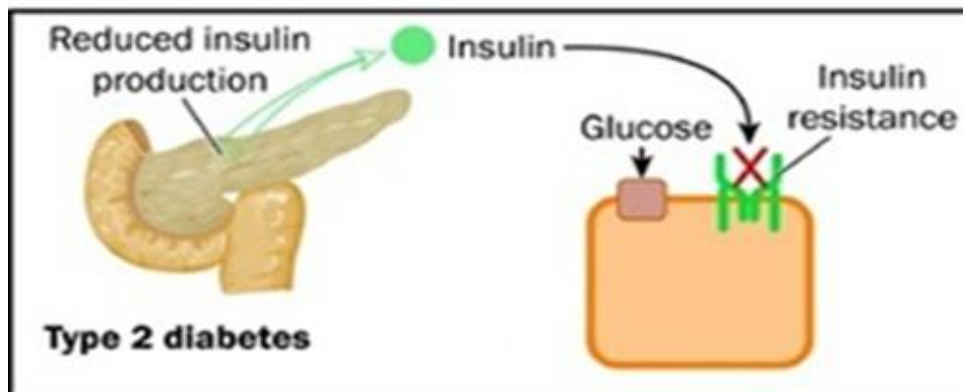
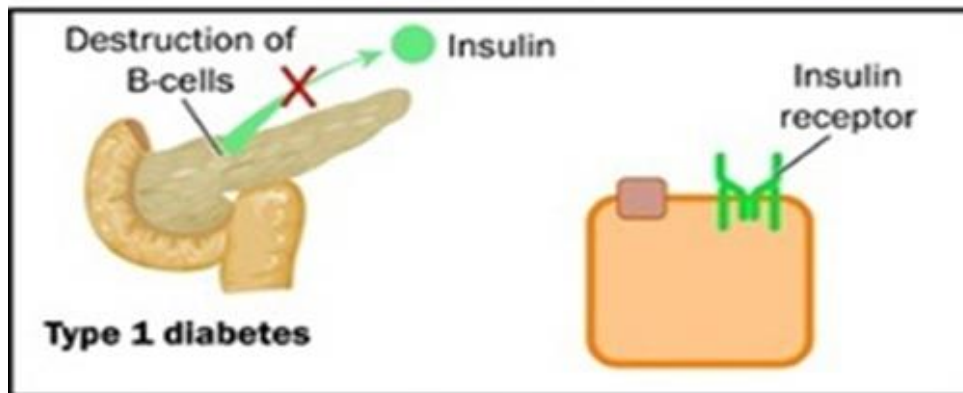
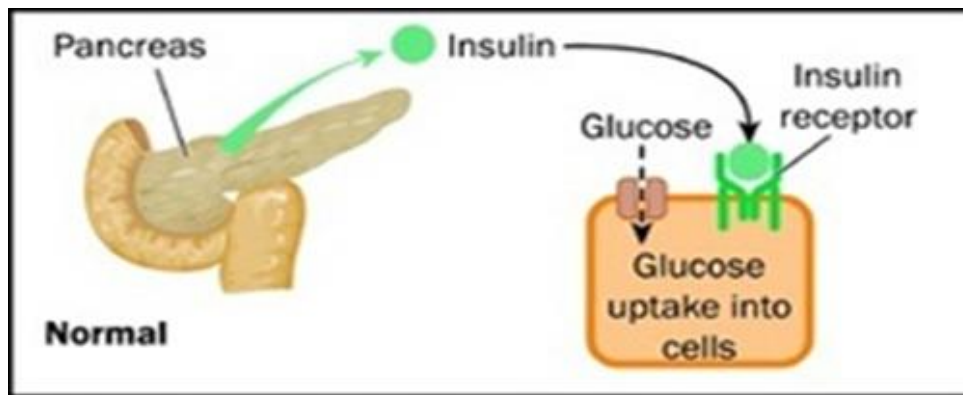
Diabetes Mellitus

- **Diabetes mellitus:** is a group of metabolic diseases in which defects in insulin secretion or action result in elevated blood glucose (**hyperglycemia**).

Normal Physiology

- Body tissues use glucose for energy.
- Glucose is a simple sugar provided by the foods we eat.
- Glucose is able to enter the cells only with the help of insulin
- a hormone produced by the beta cells in the islets of Langerhans of the pancreas.
- When insulin comes in contact with the cell membrane, it combines with a receptor that allows activation of special glucose transporters in the membrane.
- insulin lowers the glucose level in the blood.
- Insulin also helps the body store excess glucose in the liver in the form of **glycogen**.

- Another hormone, **glucagon**, is produced by the alpha cells in the islets of Langerhans.
- Glucagon raises the blood glucose when needed by releasing stored glucose from the liver and muscles.
- Insulin and glucagon work together to keep the blood glucose at a constant level.
- Diabetes results from deficient production of insulin by the beta cells in the pancreas or from inability of the body's cells to use insulin.
- When glucose is unable to enter body cells, it stays in the blood stream; hyperglycemia results, and the cells are denied their energy source.



Types and Causes

1. Type 1 Diabetes Mellitus (insulin-dependent diabetes mellitus, or IDDM)

- Type 1 diabetes is caused by destruction of the beta cells in the islets of Langerhans of the pancreas. they are unable to produce insulin.
- Insulin must then be injected for the body to use food for energy.
- Only about 5% to 10% of people with diabetes have type 1 diabetes.

2. Type 2 Diabetes Mellitus (non– insulin-dependent diabetes mellitus, or NIDDM).

- tissues are resistant to insulin.
- Insulin is still made by the pancreas but in inadequate amounts.

95% of people with diabetes have type 2 diabetes mellitus

Causes

- Heredity is responsible for up to 90% of cases of type 2 diabetes.
- Obesity is also a major factor.
- life stressor such as the death of a family member, illness, or loss of a job.

3. Gestational Diabetes

- Gestational diabetes mellitus (GDM) occurs in 2% to 10% of pregnancies.
- especially in women with risk factors for type 2 diabetes.
- Blood glucose usually returns to normal after delivery.
- Mothers with GDM require specialized care and should be referred to an expert.

4. Other Types of Diabetes

- **Secondary diabetes** can develop as a result of another chronic illness that damages the islet cells, such as pancreatitis or cystic fibrosis.
- Prolonged use of some drugs, such as steroid hormones, thiazide diuretics, and thyroid hormone, can also impair insulin action and raise blood glucose.
- Less common causes include pancreatic trauma and other endocrine disorders.

Signs and Symptoms

Classic symptoms of diabetes mellitus include:

- **polydipsia** (excessive thirst)
- **polyuria** (excessive urination)
- **polyphagia** (excessive hunger).

High blood glucose can also cause :

- fatigue
- blurred vision
- abdominal pain
- headaches.

Diagnostic Tests

- Fasting Plasma Glucose a normal plasma glucose level is less than 100 mg/dL to 126 mg/dL.
- Random Plasma Glucose: A random plasma glucose (RPG).
- Glycohemoglobin: The glycohemoglobin test (called glycosylated hemoglobin, or HbA1c) to monitor the progress of diabetes control.
- lipid profile
- Renal functions test
- Urinalysis (GUE)

Therapeutic Measures

- The only cure for diabetes is a pancreas (or islet cell) transplant.
However, diabetes can be controlled.
- Treatment begins with **diet** and **exercise**. **Insulin** is added in patients with type 1 diabetes and insulin or oral hypoglycemic medication as needed in those with type 2 diabetes.

- Weight loss is essential for patients who have type 2 diabetes and are overweight or obese.
- Blood glucose monitoring and education are also important to good diabetes control.
- To monitor the effectiveness of treatment, patients should have regular health care follow-up visits.

Acute Complications of Diabetes

- Hyperglycemia
- Hypoglycemia
- Diabetic Ketoacidosis

Long-Term Complications

1. CIRCULATORY SYSTEM: People with diabetes develop atherosclerosis and arteriosclerosis faster than the general population.

2. Macrovascular Complications

3. Microvascular Complications:

- **EYES.** Small blood vessels can become diseased, eventually leading to retinopathy in most patients with diabetes.

- **KIDNEYS.** Nephropathy is caused by damage to the tiny blood vessels in the kidneys.

- **Nerve Complications.** Another complication of diabetes is neuropathy, which is damage to nerves as a result of chronic hyperglycemia.
- Infection
- Foot Complications

Nursing Diagnosis:

- Risk for Unstable Blood Glucose Level