Chapter 28

Enteral Nutrition and Intravenous Therapy

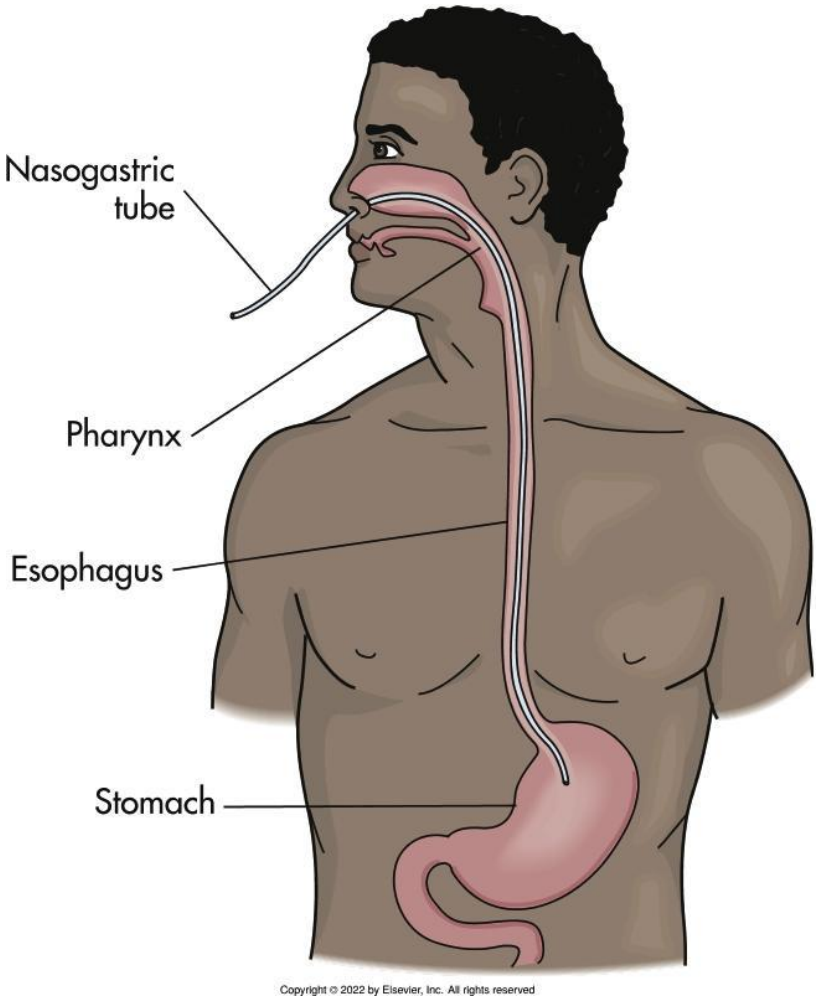
Nutritional Support

- The doctor may order nutritional support or IV therapy to meet food and fluid needs for:
  - Clients who cannot eat or drink because of illness, surgery, or injury
  - Clients who have problems eating or refuse to eat or drink
  - Clients who cannot eat enough to meet their nutritional needs
  - Gavage (tube feeding)

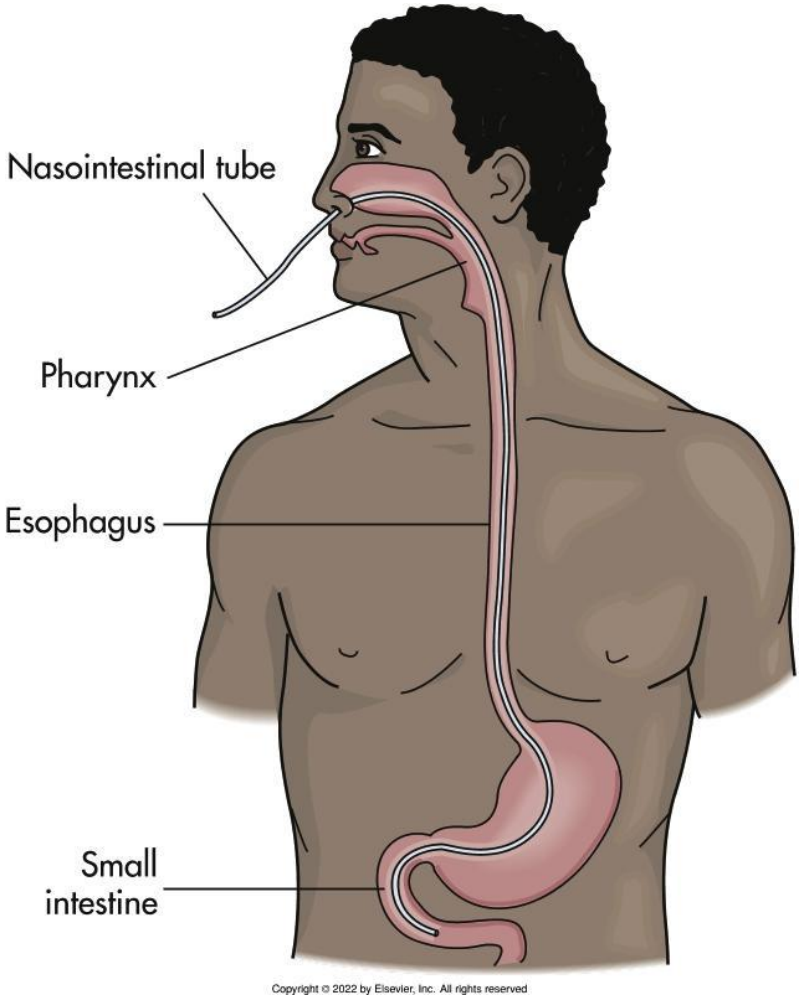
Enteral Nutrition (1 of 7)

- *Enteral nutrition* is giving nutrients into the gastro-intestinal tract through a feeding tube.
  - Nasogastric (NG) tube
    - A feeding tube is inserted through the nose into the stomach.
  - Nasointestinal tube
    - A feeding tube is inserted through the nose into the small intestine.
  - Gastrostomy tube (stomach tube)
    - A doctor surgically creates an opening in the stomach.
    - It is also known as a *G-tube.*

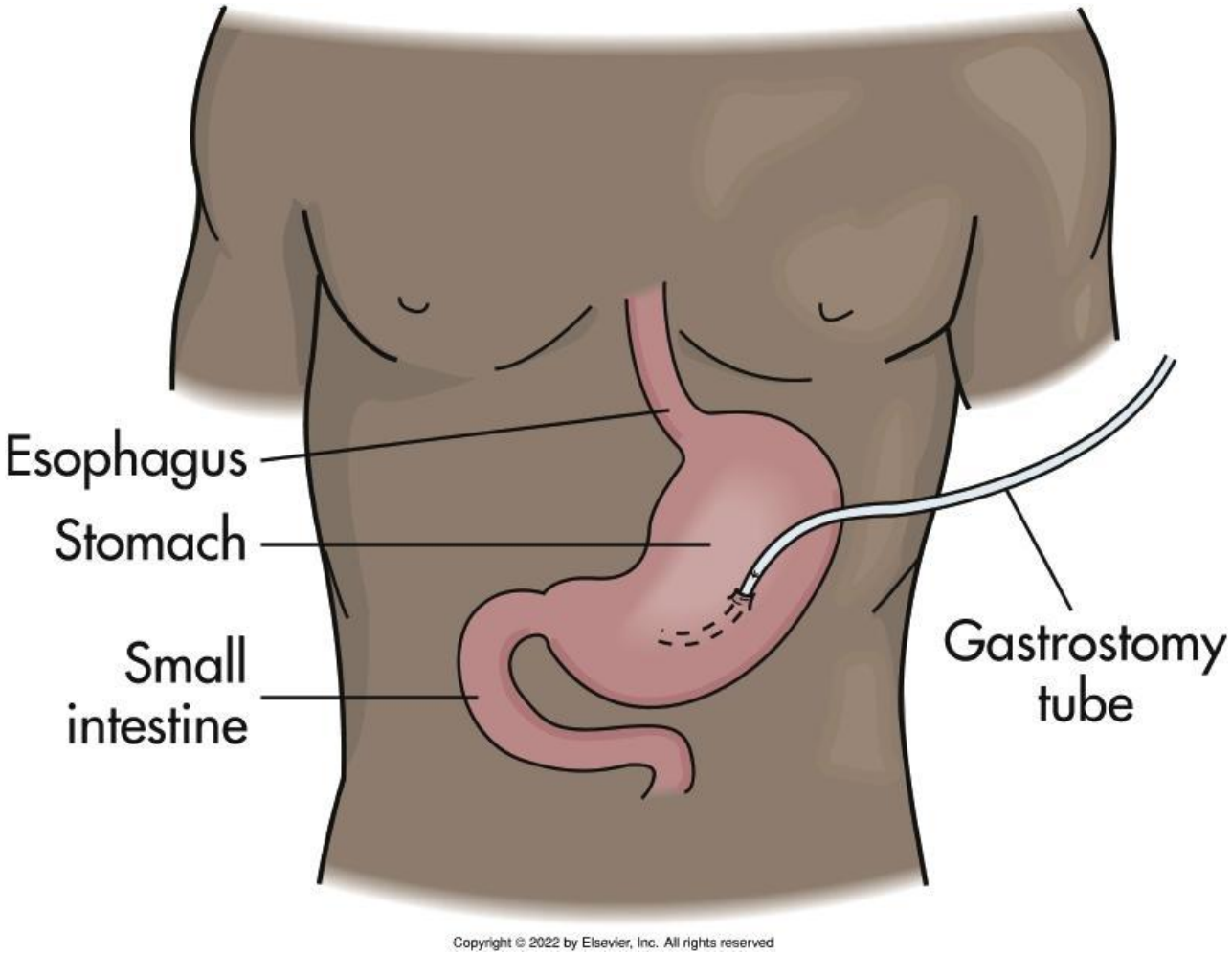
Enteral Nutrition (2 of 7)



Enteral Nutrition (3 of 7)



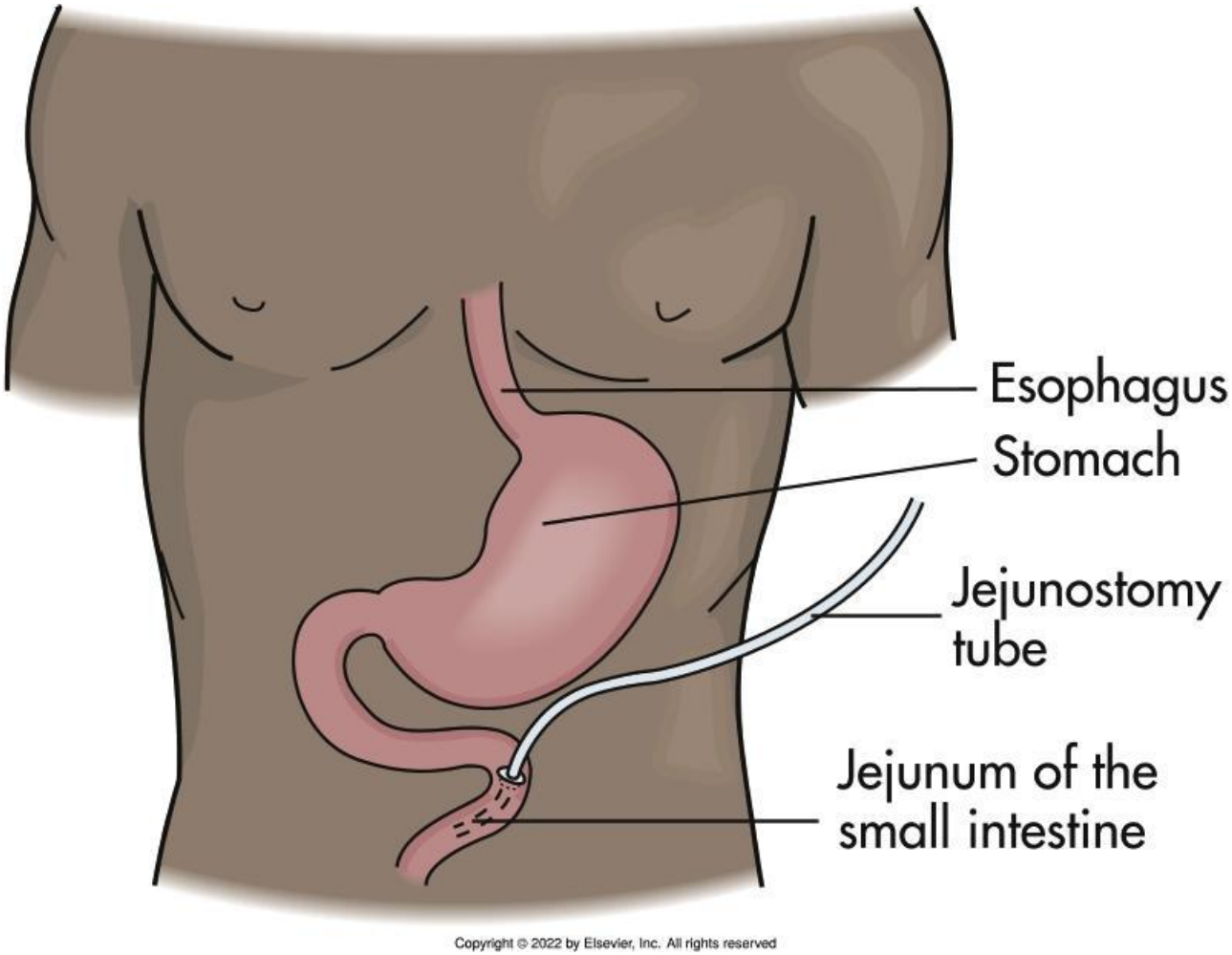
Enteral Nutrition (4 of 7)



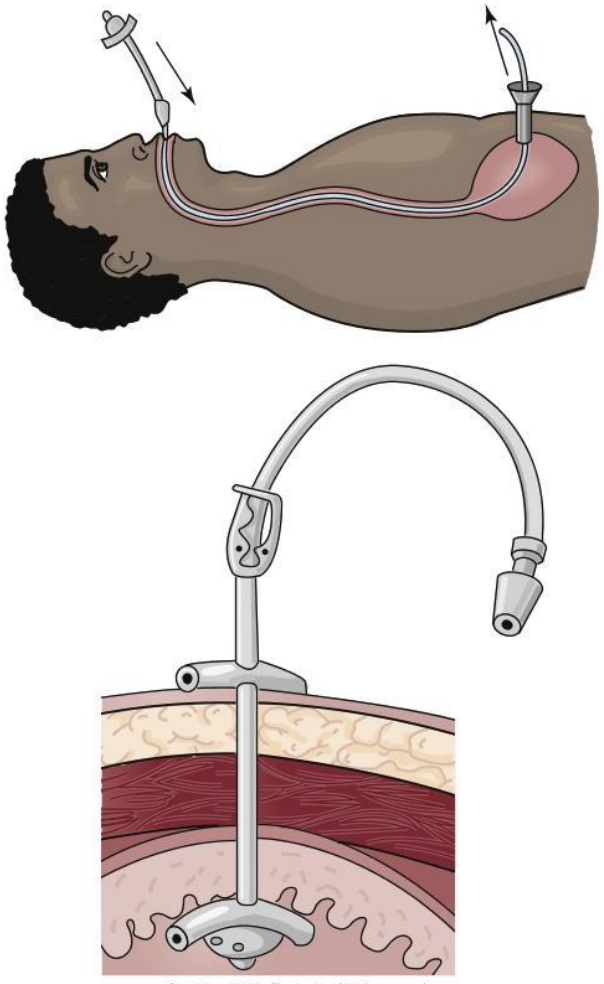
Enteral Nutrition (5 of 7)

- Jejunostomy tube
  - A feeding tube is inserted into a surgically created opening in the jejunum of the small intestine .
  - Also known as a *J tube*
- Gastro-jejunostomy
  - A tube connects the stomach to the small intestine.
  - It is also known as a *GJ-tube*
- Percutaneous endoscopic gastrostomy (PEG) tube
  - The doctor inserts the feeding tube using an endoscope.

Enteral Nutrition (6 of 7)



Enteral Nutrition (7 of 7)



Scheduled and Continuous Feedings (1 of 2)

- Formulas
  - The doctor orders the type of formula, the amount to give, and when to give tube feeding.
  - A nurse gives the formula through the feeding tube.
  - Formula is given at room temperature.
  - In some facilities, formula is kept cold with ice chips around the container to prevent growth of microbes.

Scheduled and Continuous Feedings (2 of 2)

- Scheduled feedings (intermittent feedings) are given at certain times—usually 4 times per day.
  - Continuous feedings are given over a 24-hour period.
    - A feeding pump is used (nasointestinal and jejunostomy tube feedings are always continuous)

Preventing Problems Related to Tube Feedings (1 of 2)

- Preventing Aspiration
  - Aspiration is a major risk from tube feedings, and can occur:
    - During insertion
    - From the tube moving out of place
    - From regurgitation

Preventing Problems Related to Tube Feedings (2 of 2)

- Preventing Aspiration
  - To assist the nurse in preventing regurgitation and aspiration:
    - Position the person in a sitting or semi-Fowler's position before the feeding. Follow the care plan and the nurse's directions.
    - Maintain the client in this position for 1 to 2 hours after the feeding. Follow the care plan and the nurse's directions.
    - Avoid the left side-lying position, as it prevents emptying of the stomach.

Signs of Aspiration

- Aspiration is the inhalation of fluid or object into the lungs.
  - Can cause infection and breathing problems
  - Indicated by:
    - Coughing or choking during feeding
    - Change in breathing from normal to difficult
    - Wet gurgly voice
    - Pale or bluish lips
  - Stop feeding if aspiration occurs, ensure the client is in sitting-up position, and call for help.

Other Potential Problems Related to Tube Feeding (1 of 2)

- Report the following observations at once:
  - Nausea
  - Discomfort during the feeding
  - Vomiting
  - Distended abdomen
  - Coughing
  - Complaints of indigestion or heartburn

Other Potential Problems Related to Tube Feeding (2 of 2)

- Report the following observations at once: (cont.)
  - Redness, swelling, drainage, odour, or pain at the ostomy site
  - Fever
  - Signs and symptoms of respiratory distress
  - Increased pulse rate
  - Complaints of flatulence
  - Diarrhea

Comfort Measures for Tube Feeding (1 of 2)

- Clients with feeding tubes usually are not allowed to eat or drink (NPO).
  - Dry mouth, dry lips, and sore throat can cause discomfort.
- Feeding tubes can:
  - Irritate and cause pressure on the nose
  - Change the shape of the nostrils
  - Cause pressure ulcers
- You are never responsible for inserting feeding tubes or checking their placement.

Comfort Measures for Tube Feeding (2 of 2)

- If allowed, client can suck on hard candy or chew gum (dry mouth and lips).
- Require frequent oral hygiene, and lubricant for lips.
- Ice bag is applied externally to throat to provide relief for sore throat.
- Tube holders are used to prevent pressure on nose.
- Check care plan and consult supervisor

Intravenous Therapy (1 of 3)

- *Intravenous (IV) therapy (IV infusion)* is giving fluids through a needle or catheter inserted into a vein,
  - Doctors order IV therapy to:
    - Provide fluids when they cannot be taken by mouth
    - Replace minerals and vitamins lost because of illness or injury
    - Provide sugar for energy
    - Give medication and blood
    - Provide hyperalimentation—solution is highly concentrated in nutrients

Intravenous Therapy (2 of 3)

- Nurses are responsible for IV therapy.
- IV therapy is given in hospital, outpatient care, subacute care, long-term care, and home care settings.
- Laws and institutional guidelines vary regarding the role of others in IV therapy.
- Know your employer's policies related to your role in IV therapy.

Intravenous Therapy (3 of 3)

- Peripheral and central venous sites are used.
  - Peripheral IV sites are away from the centre of the body.
  - Central IV sites are close to the heart.
    - The subclavian vein and the internal jugular vein are central venous sites.
    - The cephalic and basilic veins in the arm also are used.
      - Catheters inserted into these sites are called *peripherally inserted central catheters (PICCs)—only doctors or specially trained nurses can insert PICCs.*
  - Central venous sites are used for:
    - Giving large amounts of fluid
    - Long-term IV therapy
    - Giving medications that irritate peripheral veins

Assisting With IV Therapy

- The most common IV site is the lower arm or back of the hand.
  - See Box *28.1: Safety Measures for Intravenous Therapy (p. 631)*
- As a support worker, you help meet the hygiene and activity needs of clients who are receiving IV therapy.
- Seek assistance regarding the proper way to ambulate safely for clients with an IV line.

Subcutaneous Infusion Therapy

- Those who need frequent injections may experience discomfort and possible infections around injection sites.
  - Medication is given through a port (needle) which is inserted into the client's subcutaneous tissue layer.
    - IV tubing is connected to injection port then taped to client's skin.
  - Ensure port or needle does not become dislodged.

IV Therapy Complications (1 of 2)

- Report all observations.
  - Local—at the IV site:
    - Bleeding
    - Puffiness or swelling
    - Pale or reddened skin
    - Complaints of pain at or above the IV site
    - Hot or cold skin near the site
    - Leaking of fluid from the site

IV Therapy Complications (2 of 2)

- Systemic—involving the entire body
  - Fever
  - Itching
  - Drop in blood pressure
  - Tachycardia (pulse rate more than 100 beats per minute); irregular pulse
  - Cyanosis
  - Changes in mental function; loss of consciousness
  - Difficulty breathing (dyspnea); shortness of breath
  - Decreasing or no urine output
  - Chest pain
  - Nausea
  - Confusion