

ENTERAL NUTRITION 2025

Enteral Tubes Enteral Feedings Parenteral Nutrition

- ❖ **Nasogastric Tubes (NGT)**
 - Insertion of a flexible tube from the nose to the stomach
 - May also hear the term:
 - Nasogastric intubation

- ❖ Nasogastric vs. Orogastric Tube

- ❖ NGT- Uses
 - Decompress
 - Admin meds & feeds
 - Treat obstructions (SBO)
 - Sampling

- ❖ Medvac- wall suction- continuous/ intermittent
- ❖ Nasogastric Tubes
- ❖ Tube inserted into stomach
- ❖ Two types:
 - Levin (single)
 - Salem (double)

- Levin Tube:
 - Single lumen
 - Decompression
 - Instillations
 - Short Term feedings
 - Intermittent suction only
 - ≤ 80 mm/Hg
 - Check patency- aspiration

- Salem Sump
 - Double lumen
 - Sump port or pigtail = air vent
 - Keep pigtail about patient's midline to prevent reflux of contents into vent
 - Patency:
 - check suction by aspiration or irrigation with water
 - check vent lumen by irrigating with air

- ❖ NGT Procedure- review clinical prep documents
 - Assessing your patient with an NGT
 - Turn off suction first
 - Why?

 - Confirming Placement
 - Attach syringe to tube and try to aspirate gastric contents.
 - Gastric contents are greenish-yellow
 - Strip test for pH – should be acidic (if ordered)
 - If no return, advance tube one to two more inches and try again (reposition).
 - X-ray

❖ **Intestinal or Nasoenteric tubes**

- Decompression of intestines in bowel obstruction
- Nasoenteric feedings
- Cantor tube: single lumen
- Miller Abbott: double lumen
- Tungsten weighted

❖ **Intestinal Tube- Procedure**

- Done by physicians, Inserted same as gastric tubes
- Once tube is in stomach, patient lies on right side for 2 hours, supine with head elevated for 2 hours, left side for two hours
- Tube carried to intestines by peristalsis
- May take several hours to reach ileum
- Monitored daily by x-ray for placement
- DO NOT secure until desired point in intestines is reached.

❖ **Removal of Intestinal Tube Removal- Procedure tubes**

- Remove slowly to prevent damage
- Remove 1-2 inches at a time

❖ **Nursing Care of NG Tubes**

- Ensure patency
- Correct suction
- Accurate I&O
- Amount irrigated should be aspirated or included in intake
- Irrigate with water
- With gastric surgery, never irrigate without a provider's order
- With gastric surgery, never manipulate the tube

❖ **Prevent Oral Inflammation**

- Frequent mouth care
- Ice chips
- Toothettes
- Mouthwash
- Chapstick
- Never use lemon & glycerin swabs
- Hard candy if not contraindicated

❖ **Promote Comfort**

- Gently cleanse around nares
- Use only water-soluble gel around nares
- Chloraseptic spray / lozenges
- Viscous lidocaine gargle

❖ **Monitor for Complications**

- Fluid and electrolyte losses
 - Dehydration, monitor I&O, hyponatremia, hypokalemia, metabolic alkalosis
- Aspiration pneumonia
 - Breath sounds, placement
- Gastric ulceration
 - LIWS
- Laryngeal edema and obstruction
 - Long term use

- ❖ Emotional Support
 - Teaching

- ❖ **Other Types of Tubes**
 - Percutaneous Endoscopic Gastrostomy (PEG) Tube
 - Mic-Key Gastrostomy Tube
 - Jejunostomy (J-tube)
 - Gastrojejunostomy (G-J) Tube

- ❖ **Percutaneous Endoscopic Gastrostomy (PEG)**
 - Endoscopic procedure
 - Tube is passed into the stomach & through the abdominal wall.
 - Long term feeding
 - Increases patient comfort
 - PEG Placement
 - Requires esophageal lumen wide enough for endoscope to pass
 - PEG and radiologically placed gastrostomy
 - Gastrostomy tube placement via percutaneous endoscopy
 - Through esophagus into stomach and then is pulled through a stab wound made in abdominal wall

- ❖ **Care of the PEG stoma**
 - When first placed
 - sterile water, dry, sterile dressing
 - When healed
 - mild soap and water

- ❖ **Jejunostomy (J-tube)**
 - Reduces the risk of aspiration
 - Placed:
 - Endoscopically
 - Open or laparoscopic surgery

- ❖ **Gastrojejunostomy (G-J) Tube**
 - Simultaneous gastric decompression & small bowel feeding
 - 2 ports
 - Gastric
 - Jejunal
 - Feedings can begin 24 hours after surgical placement

- ❖ **Medication Administration Review**
 - Medication Administration Steps
 - HOB elevated 30-45 degrees
 - 30-60 mLs of H₂O before & after med
 - Each medication in its own med cup (crushed), mixed with 15 mLs of H₂O
 - Give one medication at a time
 - 15 mLs between meds - Unless specified
 - What cannot be crushed?
 - Avoid: oily medications
 - NGT? Hold 45-60 minutes after med.

❖ **Enteral Nutrition**

- Enteral meaning GI
 - By mouth
 - Tube feedings
- Administration of nutritionally balanced formula through tube inserted into:
 - Stomach
 - Duodenum
 - Jejunum

- Indications for Enteral Feedings
 - Physiological
 - Psychological
 - Pathophysiological
 - Anorexia
 - Orofacial fractures
 - Head/neck cancer
 - Neurologic or psychiatric conditions- dementia, Alzheimer's
 - Bowel diseases- IBS, short bowel syndrome
 - Malabsorption
 - Extensive burns
 - HIV
 - Chemotherapy
 - Radiation therapy
 - Anytime a patient cannot take in enough

❖ **Enteral Nutrition**

- Provides nutrients
- Easily administered
- Safer than parenteral
- More physiologically efficient than parenteral
- Less expensive than parenteral
- Variety of formulas

❖ **Delivery options include:**

- Continuous infusion or bolus by pump
- Intermittent
- Bolus by gravity/ syringe

❖ **Enteral Nutrition**

- Nasogastric and nasointestinal tubes
 - Can clog easily
 - Can be dislodged
 - Can be knotted/ kinked in GI tract
- Gastrostomy and jejunostomy tubes
 - May be used for an extended period of time

❖ **Tube feeding Administration**

- Aspiration risk
 - Right position
 - Maintain HOB
 - Residual volume
- Patient position
 - HOB at 30 to 45 degrees
 - HOB remains elevated for 30 to 60 minutes for intermittent delivery

- Promotility drugs may be ordered
 - Metoclopramide
- Contraindications for Enteral Feedings
 - Gut not functional
 - Prolonged bowel rest needed
 - Ileus or obstruction
 - GI Hemorrhage

❖ **NG or OG Tubes: Tube position**

- X-ray confirmation for new nasal or orogastric tubes
- Mark exit site of tube
- Check placement before each feeding/drug administration or every 8 hours with continuous feeds
- Check insertion length regularly
 - Methods:
 - Aspiration
 - pH check
 - Confirm placement with more than one test

❖ **Administering Tube Feedings**

- If ordered, assess Gastric Residual Volume (GRV)
 - If GRV < 500 mL – replace residual
 - If GRV > 500 mL – replace 500 mL residual & discard remainder (document as output)
 - Place on right side for 15-20 minutes , recheck residual
 - If >500 mL, stop feeding for 1 hour, recheck residual
 - If still >500 mL, replace 500 mL and discard remainder (document as output). Notify provider.
- Document
 - Type of enteral tube
 - Tube feeding type & rate
 - Residual amount
 - Residual discarded

❖ **Tube Feeding- Nursing Care**

- Site Care
 - Assess the skin daily
 - Monitor bumper tension
 - Apply a dressing until healed
 - After healed, wash with soap and water
 - Protective ointment or skin barrier
- Tube Feeding Administration
 - Check placement
 - Tube patency
 - Flush
 - Before/after each feeding and med. admin
 - feeding pump
 - When to hold?
- Misconnection
 - Severe patient injury or death can result
- General nursing considerations
 - Daily weights
 - Assess for bowel sounds before feedings

- Accurate I&O
- Initial glucose checks
- Label with date and time started
- Pump tubing changed q24h
- Syringe/ flush sets changed q24h

- Signs of feeding intolerance
 - Nausea
 - Vomiting
 - Abdominal distention
 - Diarrhea
 - Constipation
 - Gastrostomy or jejunostomy feedings:
 - Skin irritation
 - Pulling out of tube

❖ **Tube Feeding- Documentation**

- Type and rate of feeding
- Volume of formula
- How much water was given
- Residuals
- Daily weights
- I & O
- Frequent oral hygiene

❖ **Gerontologic Considerations**

- More vulnerable to complications
 - Fluid and electrolyte balances
 - Glucose intolerance
 - Decreased ability to handle large volumes
 - Increased risk of aspiration

❖ **Tube Feeding & Enteral Tubes- Delegation**

- Delegate to an LPN
 - In a STABLE patient:
 - Insert & Removing NGT
 - Flush a G-tube
 - Enteral feedings
 - Administer meds- enteral tube
 - Skin care
- Delegate to a nursing assistant
 - Oral care
 - Weigh patient
 - Elevate HOB 30-45°
 - Report symptoms to RN
 - Alert RN/ LPN to pump alarms
 - Empty drainage devices
 - Document output

❖ **Parenteral Nutrition**

- Administration of nutrients directly into the bloodstream

- Goal: Meet nutritional needs
- Utilized when GI tract is not appropriate to be fed through

- Indications:
 - Chronic severe diarrhea/ vomiting
 - Complicated surgery or trauma
 - GI obstruction
 - GI tract abnormalities
 - Severe malabsorption
- Composition:
 - Dextrose & protein (amino acids)
 - IV fat emulsion

- Methods of administration:
 - Central parenteral nutrition (TPN)
 - long-term support

 - Peripheral parenteral nutrition (PPN)
 - short-term therapy

- ❖ Home Nutrition Support
 - Teach the patient and caregiver
 - Catheter or tube care
 - Mixing and handling of solutions and tubing
 - Side effects and complications
 - Discharge planning needed