PLACEMENT, REMOVAL, AND MANAGEMENT OF ENTERAL FEEDING TUBES

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Amerita Home Infusion

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# DISCLOSURES

- Nothing to disclose

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OBJECTIVES

- Assess various types of enteral feeding tubes, similarities, and differences in placement of tubes
- Discuss management of feeding tubes, specifically recommendations for unclogging feeding tubes
- Describe safe administration of tube feeding, modular, etc through a feeding tube
- Discuss how and when to safely remove a feeding tube

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INTRODUCTION

- Placement of feeding tubes
  - Nasoenteric tube vs G tube/PEG
  - Modes of placement, confirmation of placement
- Management of feeding tubes
  - Clogging
  - Dislodgement
  - Safe administration of modulars
- Removal of feeding tubes
  - Nasoenteric tube vs G tube/PEG

https://lynnklinenutrition.com/2019/01/01/top-3-tube-feed-blog-post-from-2018/
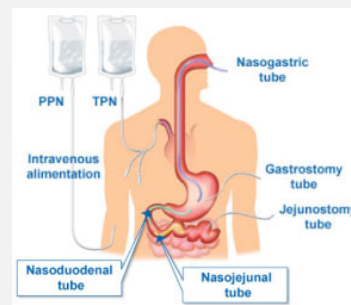
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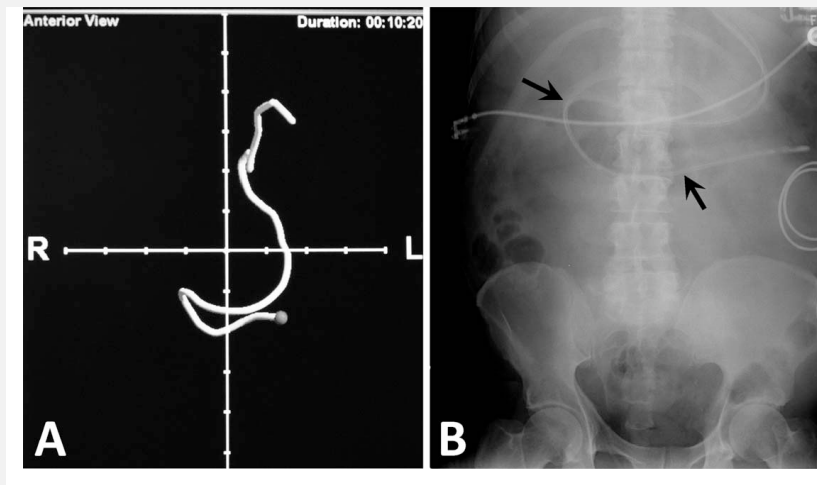## PLACEMENT OF FEEDING TUBES: NASOENTERIC TUBES

- Nasogastric/nasojejunal Tubes
  - Blind placement, direct visualization, indirect visualization in real time
    - Must be verified by chest xray, ultrasound, electromagnetic placement device, camera
  - Placed in IR/fluoroscopic-guided placement
    - Visualization of the tube through pharynx and esophagus
    - Ensures proper placement, avoids adverse events
  - If failed 3 attempts to place at bedside
  - Placed during surgery
    - Can pull post pyloric

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http://learningradiology.com/

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https://www.semanticscholar.org
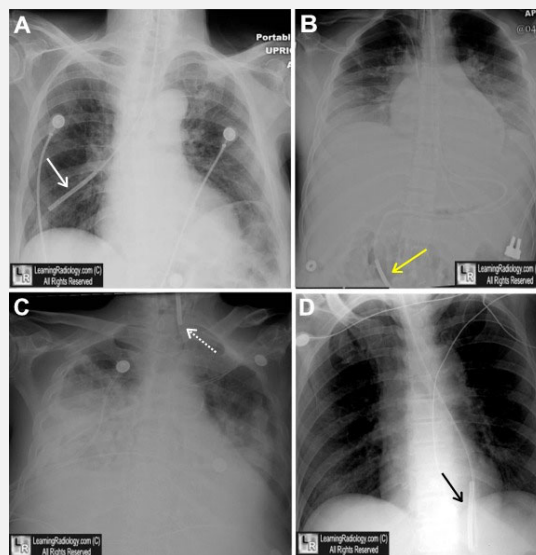
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PLACEMENT OF FEEDING TUBES: NASOENTERIC TUBES

ASPEN Bedside Feeding Tube Placement Competency Tool Checklist

Case # _____ Clinician _____ Verified by (preceptor) _____

| Date	Competency/Critical Behaviors	Competency Met	Review Needed	Evaluator's Initials
	Verify order for tube placement			
	Review patient health history for any contraindications to tube placement			
	Obtain verbal informed consent if applicable			
	Gather appropriate supplies			
	Perform hand hygiene			
	Introduce self to patient, explain procedure, and offer comfort measures as indicated			
	Confirm patient identity according to policy			
	Place patient in the appropriate position			
	Place tube according to policy and technique for facility			
	Secure tube with tape, transparent dressing, or a commercial fixation device			
	Educate patient and family as appropriate			
	Document tube placement according to policy			
	Verify proper tube placement prior to use, per policy			

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PLACEMENT OF FEEDING TUBES: NASOENTERIC TUBES

- Securing nasoenteric tube in place
  - Tape
  - Sutures
  - Nasal Bridle
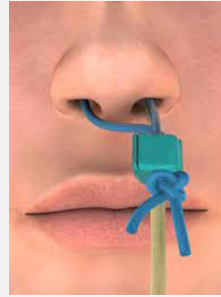
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WHEN TO NOT PLACE A NASOENTERIC TUBE

- Esophageal varices or other esophageal disturbance in which NG tube placement could cause more harm than good
- Coagulation issues
- Hemodynamic instability
- Roux-en-Y surgery
- For post pyloric placement: post gastrectomy, post Whipple surgery; any surgery in which nasal tube placement could affect anastomosis

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PLACEMENT OF FEEDING TUBES: G/J/PEG TUBES

- PEG (percutaneous endoscopic gastrostomy)
  - Placed in endoscopy
    - Best in setting of esophageal obstruction or need for postpyloric placement
    - Endoscope is passed into the mouth, down esophagus, and into stomach.
      - Using endoscope to visualize, feeding tube passes through small incision in skin of abdomen and into the stomach.
        - Balloon holds tube in place.
- G tube
  - Surgically placed (laparoscopic or open)
  - Small incision is made on abdomen and an opening is made in the stomach (stoma)
  - External bumper to hold in place.

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MANAGEMENT OF FEEDING TUBES

- For G/J tubes, clean site of feeding tube once a day with diluted soap and water
- Ensure a clean environment using aseptic technique when handling feeding tubes, formula, and administration sets.
- Tube clogging
  - Can occur for many reasons such as:
  - Narrow tube diameter (DHT)
  - Tube location
  - Not enough water flushes
  - Faullty medication preparation and administration
  - Gastric residual checks

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MANAGEMENT OF FEEDING TUBES: CLOGS

- To avoid tube clogging
  - Flush feeding tube with at least 30 ml water q4h and each time tubefeeding is held/stopped
  - Medications should be administered in liquid form or dissolved in liquid
  - Avoid use of blenderized tubefeeding formula through J tube
  - Avoid gastric residual checks as stomach acid may cause protein in tubefeeding formulas to precipitate in lumen of feeding tube
- If tube gets clogged
  - Flush with warm water
  - Enzymatic declogging kit

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MANAGEMENT OF FEEDING TUBES: UNCLOGGING

Tube Unclogging Using Pancreatic Enzymes and Sodium Bicarbonate

1. Gather supplies: 1 pancreatic enzyme capsule, ½ tsp baking soda (or sodium bicarbonate tablet), large syringe (cath tip vs luer lock), graduated cylinder, clog zapper set, twels, small cup)
2. Crush pancreatic enzymes into fine powder. If using sodium bicarb tablet, crush this as well.
3. Fill small cup with 30 ml warm water.
4. Empty crushed enzymes and baking soda into cup with warm water.
5. Locate clogged tube, place a towel underneath tube to avoid leakage on the patient. Attempt to flush feeding tube one more time. If this does not work, empty out the contents that are currently in the tube onto washcloth.

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MANAGEMENT OF FEEDING TUBES: UNCLOGGING

6. Obtain clear stylet from clog buster kit, insert stylet into the G or J port (whichever is clogged). Use stylet to break up clog if hitting resistance. Insert stylet all the way in.

7. Using syringe that fits to stylet, fill with 15-20 ml enzyme mixture and infuse through stylet into feeding gube.

8. Leave stylet in place with mixture inside for 1-2 hours.

9. After 1-2 hours, try to infuse a little more of enzyme mixture through stylet, then remove stylet.

10. Using catheter tip syringe, attempt to flush enzyme mixture through feeding tube. If this does not work, leave enzyme mixture to dwell in feeding tube for 2-3 hours.

11. After 2-3 hours, try flushing the tube with warm water. You may need to gently pump the syringe back and forth to break apart any remaining clog. If this does not work, repeat step 12.

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MANAGEMENT OF FEEDING TUBES: MODULARS

- Common types of modulars given via feeding tubes and how to administer:
  - Fiber supplement – mix 1 pack with at least 120 ml warm water, administer via syringe immediately after mixing. Flush with 30 ml water before and after administration
    - Risk of clogging J tube; for smaller tubes, mix ½ of packet with 120 ml warm water and administer via syringe immediately after mixing. Flush with 30 ml water before and after administration. Then do same with other half of packet
  - Protein modular powder – mix 1 scoop of powder with at least 60 ml water and stir until dissolved. Administer via syringe; flush with minimum 30 ml water after administration
  - Gelatinous protein supplement– dilute 1 oz (30 ml) with 1 oz (30 ml) water and administer through feeding tube via syringe. Flush tube with 30-60 ml water after administration
  - Liquid protein supplement – mix 30 ml with 30-60 ml water and mix well; administer through feeding tube via syringe. Flush with 30-60 ml water before and after administration

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MANAGEMENT OF FEEDING TUBES: DISLODGEMENT OF TUBE

- Dislodgement
  - If tube is shifting, check to see if balloon is deflated
    - Use saline syringe to inject additional fluid into the balloon until resistance is met
  - Significant weight loss can cause tube to dislodge
  - If the tube is completely removed and tract has matured, a replacement tube (or a foley if replacement tube not available) can be replaced through the site
    - Should be done within 24h
  - If the tube is completely removed and tract is not mature, the tube should not be replaced blindly as the gastric and abdominal walls may have separated
    - May cause tube placement into peritoneal cavity

It's not a party until someone's feeding tube falls out...

your ecards someecards.com

https://www.pinterest.es/pin/199213983488965048/

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REMOVAL OF FEEDING TUBE: NASOENTERIC TUBES

- Method of removal depends on the type of tube
  - NG tube/Dobhoff tube
    - Removed at bedside by removing from nare slowly
    - Have patient take a few deeps breaths then breath out as the tube is slowly removed
    - Have tissues handy
    - If sutured or bridled in place, be sure to cut sutures/remove bridle prior to attempting removal
    - For Dobhoff tube, check to ensure that the end of the tube is still attached to the tube

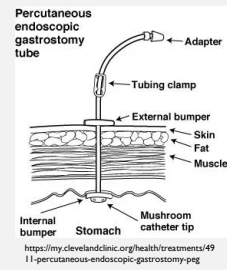https://rk.md/2020/common-types-of-adult-nasogastric-tubes-ngts/
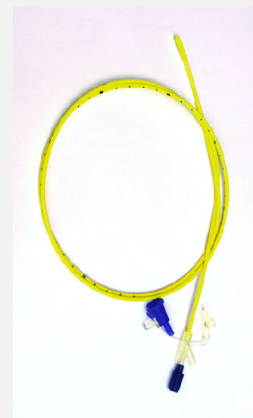
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REMOVAL OF FEEDING TUBE: GASTRIC TUBES

- PEG/G/GJ tube
  - Can be removed when stoma is mature, typically 4-6 weeks.
    - If tube is kept in place by a balloon, use a syringe to remove the water from the balloon via the port labeled "BAL"
    - If tube is kept in place by a bumper, physician can remove by pulling bumper through the incision; will likely hear a "pop" when removed
- Keep site covered until tract is closed, usually 24-72h after removal
- Avoid eating a large meal right before tube removal

https://my.clevelandclinic.org/health/treatments/4911-percutaneous-endoscopic-gastrostomy-peg

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LEARNING ASSESSMENT

1. What is the minimum amount of water that should be used to flush a feeding tube for tube patency?
   a) 10 ml
   b) 20 ml
   c) 30 ml
   d) 40 ml

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LEARNING ASSESSMENT

C. 30 ml

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LEARNING ASSESSMENT

2. True or False:

You should avoid gastric residual checks as stomach acid may cause protein in tubefeeding formulas to precipitate in lumen of feeding tube

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LEARNING ASSESSMENT

TRUE

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LEARNING ASSESSMENT

3. How long should a PEG tube stay in place before it can be safely removed?

a) 2-3 weeks

b) 4-6 weeks

c) 6-8 weeks

d) At least 2 months

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LEARNING ASSESSMENT

B. 4-6 weeks

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QUESTIONS?

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