Care of Gastrostomy Tubes for Adults with IDD in Community Settings: The Nurse’s Role

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Objectives

- The participants will be able to identify the different types and functions of gastrostomy tubes.
- The participants will be able to describe the care and maintenance of gastrostomy tubes.
- The participants will be able to articulate the methods for enteral feeding and medication administration via gastrostomy tubes.
- The participants will be able to describe the risk factors and potential problems of gastrostomy tubes including when to notify the physician or when to call EMS.
A gastrostomy tube, or G-tube, is a surgically created fistula that proceeds through the abdominal wall into the stomach.

G-tubes can be either temporary or permanent.
Methods of Inserting a G-tube

- Percutaneous (through the skin) Endoscopic Gastrostomy (PEG)
- Laparoscopic Technique
- Open Surgical Procedure
Gastrostomy tube (G-tube):
The end of the G-tube is placed through the abdominal wall into the stomach. A port remains outside the body. The G-tube is placed so that liquid food is delivered straight into the stomach.
Gastro-jejenum tube (G-J tube): This tube is often used if the person vomits when large amounts of food are in the stomach. Like the G-tube, the G-J tube is placed through the abdominal wall. The end of the G-J tube is put into part of the small intestine called the **jejenum**.

A port remains outside the body. The G-J tube is placed so that liquid food is delivered straight into the small intestine.
Percutaneous endoscopic gastrostomy (PEG) tubes can be inserted endoscopically without general anesthesia.

- Used for long-term tube feedings into the stomach in patients with a functional GI tract.
- Used in patients with alterations in swallowing due to neurologic diseases, brain injury, or tumors of the head, neck, or esophagus. PEG tubes are safer and less expensive than traditional G-tubes. PEG tubes can be inserted at bedside with local anesthesia and conscious sedation, usually in only 10 to 30 minutes.
PEG Tube Placement

A. Endoscope inserted into duodenum and pulled back into stomach

B. Small incision made and trocar advanced through skin, muscle and fascia into stomach. Scope

C. Trocar removed and guide wire advanced through the catheter and grasped with snare forceps

D. Guide wire attached to PEG tube and pulled back into stomach

E. Using the pull technique, the PEG tube is pulled through abdominal wall

Postoperative View

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Laparoscopic technique is done by making several small incisions in the abdomen and inserting a tiny telescope that helps surgeons see the stomach and surrounding organs.
Open surgery is a good approach for placing a gastrostomy tube but usually is reserved for cases where the individual’s anatomy won't allow for a PEG; if there is scar tissue from a previous surgery, procedure, or illness; or if the person requires another surgical procedure at the same time.
Indications for Gastrostomy tube

- Congenital (present from birth) abnormalities of the mouth, esophagus, stomach, or intestines
- Swallowing disorders (dysphagia), which are often related to prematurity, brain injury, developmental delay, or certain neuromuscular conditions, like severe cerebral palsy
- Failure to thrive, which is a general diagnosis that refers to inability to gain weight and grow appropriately
Needed Supplies

❖ Measuring cup that is marked with ml or cc (these are the same thing)
❖ Measuring spoon or syringe marked with ml or cc
❖ 50 ml (cc) or larger syringe
❖ Bowl of tap water as ordered
Care and Maintenance of Gastrostomy Tubes

✓ Perform daily skin care.
✓ Wash your hands.
✓ Assess the exit sites at least once each shift. Examine the area for erythema, drainage, and other skin problems.
✓ There may be a small amount of clear drainage from the exit site in the first few weeks after insertion.
✓ Clean the area around the exit site with a mild pH-balanced soap, commercial cleanser, or 0.9% sodium chloride.
✓ A cotton-tipped applicator can be used to clean close to the tube to remove any crusts or drainage.
Nursing Management

- Always check tube placement before administering feedings and medications.
- Assess for the presence of bowel sounds before administering feedings.
- Monitor for complications, such as aspiration, diarrhea, abdominal distention, hyperglycemia, constipation, and fecal impaction.
Nursing Management ...cont’d

- Elevate the head of the bed at least 45 degrees or as recommended by speech (obtain physician order once recommendation is received), check for residual volume (obtain order for when to hold feeding if residual is greater than ---, recheck residual 1hour after and if residual is still more than --- notify the physician as ordered in the POS, and flush the tube with water.
Administering Medications Via G-tube

- Check the placement
- Prepare each medication
- Take medications in the following order:
  - Liquid medications first.
  - Medications that need to be dissolved second.
  - Thick medications last.
Administering Medications
Via G- tube ... cont’d

- Measure the prescribed amount of liquid medication, or crush pills and dissolve powder in 15 ml (or as ordered).
- Remove the plunger from the 50 ml syringe. Pour 30 ml of water (as ordered) into the syringe and flush your tube.
- Pour the medication into the syringe. Do not use the syringe plunger to push the medication into the tube. Let the medication flow in slowly via gravity.
Administering Medications Via G- tube ... cont’d

- Flush your tube with 5 ml (or as ordered) or more of water between all medications.
- Take each medication by itself. Never mix medications together in the syringe.
- Flush the tube with 30 ml of (or as ordered) water after all medications have been given.
- Wait before restarting tube feeding. Some medications don’t work when mixed with the feeding formula (dilantin, synthroid, Fosamax)
- Keep tube clamped in between feedings.
Precautions when administering medical administration via G-tube

- Use liquid medications whenever possible
- Don’t mix medications with feeding formula
- Flush GT before, between, and after giving medications to prevent the tube from getting clogged.
Potential Problems with G-Tubes

Dislodgement of feeding tubes

• Feelings of fullness
• Nausea/vomiting
• Abdominal distention

Aspiration

• Reduced level of consciousness, depressed gag or cough reflexes, and alterations in normal swallowing increase the risk for aspiration.
• Early recognition of signs and symptoms of aspiration allows for prompt intervention.
## Major Complications

<table>
<thead>
<tr>
<th>Complication</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspiration</td>
<td>0.3%–1.0%</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>0%–2.5%</td>
</tr>
<tr>
<td>Peritonitis</td>
<td>0.5%–1.3%</td>
</tr>
<tr>
<td>Necrotizing fasciitis</td>
<td>rare</td>
</tr>
<tr>
<td>Death</td>
<td>0%–2.1%</td>
</tr>
<tr>
<td>Tumor implantation</td>
<td>rare</td>
</tr>
</tbody>
</table>

## Minor Complications

<table>
<thead>
<tr>
<th>Complication</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ileus</td>
<td>1%–2%</td>
</tr>
<tr>
<td>Peristomal infection</td>
<td>5.4%–30%</td>
</tr>
<tr>
<td>Stomal leakage</td>
<td>1%–2%</td>
</tr>
<tr>
<td>Buried bumper</td>
<td>0.3%–2.4%</td>
</tr>
<tr>
<td>Gastric ulcer</td>
<td>0.3%–1.2%</td>
</tr>
<tr>
<td>Fistulous tracts</td>
<td>0.3%–6.7%</td>
</tr>
<tr>
<td>Inadvertent removal</td>
<td>1.6%–4.4%</td>
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</tbody>
</table>
Signs and Symptoms of Aspiration

Crackles
Cough
Dyspnea

Presence of 30-50 cc of residual feeding in syringe
Tachycardia
Take individual to emergency room if the following occurs:

- Tube feels loose, comes out, or the size of the opening where the tube enters the skin increases
- Blood around the tube, in stool, or in contents of the stomach
- Tube that falls out or difficulty telling if the tube is in your stomach
- Tube becomes clogged or blocked and you cannot clear it
Notify physician if the following occurs:

- Vomiting or coughing while feeding
- Bloating or rigid abdomen (belly feels hard when gently pressed)
- Diarrhea
- Fever of 100.4°F (38°C) oral or 101.4°F (38.5°C) rectal or higher, or as directed by your healthcare provider.
- Shaking chills
Notify physician if the following occurs: (cont’d)

- Redness, swelling, leakage, sores, or pus around the tube
- Red, rough tissue around the tube site
- Coughing
- Respiratory distress during feeding, flushing, or giving medication
- Constipation that lasts more than 48 hours
- Red, warm, or tender skin around the tube
Summary

Overall Goal: Adequate Nutrition

To ensure nutritional needs are being met:
- Consult with nutritionist & PCP
- Discuss positioning needs with SLP
- Review laboratory results
- Weight weekly