



Gastrostomy Feeding

Objectives:

At the end of this procedure the student nurse will be able to:

1. Define of gastrostomy & gastrostomy tube.
2. Understanding objectives for gastrostomy feeding.
3. Prepare the equipment needed for the procedure.
4. Illustrate the special consideration for gastrostomy feeding.
5. Demonstrate gastrostomy feeding.
6. Illustrate unexpected outcome of gastrostomy feeding.

Definition of gastrostomy:

A gastrostomy is an opening made to introduce food directly into the stomach through the abdominal wall by means of a surgically placed tube or button.

Definition of gastrostomy tube:

A large tube is surgically placed in the stomach and exits through an incision in the upper left quadrant of the abdomen, where it is sutured in the place.



Indications for gastrostomy feeding:

1. Congenital (present from birth) abnormalities of the mouth, esophagus, stomach, or intestines
2. Sucking and swallowing disorders, which are often related to prematurity, brain injury, developmental delay, or certain neuromuscular conditions, like severe cerebral palsy
3. Failure to thrive, which is a general diagnosis that refers to a child's inability to gain weight and grow appropriately.

Special consideration for gastrostomy feeding:

- ☒ Immediately after surgery the catheter is left open and attached to gravity drainage for 24 hours or more.
- ☒ As a precaution the length of the tube is measured post operatively and at each shift to be sure it has not slipped. A mark can be made above the skin level to further ensure it is placement
- ☒ Clean the skin around the tube insertion with mild soap and water(once or twice daily) and application of antibiotic or other preparation may be prescribed to aid in healing and prevent

infection and irritation of the wound.

- ☒ The nurse must assess the site and report for leakage, redness around the site, drainage (brown or green drainage may indicate slipping of the tube through the pylorus into the duodenum) , tension ,occlusion , bleeding, skin break down , vomiting ,and abdominal distention .
- ☒ For children on long term gastrostomy feeding, a skin level device as button offers several advantages and when it is used, extension tubing between the button and the feeding pump might be placed.

Gastrostomy Tube Feeding procedure:






Equipment:

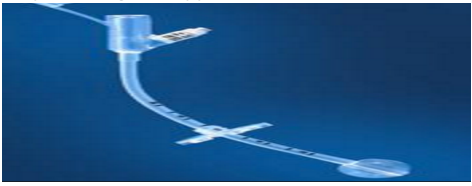

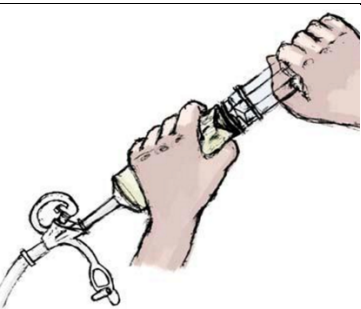

1. Prescribed feeding formula at room temperature.
2. Feeding bag or prefilled tube feeding set.
3. 60 ml syringe.
4. Stethoscope.
5. Rubber band.
6. Non-sterile gloves.
7. Disposable pad or towel.
8. Enteral feeding bump (if ordered).
9. Clamp.
10. 15 to 30 ml of water to flush the tube as ordered.
11. Funnel or syringe barrel.
12. Syringe for aspiration.





Assessment:

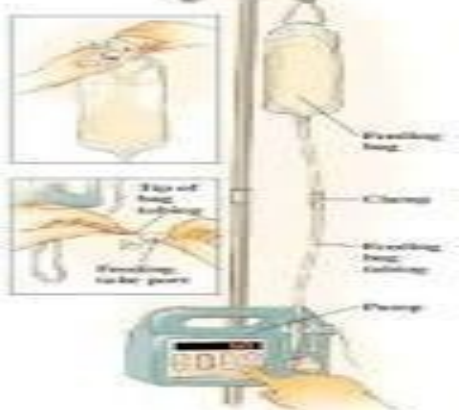
- Assess the abdominal by inspection for presence of distention, auscultation for bowel sounds, and palpate the abdomen for firmness or tenderness.
- If the abdomen is distended, consider measuring the abdominal girth at the umbilicus.
- If the patient report any tenderness or nausea, exhibits any rigidity or firmness of the abdomen, and if the bowel sound are absent, confer with primary care provider before administering the feeding.
- Assess for patient and family understanding, for the rational for the tube feeding and address any question or concerns expressed by the patient and family members.

Gastrostomy Feeding Procedure

STEPS	RATIONAL	Picture
1-Perform hand hygiene.	Reduces transmission of microorganisms.	
2-Gather the necessary supplies.	Promotes efficient time management and provides an organized approach to the procedure.	
3-Don gloves.	Standard precaution to reduce transmission of microorganisms.	
4-Place child in a supine position, before the procedure begins, with the head of bed up 30 degrees (if not otherwise contraindicated). Older children may be placed in a sitting position or a position of comfort.	A Semi-Fowler's , head-of-bed up, right side-lying position is best for promoting gastric emptying and peristalsis.	
5-Measure prescribed to be infused into clean graduated measuring cup.	Prepares formula for administration. Promotes safety for the delivery of the ordered volume of feeding.	
6-Place a towel or washcloth under child's indwelling enteral tube	Protects clothing and linens from emesis or secretions.	
KEY POINT: 7-To verify proper tube placement of gastrostomy tube malposition may be evidenced by the external tube length being shorter than baseline measurement, distended abdomen. high-pitched bowel sounds indicating obstruction, or blocked	Avoids complications associated with inappropriate administration of feeding.	

<p>lumen of the bowel by the tube balloon from tube migration.</p>		
<p>8-For skin-level devices, attach feeding tube extension to enteral device (as needed depending on type of enteral device)</p> 	<p>Skin-level devices require that a feeding tube be connected to the device to administer the feedings or medications.</p>	
<p>9-Attach 60-mL catheter-tip syringe with plunger.</p>	<p>Syringe is used to administer bolus feeding.</p>	
<p>10-Assess for residual fluid in gastrointestinal tract by aspirate the stomach contents by using the syringe plunger to determine entire residual.</p>	<p>Monitoring residuals aids in prevention of overfeeding and detecting early signs of feeding intolerance. Gastric residuals may be elevated because of formula intolerance, delayed gastric emptying, sepsis, or underlying gastrointestinal disease process.</p>	
<p>KEY POINT If residual feeding is obtained and is greater than one half of the previous feeding volume, hold the present feeding, noting color and consistency, and notify the prescribing practitioner. If there is a small amount of residual, return the aspirate and continue with the enteral feeding procedure.</p>	<p>Gastric aspirates contain enzymes, electrolytes, and secretions essential for digestion, so discarding aspirates repeatedly could lead to electrolyte imbalances.</p>	
<p>11-Remove the plunger from the syringe.</p>		

<p>12-If the feeding tube does not have a clamp, pinch the tube, open the plug and insert the end of the syringe into the feeding tube. If it has a clamp, open it after you insert the syringe.</p>	<p>Prevent air from entering child stomach</p>	
<p>13-Hold the syringe upright. Slowly pour the warm water into the syringe. (If you don't know how much water to use, ask the doctor who handles problems with your child's feeding.)</p>		
<p>14-Fill syringe with measured amount of formula.</p>		
<p>15-Elevate catheter-tip syringe to a level to deliver the feeding over about 15 minutes, gradually adding the total feeding volume to the syringe. Allow feeding to flow slowly by gravity: raising or lowering syringe can adjust the rate of flow.</p>	<p>Enteral feedings delivered too rapidly may interfere with peristalsis, causing abdominal distention, possible cramping, regurgitation, and/or diarrhea.</p>	
<p>16-After feeding is complete, gently clear tubing and catheter-tip syringe with warm water flush.</p>	<p>Warm water helps prevent the tube from clogging. Depending on child's age and diagnosis, added free water may be needed to avoid potential dehydration that can result from high osmolality formulas. Free water may also place some children at risk for fluid overload.</p>	
<p>16-If feeding tube is discontinued after each feeding, pinch or clamp the enteral tubing.</p>		
<p>Used supplies, such as catheter-tip syringe and feeding extension tubing, can have repeated use for up to 24 hours. Label administration set with date and time when first used: cleanse thoroughly with warm, soapy water</p>	<p>Changing enteral feeding set/disposable supplies every 24 hours prevents</p>	

<p>and rinse well. ag Dispose of equipment and waste in appropriate receptacle.</p>	<p>bacterial overgrowth in set. Date and time labeling indicates to parents and nursing staff when supplies should be changed.</p>	
<p>17-Dispose of equipment .</p>	<p>Standard precautions.</p>	
<p>18-Remove gloves and perform hand hygiene.</p>	<p>Reduces transmission of microorganisms.</p>	
<p>19-Leave child lying on the right side with head of the bed elevated for 30 minutes after feeding.</p>	<p>To prevent aspiration.</p>	
<p>20-Recording and reporting: Record amount ,type of feeding , child response to feeding , and any additional water on intake and output form, and any adverse effects.</p>		
<p>If feeding bag is used:</p> <ol style="list-style-type: none"> 1. prime tubing, and attach tubing to the end of feeding tube . 2. Set rate by adjusting roller clamp on tubing or placing on feeding pump. Allow bag to empty gradually over 30 to 60 minutes. 3. Label bag with tube feeding type, amount, date, time and child response. <p>Key point; Change bag every 24 hours.</p>		

Unexpected Outcome	Related Intervention
1- The feeding tube become clogged. Due to frequent aspiration of gastric content and frequent administration of medication.	☞ Flush the tube with water after checking the residual volume .
2- Excessive gastric residual volume .	<ul style="list-style-type: none"> ☞ Notify the physician to determine if feeding need to be held. If feeding are held , reassess residual volume 1 hour after the feeding is stopped to determine if volume has lessened or increased. If it has increased, make sure the physician is aware. ☞ Maintain child in high fowler position or have head of the bed elevated at least 30 degree.
3- Develop diarrhea 3 or more times in 24 hours: may indicate intolerance .	<ul style="list-style-type: none"> ☞ Notify the physician, and confer with dietitian to determine need to modify type of formula, concentration, or rate of infusion. ☞ Consider other causes(e.g., bacterial contamination of the feeding . client infection). ☞ Determine if child is receiving antibiotic or medication (e.g., those containing sorbitol)that can induce diarrhea.
4- Drainage (signs of hemorrhage, infection , or obstruction) from the abdominal insertion site of a gastrostomy .	<ul style="list-style-type: none"> ☞ Notify the physician; describe and document the type of drainage. ☞ For purulent drainage anticipate the need for cultures. ☞ Place a dry drain gauze around the site, and change every shift and as needed.

CHILD AND FAMILY EVALUATION AND DOCUMENTATION

1. Evaluate enteral tube position and function each shift, prior to use or as determined by the child's condition.
2. Observe the enteral tube system to ensure the system is intact, without leaks, kinks, or occlusions, at least once every shift.
3. Auscultate the child's bowel sounds a minimum of each shift or as clinically indicated for motility.
4. Evaluate the child for gastric residuals every 4 hours while on feedings or as ordered. Note color, consistency, pH testing, occult blood testing, and whether the residuals were given back to the child or discarded. Hold feedings for 1 hour if residuals are greater than half of the previous intermittent feeding or greater than half of the previous hour's worth of continuous feeding. If feeding residuals continue after feeding is held for an hour, notify prescriber to obtain further orders.
5. Evaluate child's intake, output, and tolerance to feeding. Monitor for decreased or increased urine output.
6. Evaluate for diarrhea; consider diarrhea as a possible result of the use of hyperosmolar formula, lactose intolerance, prolonged use of antibiotics, or bacterial contamination of formula.
7. Evaluate children experiencing persistent diarrhea on enteral tube feedings for any relation to formula rate and content. Review medications for those that may contribute to diarrhea. Obtain stool to check for *Clostridium difficile*.
8. Evaluate the child's weight pattern by weighing the child daily.
9. Evaluate the need for in-home enteral nutritional support.
10. Document the following:
 - a) Date.
 - b) Time of feeding administration.
 - c) Type.
 - d) Size of enteral tube in use.
11. Type of feeding, medication, or treatment administered through the enteral tube Amount of intake (for continuous feedings document hourly), including flushes and output Amount of gastric residuals, color and characteristics of residuals and whether the residuals were given back to the child or discarded
12. Child's response to and tolerance of the procedure.
13. Child's daily weight.

Health education

Instruct the family in the following cases:

1. Tube insertions when appropriate.
2. Evaluating tube patency and management.
3. Initiating and discontinuing enteral feeding.
4. Recognizing signs and symptoms of feeding intolerance.
5. Safety and problem solving related to developmental level of child.
6. Encourage child and family questions to in-home feeding therapies and consult with a nutritional support counselor or nurse for discharge planning related to obtaining necessary equipment for in-home enteral feedings.
7. For the child receiving tube feedings at home, instruct the family to contact the healthcare provider if:
 - a) The child's abdomen becomes distended.
 - b) The child vomits after feedings.
 - c) The child has an increased residual from the previous feeding.
 - d) The child develops a skin rash or redness at enteral tube placement site.
 - e) The child has oozing of secretions or formula at the entrance site of the enteral tube.
 - f) Mechanical tube problems occur (e.g., tube occlusion, altered tube integrity).