

Caring for Children with a Gastrostomy in a Community Program

**Unified Referral and Intake System (URIS)
3rd edition (revised)
2020**



Gastrostomy

This manual was developed in consultation with health care professionals in the areas of gastroenterology and community health. The Unified Referral and Intake System (URIS) wishes to acknowledge the contribution of the following individuals.

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INTRODUCTION

The Unified Referral and Intake System (URIS) is a joint collaboration among various government departments, health service organizations, school divisions and child care organizations. URIS supports community programs in the care of children with specific health care needs. Community programs that are eligible for URIS support include schools, licensed child care facilities and respite service.

URIS provides a standard means of classifying the complexity of health care needs and establishes the level of qualification required by personnel to support children with these health care needs. Health care needs that are classified as 'Group B' can be delegated to non-health care personnel who receive training and monitoring by a registered nurse. For children with 'Group B' health needs (e.g. gastrostomy care), the nurse provides the following support:

- develops and maintains a written health care plan;
- provides training to community program personnel that are responsible for the child; and
- monitors community program personnel that receive training.

This document provides standard clinical information that is relevant to the care of a child with a gastrostomy during his/her attendance in a community program. Supplemental documents are also provided to assist the nurse in the development of health care plans and training and monitoring of community program personnel.

CLINICAL INFORMATION

The following information is considered 'best practice' in community program settings and is the basis for all gastrostomy information contained in this document and its supplements.

Gastrointestinal system

The gastrointestinal system breaks down food into the basic nutrients that feed the cells of the body. The gastrointestinal tract can be divided into two parts: upper and lower.

The *upper gastrointestinal (GI) tract* is where digestion and absorption of most nutrients occur. It includes the mouth, throat, esophagus, stomach and small intestine.

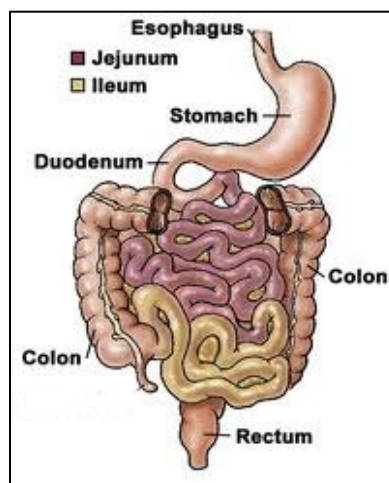
The *lower gastrointestinal tract* is where water is re-absorbed and undigested food is consolidated into fecal waste. It includes the colon, rectum and anus.

The *esophagus* is a muscular tube that extends from the base of the throat to the stomach. A valve-like structure (esophageal sphincter) prevents food or fluid from backing up after reaching the esophagus. The backing up of food or fluids is called reflux.

The *stomach* is a curved, pouch-like organ that is located in the upper left portion of the abdomen. It partially digests food and regulates passage of food into the intestine.

The *small intestine* is where most digestion and absorption of nutrients occurs. The *duodenum*, *jejunum* and *ileum* are parts of the small intestine. Food is absorbed through the lining of the small intestine and enters the blood stream where it is carried to the tissues and cells throughout the body.

Water is re-absorbed in the *colon or large bowel* and food by-products are consolidated into fecal waste. The *rectum* opens to the outside of the body through the anus where fecal waste is expelled.



Gastrostomy Tubes

A gastrostomy is a surgical opening (“stoma”) into the stomach (“gastro”). A gastrostomy tube (G-tube) is a small soft tube that goes into the body through the stoma and ends inside the stomach. It may be held in place by sutures, an inflated balloon, internal/external bumpers or a disc. All gastrostomy tubes have a rounded tip with holes on the end that is inside the stomach. There are one or more openings, called “ports”, on the end of the tube that is outside the body. Different types of gastrostomy tubes are used depending on the needs of the child.

The gastrostomy tube is a way of administering liquid food (often formula), purees, water and medication directly into the stomach. It may also be used to empty the stomach of gas.

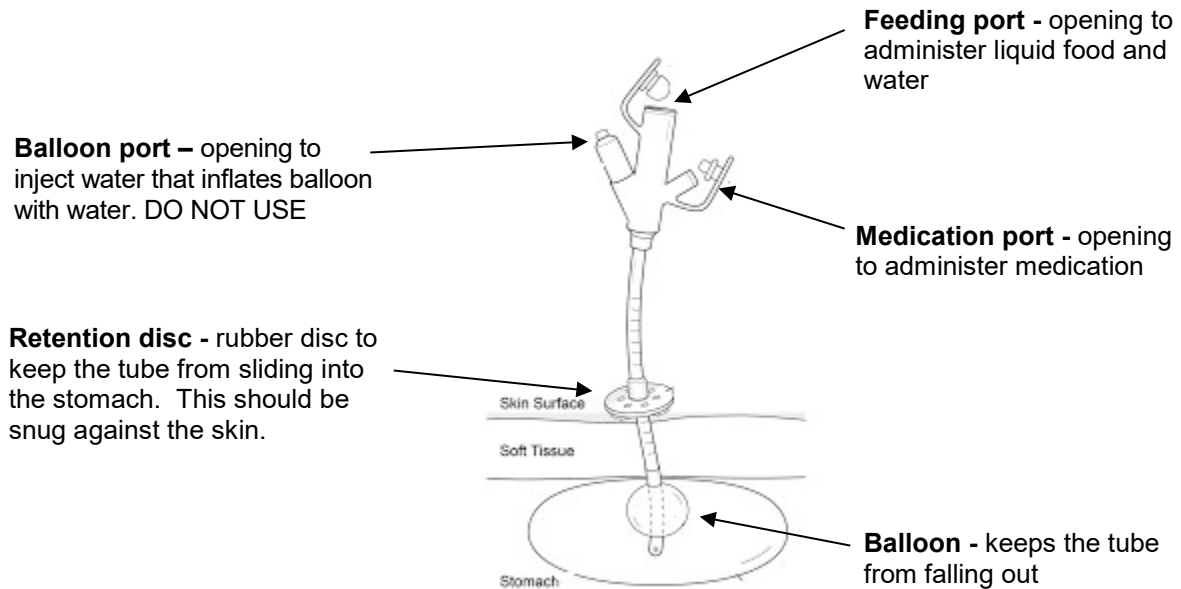
Gastrostomy tubes may be used for reasons such as:

- obstruction in the esophagus or throat;
- difficulty swallowing;
- potential risk for choking;
- inability to eat or drink enough regular food or fluids orally (e.g. unable to chew or swallow, tires easily); or
- unable to eat/absorb enough food to maintain adequate nutrition (failure to thrive).

The gastrostomy tube remains in place and is closed with a cap between feedings to prevent leakage of stomach contents. A gastrostomy tube does not normally cause discomfort for the child. Transfer belts should be used with caution. Swimming, bathing and stomach time are allowed with no restrictions.

Balloon gastrostomy tube

The balloon gastrostomy tube is held in place by a disc on the skin surface and a balloon inflated with water inside the stomach.



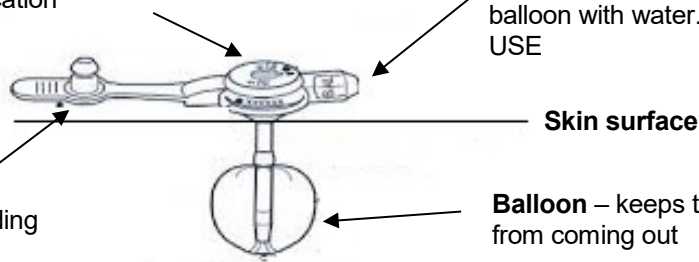
MIC-KEY® low-profile gastrostomy tube

The MIC-KEY® is a low profile gastrostomy tube that is level with the skin. It is held in place by a balloon inside the stomach that is inflated with water. An extension tube is connected to the MIC-KEY® tube and locked into place to administer liquid food, purees, water and medication. The extension tube should be removed when it is not in use to keep the child from pulling the MIC-KEY® tube out. The numbers on the MIC-KEY® tube indicate its size. The “Fr” size is the width of the tube (e.g. 18Fr). The centimeter size indicates the length of the tube from the skin to the stomach (e.g. 1.5 cm). The French size of gastrostomy tube and extension tube must match.

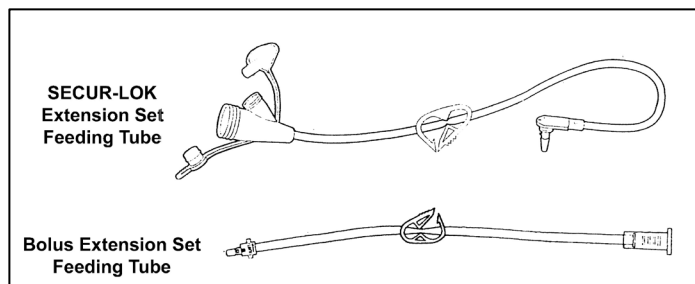
Feeding port – opening to connect the extension tube and administer liquid food, water and medication

Balloon port – used to fill the balloon with water. **DO NOT USE**

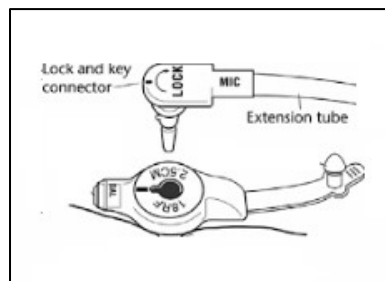
Cap – covers the feeding port



Extension tubes used with MIC-KEY® G-tube



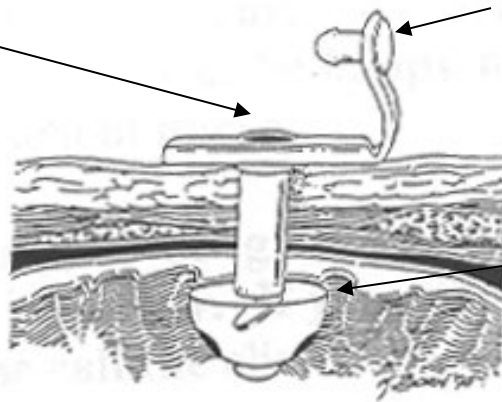
Locking extension tube into MIC-KEY® G-tube



Bard Button™

The Button™ is a low profile gastrostomy tube that is level with the skin. It is held in place by a hollow dome inside the stomach. An extension tube is connected to the Bard Button™ (see below) and locked into place to administer liquid food, water and medication. The extension tube should be removed when it is not in use to keep the child from pulling the Bard Button™ out.

Feeding port -
opening to connect
the extension tube
and administer liquid
food, water and
medication



Cap - used to close
the port

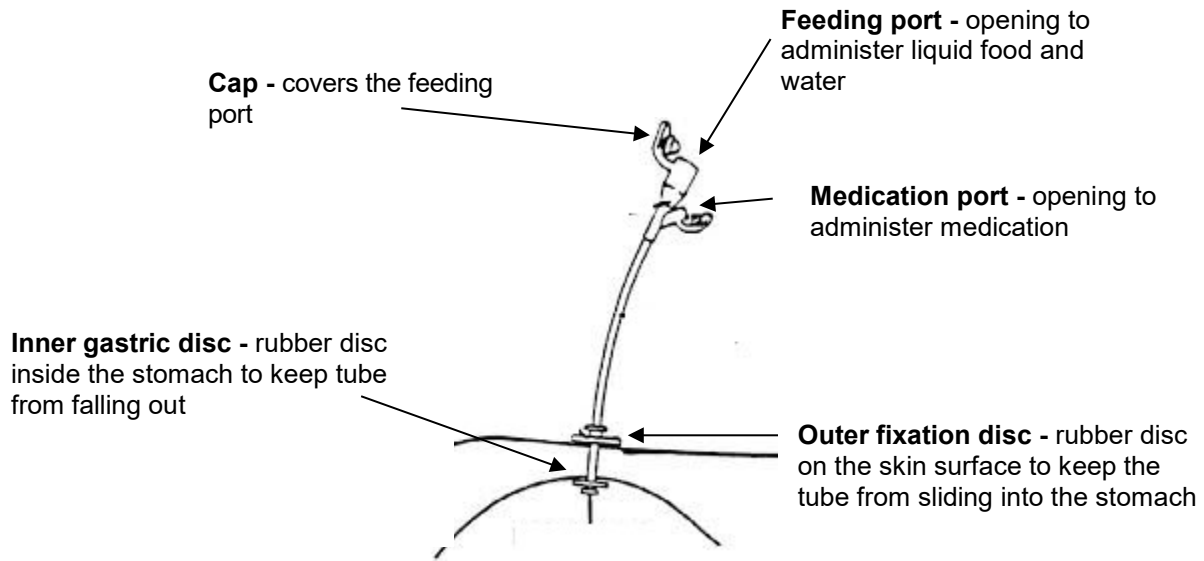
Dome - rubber end
inside the stomach
that keeps the tube
from falling out

Extension tubes used with Bard Button™



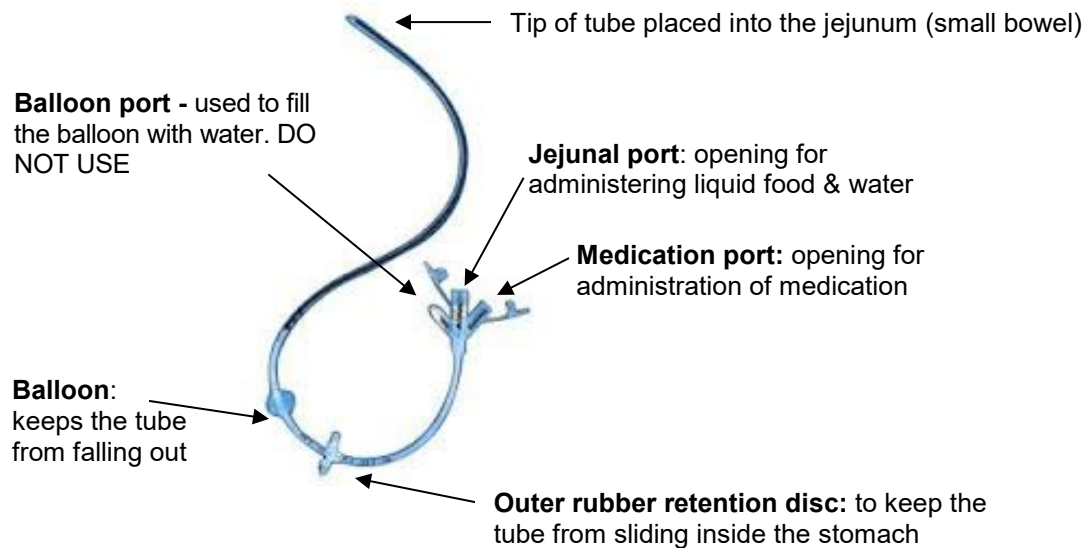
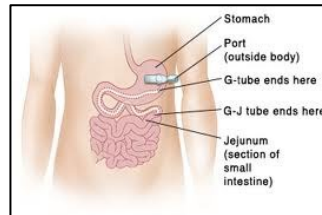
Percutaneous Endoscopic Gastrostomy (PEG) tube

The Percutaneous Endoscopic Gastrostomy (PEG) tube has a disc on the skin surface and inside the stomach that keeps the tube from falling out.



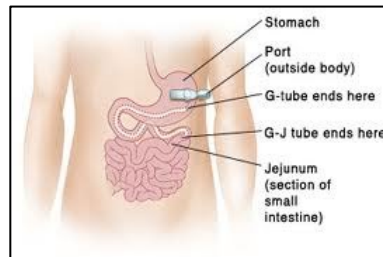
MIC® regular jejunal feeding tube

The MIC® regular jejunal feeding tube allows liquid food and water to be administered directly into the small bowel when your child cannot be fed into their stomach. It is inserted into a healed gastric stoma at least eight weeks after the stoma has been put in place. A fluoroscopy is used to visualize the tube entering the small bowel. A small weight at the internal end of the tube keeps the tip in the right place. An inflated balloon inside the stomach keeps the tube from falling out and a rubber retention disc on the skin keeps the tube from sliding inside the stomach.



MIC-KEY® low profile jejunal feeding tube

The MIC-KEY® low profile jejunal feeding tube allows liquid food and water to be administered directly into the small bowel when your child cannot be fed into their stomach. It is inserted into a healed gastric stoma at least eight weeks after the stoma has been put in place. A fluoroscopy is used to visualize the tube entering the small bowel. A small weight at the internal end of the tube keeps the tip in the right place. An inflated balloon inside the stomach keeps the tube from falling out.

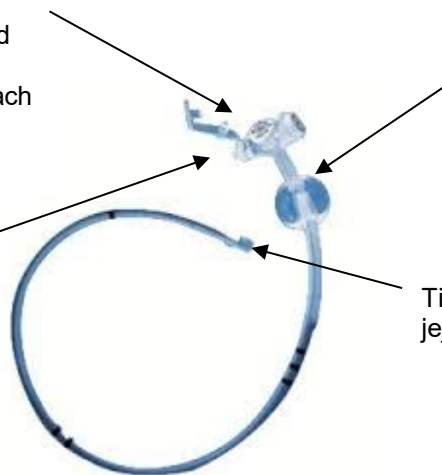


Feeding port – opening to connect the extension tube and administer formula, water and medication or empty the stomach of gas

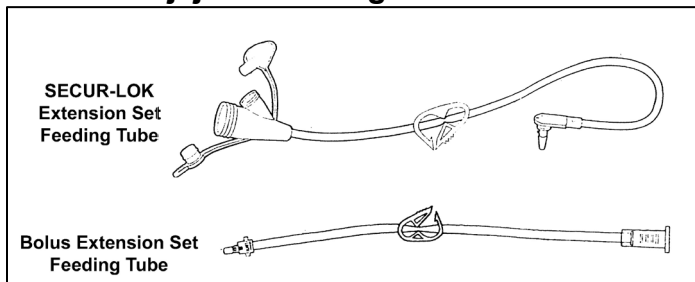
Balloon: keeps the tube from falling out

Balloon port - used to fill the balloon with water. DO NOT USE

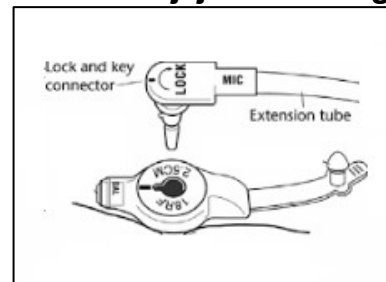
Tip of tube placed into the jejunum (small bowel)



Extension tubes used with MIC-KEY® jejunal feeding tube

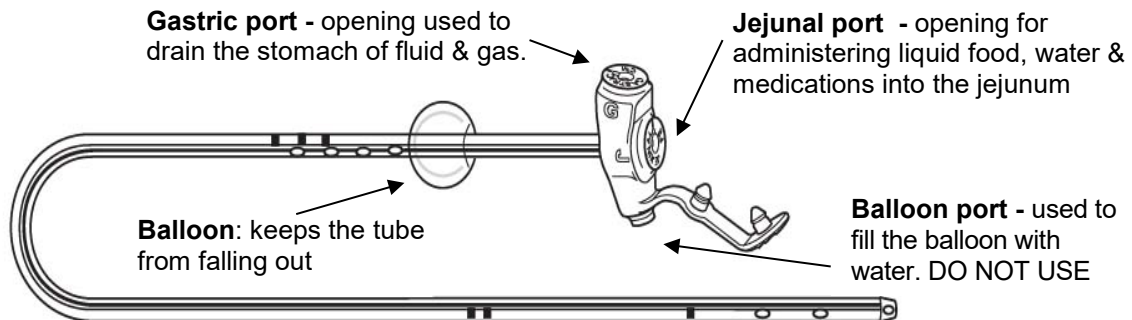
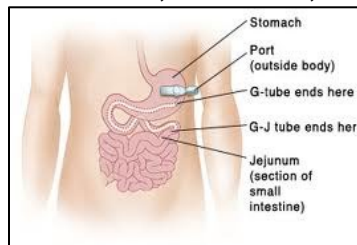


Locking extension tube into MIC-KEY® jejunal feeding tube

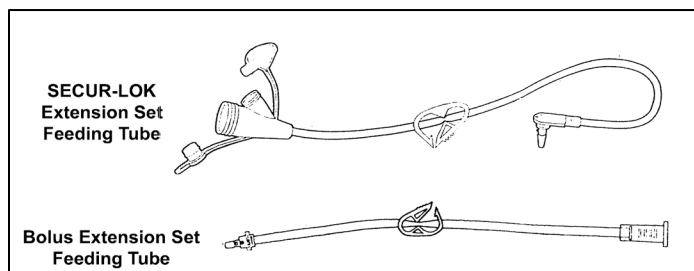


MIC-KEY® low profile jejunal feeding tube with gastric port

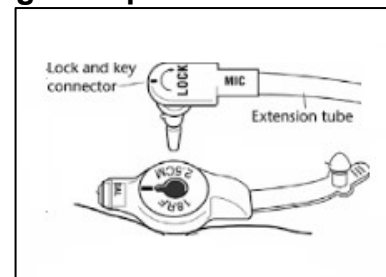
The MIC-KEY® low profile jejunal feeding tube with gastric port allows liquid food and water to be administered directly into the small bowel when your child cannot be fed into their stomach. It is inserted into a healed gastric stoma at least eight weeks after the stoma has been put in place. A fluoroscopy is used to visualize the tube entering the small bowel. A small weight at the internal end of the tube keeps the tip in the right place. An inflated balloon inside the stomach keeps the tube from falling out. The stomach can be emptied at the same time, if needed, using the gastric port.



Extension tubes used with MIC-KEY® jejunal feeding tube with gastric port



Locking extension tube into MIC-KEY® jejunal feeding tube gastric port



Key points for jejunal feeding tubes

- The numbers on the tube indicate the size. The “Fr” size indicates how wide the tube is (e.g., 16 Fr). The “cm” number indicates how long the tube is from the skin to the stomach (the stoma length – e.g., 2.0cm). There is another number on the box that tells you how long the entire tube is (e.g., 30 cm).
- Feeding must be given over a longer period or continuously (bolus feed) using a pump as the small bowel cannot handle a large feed.
- A medication that lowers the acid in the stomach is needed to protect the stomach. The tube should be flushed well before and after administering medication. Do not mix medications. Use liquid medications or dissolve well in water.
- The tube should be flushed with 5-10 mL of water every four hours to prevent it from plugging. Signs that the tube may be plugged include abdominal bloating, pain, vomiting or diarrhea.
- If the tube has been moved out of place, stop the feed and call the parent/guardian.
- Do not spin the tube in the stoma or the tube may come out.
- Keep the tube taped down at all times and hidden in the child’s clothes to keep it from being pulled out.
- Do not pull back on a syringe attached to the tube to empty it as this can block the tube.
- If the tube becomes blocked, attach a 30 or 60 mL syringe filled with warm water to the tube and slowly push the water into the tube. Do not use too much pressure or the tube may break. Squeezing the tube may loosen the plug.

Stoma care

It is very important to keep the skin around the stoma clean and dry to prevent the skin from breaking down and becoming infected. Some stomas leak frequently while others do not leak at all. It is the responsibility of the child's parent/guardian to clean the skin around the stoma on a daily basis. Community program personnel should clean the stoma site if it is wet or dirty. Some children may require stoma care on a regular basis if the stoma leaks frequently to ensure the stoma site remains clean and dry. For diapered children, it is recommended to keep the stoma and tube outside of the diaper to keep it clean.

Cleaning stoma

1. Wash hands and put on gloves.
2. Gather supplies and place on a clean surface.
 - Clean washcloth
 - Warm soapy water
 - Clear water
 - Clean towel
 - Cotton swabs (e.g. Q-Tips™) as required
 - Gauze or dressing, if indicated by the parent/guardian
 - Prescribed cream or ointment, if required
3. Wash skin around stoma and disc/button with warm soapy water. Gently lift the sides of the disc/button to reach all areas of the skin. Do not pull hard on it as this can hurt the inside of the stomach or jejunum. Cotton swabs may be useful to clean around the disk/button.
4. Rinse the skin and disc/button well with clear water.
5. Dry the skin with a clean towel, gauze or Q-tip™. It is best to leave the skin open to air dry and prevent skin breakdown.

If there is leakage at the stoma, a dressing (e.g. 2x2 gauze, Aquacelle™, foam-like dressing) may be recommended by the child's health care provider. Cut the recommended dressing in a "Y" formation to fit around the disc/button. The gauze should be changed when it becomes wet. Most skin irritations heal quickly when left open to the air. Creams should not be applied to the stoma unless directed by a health care professional.

If redness, swelling, bleeding, change in color or odor occurs at the stoma site, the parent/guardian should be informed.

The gastrostomy should not restrict the child from participating in activities. Swimming is allowed if the skin around the disc/button is healthy. After swimming, the skin around the disc/button should be cleaned and dried well. If there is a hit to the abdomen, there may be some pain but it is usually not an emergency unless the pain is intense or does not improve.

It is recommended to prevent the gastrostomy tube from being pulled. Some common strategies to prevent a child from pulling on or playing with the tube is to tuck their shirt into their pants or tape the tube to their skin. The parent/guardian can be consulted

regarding strategies that assist in preventing their child from pulling on the gastrostomy tube.

Children can lie in any position that is comfortable and safe for feeding. The parent/guardian may specify a specific position that is recommended for their child. The child's physician may be consulted, if required, to determine if a specific position is safe and appropriate.

Gastrostomy feeds

Bolus (intermittent) and continuous feeding schedules may be used, depending on the child's nutritional needs and lifestyle. Bolus feedings resemble the normal pattern of eating and digestion and can be given by gravity, push method or pump. Continuous feedings are administered with a pump at a steady rate, for as many hours as needed. Some children may receive bolus feedings during the day and continuous feeding during the night.

- Washing your hands is one of the most important steps in administering feeds (liquid or purees), water and medications via the gastrostomy tube. See *Infection Control Guidelines* (below) for more details.
- It is important to ensure the gastrostomy tube is in the correct position before starting a feed or administering medication. The disc/button should be flush with the skin.
- It is recommended that the child is in a sitting position during the administration of a feed with their head elevated at least 30 degrees. They should remain in this position for a minimum of 30 minutes after the feed.
- The gastrostomy tube should be flushed with water before and after administering liquid food, purees and medication to prevent blockage of the tube. If multiple medications are administered, a water flush should be administered after each medication. At least 5-10 mLs should be used to flush the tube. For continuous tube feedings, it is recommended to flush the bag and tube with water every four hours to prevent blockage.
- A syringe, instead of a bag, should be used to administer pureed food due to the thickness of the liquid.
- If the child is less than 4 months of age, sterile water should be used to flush the gastrostomy tube.

Bolus feed by gravity (feeding bag)

Getting ready

1. Wash hands and put on gloves.
2. Gather supplies.
 - Liquid food (room temperature)
 - Feeding bag
 - Extension tube, if child has a low profile gastrostomy tube
 - Water (room temperature)
3. Prepare liquid food as directed in child's health care plan.
4. Ensure roller clamp on feeding bag is closed.
5. Pour liquid food into feeding bag.
6. Close cap on the feeding bag and hang bag.
For low profile gastrostomy tube only, attach extension tube to gastrostomy tube/button. Ensure clamp on extension tube is closed.
7. Squeeze drip chamber until it fills with liquid food to the line.
8. Open clamp(s) and fill tube with liquid food.
9. Close clamp(s).

Water flush (before feed)

1. Draw up water flush amount, as specified in child's health care plan, with syringe.
2. Attach syringe to extension tube/gastrostomy tube.
3. Open clamp of extension tube/unpinch gastrostomy tube.
4. Push water into tube slowly.
5. Close clamp of extension tube/pinch tube.

Gastrostomy feed

1. Place child in an upright and comfortable position.
2. Remove cap from feeding port.
3. Connect tube to feeding port.
 - *If using extension tube, match lines and turn to lock.*
4. Open clamp(s).
5. Adjust roller clamp to regulate the rate of flow so feed occurs in the time period specified in the child's health care plan.
6. Close roller clamp before feeding bag is completely empty of liquid food.

Water flush (after feed)

1. Pour water amount, as specified in child's health care plan, into feeding bag.
2. Open roller clamp, adjusting it to regulate the rate of flow to occur in the time period specified on the child's health care plan.
You may need to hold the tube higher to remove as much water as possible.
3. Close clamp(s) before tube is completely empty.

Cleaning up

1. Remove tube from feeding port.
2. Close feeding port with cap.
3. Remove gloves and wash hands.
4. Clean and store equipment as directed.
5. Document.

Bolus feed by gravity (syringe)

Getting ready

1. Wash hands and put on gloves.
2. Gather supplies.
 - Liquid food (room temperature)
 - 60 mL syringe
 - Extension tube, if using a low profile gastrostomy tube
 - Water (room temperature)
 - Catheter tip adapter, if syringe does not fit into feeding port
3. Prepare liquid food.
4. Remove cap from feeding port and insert syringe (without the plunger).
 - *If using extension tube, attach it to the syringe and fill syringe with liquid food. Unclamp the extension tube and fill it with liquid food. Close the clamp.*
 - *If child has a gastrostomy tube, pinch tube before inserting syringe and fill the syringe with formula.*

Water flush (before feed)

1. Draw up water flush amount, as specified in child's health care plan, with syringe.
2. Attach syringe to extension tube/gastrostomy tube.
3. Open clamp of extension tube/unpinch gastrostomy tube.
4. Push water into tube slowly.
5. Close clamp of extension tube/pinch tube.

Gastrostomy feed

1. Open clamp of extension tube/unpinch tube.
 - *Allow the formula to flow in by gravity. Raise or lower the syringe to regulate the rate of flow so feed occurs in the time period specified in the child's health care plan. The higher you hold the syringe, the faster the flow of liquid food into the stomach. The lower you hold the syringe, the slower the flow of liquid food into the stomach.*
2. Continue pouring liquid food into syringe, making sure it does not empty.
3. When the feed is finished, close clamp of extension tube/pinch tube before syringe empties.
4. Pour water flush amount, as specified in child's health care plan, into the syringe.
 - *Administer the flush in two portions to ensure the water runs clear at the end of the flush. The plunger may be used to push all the water through the tube.*

Water flush (after feed)

1. Draw up water flush amount, as specified in child's health care plan, with syringe.
2. Attach syringe to extension tube/gastrostomy tube.
3. Open clamp of extension tube/unpinch gastrostomy tube.
4. Push water into tube slowly.
5. Close clamp of extension tube/pinch tube.

Cleaning up

1. Remove extension tube or syringe from the feeding port.
2. Close feeding port with cap.
3. Remove gloves and wash hands.
4. Clean and store equipment as directed.
5. Document.

Bolus Feed by gravity (feeding bag) & push method for water flush (syringe)

Getting ready

1. Wash hands and put on gloves.
2. Gather supplies.
 - Liquid food (room temperature)
 - Feeding bag
 - Extension tube, if child has a low profile gastrostomy tube
 - Water (room temperature)
 - Syringe
 - Catheter tip adapter, if syringe does not fit into feeding port
3. Prepare liquid food.
4. Ensure roller clamp on feeding bag is closed.
5. Pour liquid food into feeding bag.
6. Close cap on the feeding bag and hang bag.
 - *For low profile gastrostomy tube only, attach extension tube to feeding bag. Ensure clamp on extension tube is closed.*
7. Squeeze drip chamber until it fills with liquid food to the line.
8. Open clamp(s) and fill tube with liquid food.
9. Close clamp(s).

Water flush (before feed)

1. Draw up water flush amount, as specified in child's health care plan, with syringe.
2. Attach syringe to extension tube/gastrostomy tube.
3. Open clamp of extension tube/unpinch gastrostomy tube.
4. Push water into tube slowly.
5. Close clamp of extension tube/pinch tube.

Gastrostomy feed

1. Place child in an upright and comfortable position.
2. Remove cap from feeding port.
3. Connect tube to feeding port.
 - *If using extension tube with MIC-KEY®, match lines and turn to lock.*
4. Open clamp(s).
5. Adjust roller clamp to regulate the rate of flow so feed occurs in the time period specified in the child's health care plan.
6. Close roller clamp, ensuring gastrostomy tube or extension tube remained filled with liquid food.
7. Remove feeding bag from extension tube/gastrostomy tube and close feeding port with cap.
 - *If child has gastrostomy tube, pinch tube before removing feeding bag tube.*

Water flush (after feed)

1. Draw up water flush amount, as specified in child's health care plan, with syringe.
2. Attach syringe to extension tube/gastrostomy tube.
3. Open clamp of extension tube/unpinch gastrostomy tube.
4. Push water into tube slowly.
5. Close clamp of extension tube/pinch tube.

Cleaning up

1. Remove extension tube or syringe from feeding port.
2. Close feeding port with cap.
3. Remove gloves and wash hands.
4. Clean and store equipment as directed.
5. Document.

Bolus feed with push method (syringe)

Getting ready

1. Wash hands and put on gloves.
2. Gather supplies.
 - Liquid food (room temperature)
 - 60 ml syringe
 - Extension tube, if using a low profile gastrostomy tube
 - Water (room temperature)
 - Catheter tip adapter, if syringe does not fit into feeding port
3. Prepare liquid food or puree
4. Draw up liquid food or puree with syringe and remove any air from syringe.
5. *If using extension tube with MIC-KEY®, attach it to the syringe, open clamp, fill it with formula and close clamp.*

Water flush (before feed)

1. Draw up water flush amount, as specified in child's health care plan, with syringe.
2. Attach syringe to extension tube/gastrostomy tube.
3. Open clamp of extension tube/unpinch gastrostomy tube.
4. Push water into tube slowly.
5. Close clamp of extension tube/pinch tube.

Gastrostomy feed

1. Remove cap from feeding port.
2. Insert syringe/extension tube into feeding port.
 - *If using extension tube for MIC-KEY®, open clamp.*
3. Push formula into tube slowly.
4. Close clamp of extension tube/pinch gastrostomy tube and close feeding port to ensure tube remains filled with liquid food.
5. Remove syringe and fill again with liquid food and remove any air from syringe.
6. Repeat steps 1-5 until feed is done.
7. Clamp extension tube/pinch gastrostomy tube and remove syringe.
8. Close feeding port.

Water flush (after feed)

1. Draw up water amount, as specified in child's health care plan, with syringe.
2. Insert syringe into extension tube/gastrostomy tube.
3. Open clamp of extension tube/unpinch tube.
4. Push water into tube slowly.

Cleaning up

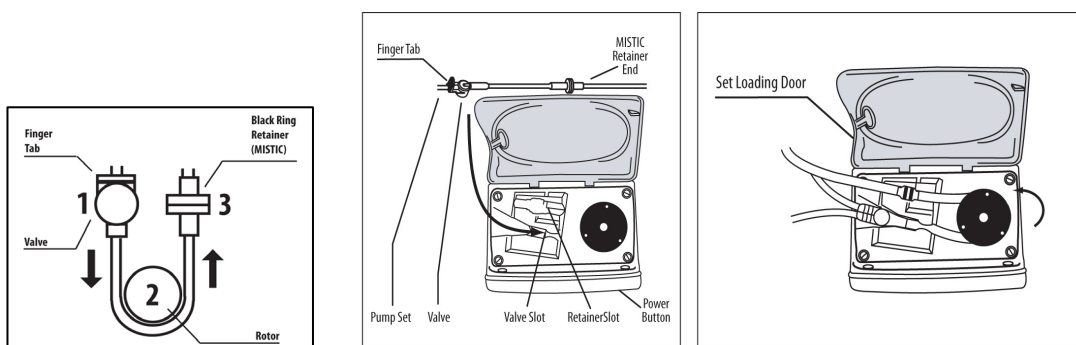
1. Clamp extension tube/pinch tube.
2. Remove syringe from tube.
3. Close feeding port with cap.
4. Remove gloves and wash hands.
5. Clean and store equipment as directed.
6. Document.

Continuous/bolus feed

Kangaroo™ Joey or Epump Enteral Feeding Pump

Getting ready

1. Wash hands and put on gloves.
2. Gather supplies.
 - Pump
 - Liquid food (room temperature)
 - Joey/Epump feeding pump set
 - Extension tube, if using a low profile gastrostomy tube
 - Water (room temperature)
3. Prepare liquid food.
4. Pour liquid food into feeding bag.
5. Replace cap on the feeding bag and hang bag.
6. If using extension tube, attach it to the feeding bag.
7. To load the pump set:
 - a) Open the blue door at the top (Kangaroo Joey) or side (Epump) of the pump.
 - b) Hold the finger tab on the valve and insert the valve into the valve slot on the left. The flat surface of the valve should be facing up.
 - c) Grasp the black ring retainer and wrap the tube counterclockwise around the rotor. Try not to overstretch the tubing during this step.
 - d) Gently pull the ring retainer end left and upwards to position it over the slot on the left and then lower it into the slot. Push down on the retainer to ensure it is properly placed.
 - e) Push the valve's finger tab to the right to ensure proper placement.
 - f) Close the blue door and make sure the valve finger tab is captured by the slot in the blue door.



8. Turn pump on.
9. Press PRIME PUMP and HOLD TO PRIME until pump set tubing fills with formula.
10. Check to ensure the pump is programmed (e.g. feeding rate) as specified in child's health care plan.
11. Attach to the child's GT feeding port.

Administering feed

1. Press RUN to begin the feed.
2. Before bag is completely empty of formula, press HOLD to stop feed.
 - *If using low profile gastrostomy tube, clamp extension tube.*

Water flush (after feed)

1. Add water to bag and Press RUN.
 - *If using syringe for water flush, remove tube from feeding port and attach syringe to feeding port, pushing water in slowly.*
 - *If using low profile gastrostomy tube, unclamp extension tube.*

Cleanup

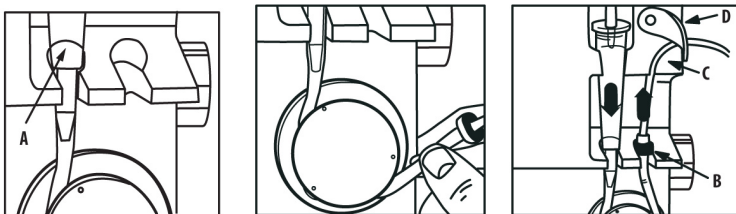
1. Press HOLD.
2. Remove tube or syringe from feeding port.
 - *If using syringe for water flush, remove syringe. If using low profile gastrostomy tube, clamp extension tube.*
3. Clamp tube /pinch tube and remove tube.
4. Close feeding port with cap.
5. Remove gloves and wash hands.
6. Clean and store feeding supplies as directed.
7. Document.

For resources on how to use the Kangaroo Joey and EPump enteral feeding pumps, go to <https://www.cardinalhealth.com/en/product-solutions/medical/enteral-feeding/resources>.

Continuous/bolus feed Kangaroo™ 924 pump

Getting ready

1. Wash hands and put on gloves.
2. Gather supplies.
 - Pump
 - Formula (room temperature)
 - 924 Kangaroo feeding pump set
 - Extension tube if using a low profile MIC-key or Bard button
 - Water (room temperature)
 - Syringe
 - Catheter tip adapter, if syringe does not fit into feeding port or if medication port is not available
3. Prepare formula by wiping top of can and shaking it well.
4. Pour formula into feeding bag. Ensure roller clamp is closed.
5. Replace cap on the feeding bag and hang bag.
6. If using extension tube attach it to the feeding bag. Close the clamp.
7. Open roller clamp and squeeze drip chamber until it fills with formula to the line. Fill tube(s) with formula.
8. Close roller clamp.
9. Seat and secure the bottom of the drip chamber to the lower drip chamber guide on the pump.
10. Gently stretch the tube around the rollers.
11. Insert the OPTIX disc into the OPTIX loc (B). Thread the tube through the tubing guide (C). Secure the latch over the guide (D).



12. Connect the tube to the feeding port.
13. Turn pump on.

Administering feed

1. Check to ensure the pump is programmed (e.g., feeding rate) as specified in child's health care plan.
2. Press START/HOLD button.
3. Before bag is completely empty, press START/HOLD to stop feed.
 - *If using low profile gastrostomy tube, clamp extension tube.*

Water flush (after feed)

1. Add water to bag and Press START/HOLD.
 - *If using syringe for water flush, remove tube from feeding port and attach syringe to feeding port, pushing water in slowly.*
 - If using low profile gastrostomy tube, unclamp extension tube.

Clean up

1. Press START/HOLD to stop the feed.
2. Press OFF to turn pump off.
3. Clamp tube/pinch tube and remove tube.
4. Close feeding port with cap.
5. Remove feeding tube from pump. If there is any fluid remaining in the tubing, close roller clamp to prevent the fluid from running out and onto the floor.
6. Remove gloves and wash hands.
7. Clean and store equipment as directed.
8. Document.

For resources on how to use the Kangaroo 924 enteral feeding pump go to <https://monetmedical.com/product/covidien-kendall-kangaroo-924-enteral-feeding-copy/>.

Water flush only (syringe)

Some children may require water only during attendance at the community program.

Getting ready

1. Wash hands and put on gloves.
2. Gather supplies.
 - Syringe
 - Water (room temperature)
 - Extension tube, if using a low profile gastrostomy tube
 - Catheter tip adapter, if syringe does not fit into port
3. Draw up water flush (see child's health care plan for specific amount) with syringe.
 - *If using low profile gastrostomy tubes only, attach extension tube to the syringe and fill with water.*

Administering water

1. Attach syringe/extension tube to feeding port.
2. Push water into tube slowly.
3. Close clamp/pinch tube.
4. Remove syringe/extension tube from feeding port.
5. Close feeding port with cap.

Cleaning up

1. Remove gloves and wash hands.
2. Clean and store equipment as directed.
3. Document.

Administering medication (syringe)

Getting ready

1. Wash hands and put on gloves.
2. Gather supplies.
 - Medication(s)
 - Syringe(s) for medication
 - Syringe for water flush
 - Water (room temperature)
 - Extension tube, if using a low profile gastrostomy tube
 - Catheter tip adapter, if syringe does not fit into feeding port
3. Prepare medication.
 - Check the medication name, route, time and dosage of medication to ensure correct administration.
 - If medication is in pill form, crush and mix well with 10 mL water.
4. Draw up medication into syringe.
5. Draw up water flush as specified in child's health care plan with second syringe.
 - *If using extension tube, attach it to the syringe and fill it with water. Close the clamp.*

Water flush (before medication)

1. Attach water syringe/extension tube to feeding port.
2. Open clamp/unpinch tube.
3. Push water into tube slowly.
4. Pinch tube/close clamp and remove water syringe.

Administering medication

1. Attach medication syringe.
2. Open clamp/unpinch tube.
3. Push medication into tube slowly.
4. Pinch tube/close clamp and remove medication syringe.

Water flush (after medication)

1. Attach water syringe.
2. Push water into tube slowly.
3. Close clamp/pinch tube and remove syringe.

Cleaning up

1. Close feeding port with cap.
2. Remove gloves and wash hands.
3. Clean and store equipment as directed.
4. Document.

Key points for administering medication

- Do not mix medications together as this may cause the tube to plug.
- If administering medication at the same time as feed, give the medication first.
- Do not add medication to liquid food or put into feeding bag.
- If pills are used, they must be crushed and mixed with water.
- Ensure air is removed from the syringe to ensure accuracy of dosage.
- Flush the tube with 5-10 mL of water after administering medication to make sure the child gets all the medication and to prevent the tube from plugging.
- If you are giving more than one medication, flush the tube with water between each medication so they don't mix together and plug the tube.

Care of supplies

Storage

Store the feeding bag, syringe and extension tube in a clean labeled container in the refrigerator between feeds to lessen the growth of bacteria.

Cleaning

1. Ensure sink is clean prior to washing equipment.
2. Separate supplies (e.g. syringe, extension tube, catheter tip adapter) before washing.
3. Wash with warm water and mild dish soap, taking care to check for food residue in the tube. A small bottle brush may be useful to remove residue.
4. Rinse supplies with clear water until no soap or residue can be seen. You may need to rinse the tube three to four times.
5. Clear water from tube as much as possible.
6. Leave supplies on a clean towel to air dry.
 - *For feeding bag set, keep roller clamp and end of tube open until it is dry.*
 - *Do not reconnect supplies until the next feeding.*

Replacing supplies

It is the responsibility of the parent/guardian to replenish supplies. Families are allotted supplies to allow for weekly and/or monthly replacement. If possible it is recommended to store an extra feeding bag set at the community program.

- Feeding bag or pump set is replaced weekly.
- Extension tube (low profile gastrostomy tube only) is replaced monthly.
- Syringe is replaced monthly or when the plunger begins to stick and does not slide easily.
- Catheter tip adapter (if required) is replaced when it begins to leak.

If equipment does not appear clean after washing and rinsing thoroughly, it should be replaced. A vinegar and water solution (1 part vinegar to 4 parts water) may be used to clean supplies if there is a filmy build up. Supplies washed in the vinegar solution should be rinsed thoroughly.

Liquid Food

- Always check the expiry date of formula before use. Do not use formula after the expiry date.
- Wipe the outside of the can with a clean damp cloth before opening it.
- Formula should be used within 4 hours after pouring it into the feeding bag.
- Unused formula that remains in the can must be stored in the refrigerator and used within 24 hours. Cover the opened can with plastic wrap or store in a clean sealed container and label with the date/time.
- When using liquid food stored in the refrigerator, remove from the refrigerator 15-20 minutes prior to the feed or place in a container of warm water to bring it to become room temperature. Do NOT use the microwave to heat liquid food as it breaks down the proteins.

Emergency situations

Aspiration

Aspiration occurs when stomach contents reflux back up into the esophagus or mouth and get breathed into the lungs. In the short term, this can result in breathing problems.

Signs of aspiration

- Increase in breathing rate
 - Nasal flaring
 - Pulling or sucking in of chest
 - Wheezing and/or noisy breathing
 - Grey/bluish lips, mouth or nails
 - Noisy breathing
1. Stop the feed immediately.
 2. If problem continues when the feed is stopped, activate 911/EMS.
 3. Notify the parent/guardian.
 4. Stay with child until EMS personnel arrive.

Gastrostomy tube falls out

If the gastrostomy tube falls out, it needs to be replaced within 1-2 hours to keep the stoma from closing. **Community program personnel are NOT to re-insert the gastrostomy tube.** For some children, the parent/guardian may be able to re-insert the gastrostomy tube. It is recommended that an extra gastrostomy tube is kept with the child at all times which can be inserted by a parent/guardian when they arrive or given to paramedics.

1. Cover the stoma site with a dry dressing and tape in place.
2. Contact the parent/guardian immediately.
3. If unable to reach parent/guardian or emergency contact within 10-15 minutes, call 911/EMS.

Potential problems

Child gags or vomits during feed

1. Stop the feed immediately.
2. Position the child to allow vomit to drain from mouth and prevent choking.
3. When the child has recovered, resume the feed at a slower rate. Vomiting can be caused by the feed going into the stomach too quickly.
4. If the child starts to vomit again, stop the feed and contact the parent/guardian.

Nausea and/or cramping during feed

1. Stop the feed.
2. Check rate of feeding as it may need to be decreased.
3. Check temperature of liquid food as it may be too cold. It should be at room temperature.
4. Ensure there is no air running in with the feed as this can cause gas.
5. Resume the feed.
6. If problem continues, stop the feed and contact the parent/guardian.

Blocked gastrostomy tube may be a result of kinks in the tube(s), inadequate flushing or very thick fluid or medication.

1. Check that tube is not kinked or twisted.
2. Attach a syringe with plunger into the extension tube/feeding port.
3. Slowly draw back on the plunger of the syringe.
4. If this does not work, GENTLY push up to 10 mL of warm water through the tube with a syringe.
5. If you cannot get the tube cleared, notify the parent/guardian.

Disc/button is not flush with the skin may mean the balloon in the stomach is not inflated and the tube may fall out of the stoma.

1. Check the position of a gastrostomy tube by gently pulling on the tube/button to make sure it is against the stomach wall.
2. If the disc/button becomes flush with the skin and does not fall out, a feed or medication may be administered.
3. If the disc/button is not flush with skin, notify the parent/guardian. Do Not administer a feed or medication.
4. If the gastrostomy falls out of the stoma, contact the parent/guardian immediately. If unable to reach parent/guardian or emergency contact within 10-15 minutes, call 911/EMS.

Child appears uncomfortable or stomach is bloated

Gas build-up occurs when air enters the stomach during the feed. To prevent this, fill the tube with liquid food/water before starting the feed. The child should be in an upright position during the feed. For babies, burp well after each feed.

1. Attach a 30 mL syringe (no plunger) to the feeding port of the gastrostomy tube/extension tube. Open clamp, if applicable.

2. Leave syringe open to air for 10-15 minutes to let air escape. Keep the level of the syringe above the stomach so the feed doesn't back up.

Fever (flushed face or hot), nausea and/or vomiting, diarrhea may be signs of a gastrointestinal infection.

Notify the parent/guardian.

Redness, swelling, change in color or odor at stoma site may indicate infection.

1. Ensure the skin around the stoma site is clean and dry.
2. Notify the parent/guardian.

Feed is leaking around the gastrostomy tube

1. Stop the feed if child is experiencing pain or discomfort.
2. Ensure the skin around the stoma site is clean and dry.
3. Notify the parent/guardian.

Bleeding or drainage around stoma

1. Ensure the skin around the stoma is clean and dry.
2. If there is a lot of oozing around the tube, cut small gauze in a "Y" formation and place between the skin and disc.
3. Notify the parent/guardian.

Troubleshooting with pump equipment

For information on the Kangaroo & EPump enteral feeding pumps, go to <https://www.cardinalhealth.com/en/product-solutions/medical/enteral-feeding/resources>.

For information on the Kangaroo 924 enteral feeding pump, go to <https://monetmedical.com/product/covidien-kendall-kangaroo-924-enteral-feeding-copy/>.

Mouth care

A child with a gastrostomy should have their teeth and mouth cleaned at least three times a day. A soft toothbrush or facecloth soaked in water may be used. Fluoride containing toothpaste can be used (i.e. size of rice grain) if the child can spit out the foam instead of swallowing. Lip moisturizer may be used to prevent dryness.

Oral Stimulation

For children who cannot eat or drink by mouth, tube feeding does not mean the end of pleasures associated with eating. Some children are able to take small amounts of food.

Oral motor stimulation can be nutritive (with tastes) or non-nutritive. Extended periods of tube feeding can contribute to reduced oral-motor skills. Unpleasant procedures and experiences may result in oral aversion. Oral motor stimulation should be fun and enjoyable for child and caregiver. It is best to incorporate it into regular play times and during tube feeds. If the child does not tolerate oral stimulation or becomes stressed, stop and try again later at a level of stimulation that the child prefers and slowly work at progressing stimulation.

Gastroesophageal Reflux (GERD)

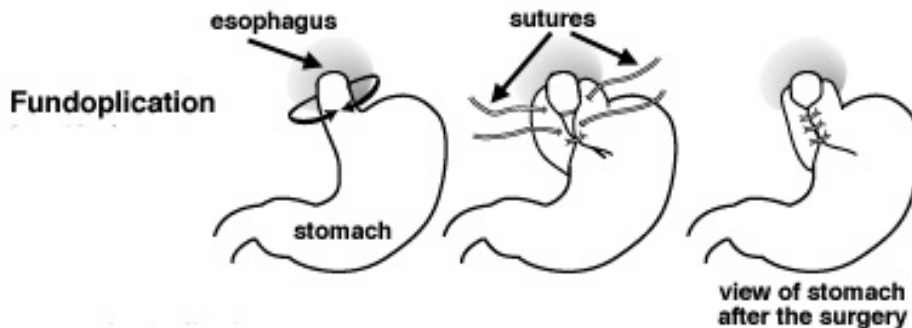
Gastroesophageal Reflux (GERD) is a digestive disorder that affects the lower esophageal sphincter (the muscular ring connecting the esophagus with the stomach). The sphincter normally prevents food from moving out of the stomach and back up into the esophagus.

When a person has GERD, the sphincter muscle becomes weak or fails to close tightly, causing the acid-like fluid from the stomach to flow back into the esophagus.

Techniques that often reduce or prevent GERD include:

- Feeding the child smaller, more frequent meals; and
- Positioning the child upright for one hour after a feeding.

Children with severe, chronic GERD may require surgery if their symptoms are not relieved through other medical treatments. A **fundoplication** is a surgical procedure that creates an improved valve mechanism at the bottom of the esophagus. It is meant to prevent the flow of acid upward and strengthen the valves.



Children with a fundoplication may not be able to burp or vomit after the surgery. Some children may also have issues with dry retching.

Infection Control Guidelines

Infection control is important for the health of the child as well as the community program personnel who provides care to the child. The following practices are intended to prevent transmission of infection when caring for children. These practices are to be used when caring for all children, not just those who pose a risk.

Hand washing

Hand washing is the single most important procedure in preventing the spread of infection. Proper hand washing includes the use of soap and water, rubbing hands together to create some friction for at least 30 seconds, rinsing under running water, drying hands and turning off the faucet using a paper towel to avoid germs from the tap. When soap and water are unavailable, a waterless skin antiseptic may be used as a temporary method.

Hand washing should occur in the following situations:

- before and after contact with body fluids, even if gloves are worn;
- immediately after contact with blood or body fluids;

- after removal of gloves;
- before and after contact with child; and
- before taking breaks.

Protective equipment

Gloves and other personal protective equipment (e.g. masks, protective eyewear) are intended to reduce the spread of infection to the caregiver and from child to child.

Latex or vinyl gloves are to be worn in the following situations:

- direct care with a child that involves possible contact with blood or body fluids (e.g. mucous, sputum, urine, feces, saliva, vomit, nasal secretions);
- cleaning up spills of blood or body fluids;
- handling items soiled with blood or body fluids;
- in contact with open wounds or sores;
- performing mouth care;
- assisting child with toileting/diapering; and
- when the caregiver has broken skin on hands.

Removing Gloves

1. Grasp cuff of one glove using the other gloved hand.
2. Pull glove off the hand, allowing it to turn inside out.
3. Grasp and hold the removed glove within the palm of the gloved hand.
4. Place the thumb of the ungloved hand underneath the cuff of the gloved hand, and remove it by pulling it inside out, over the first removed glove.

Disposal of contaminated items

Any disposable item (e.g. gloves, medical supplies) that is contaminated with blood or body fluids should be double bagged before discarding. A separate waste container should be designated for this purpose.

Needles, lancets, syringes and other sharp objects should be placed in a puncture-proof container immediately after use.

Cleaning of contaminated surfaces

Areas that have been contaminated with blood or body fluids should be promptly cleaned with absorbent disposable paper toweling which is then disposed into plastic garbage disposal. The area should be cleaned with water and detergent, disinfected with household bleach (one part bleach to nine parts water) and allowed to air dry.

If mops have been used to clean contaminated surfaces, they should be thoroughly washed with soap and water and dried before re-use.

Latex alert

Some children that have multiple surgeries may be diagnosed with a clinical latex allergy while other children are at high risk for developing a latex allergy. For these children, allergic responses can occur when latex-containing items touch the skin or mucous membranes (e.g. mouth, urethra, genitals), allowing latex to enter the bloodstream or inhaled.

Latex precautions are important in preventing allergic reactions for children who have a latex allergy or at high risk for developing a latex allergy. In order to be effective, latex avoidance must occur in all spheres of life including hospital, home and community programs. Identifying areas of potential latex exposure is crucial to providing a safe environment for the child.

Latex that comes in contact with mucus membranes has the highest potential to cause allergic reaction. When a child has a latex allergy or is at high risk for developing a latex allergy, the following precautions are recommended.

- Use of non-latex gloves
- Use of latex free band aids
- Balloons should not be used in the facility as the latex particles become aerosolized if the balloon breaks.

Other items that may contain latex

- Classroom items such as erasers, rubber bands, art supplies and lab equipment may contain latex. Many of these will not cause allergic reactions if they do not come in contact with the child.
- Food prepared in a cafeteria with latex gloves may contain latex. In addition, it is important for personnel to understand the possible cross-sensitization between latex and certain foods such as bananas, kiwi and avocado.
- Gym and playground equipment such as rubber mats, balls and racquet handles may contain latex.
- School buses may have floor mats with latex and airborne natural latex rubber in tires.
- Field trips can be challenging. Items to be aware of include latex gloves in first aid kits or in lunch facilities and balloon decorations.

Allergic reactions to latex may include watery eyes, wheezing, rash, hives, swelling and, in severe cases, life-threatening anaphylactic shock.

Signs of Anaphylaxis

After exposure to the allergen, any combination of the signs (see next page) may occur to signal the onset of anaphylaxis. Signs do not always occur in the same sequence, even in the same individual.

An anaphylactic reaction most commonly begins within seconds or minutes of exposure to the allergen, with the majority of reactions occurring within thirty minutes. The time from the first signs of anaphylaxis to death can be as little as a few minutes, if the reaction is not treated. It is possible, but rare, for signs of anaphylaxis to occur up to 2-4

hours after exposure to the allergen. Even when signs have subsided after initial treatment, they can return as long as eight hours after exposure. This second (biphasic) reaction may occur in up to 20% of cases. (Järvinen 2008)

When remembering the signs of anaphylaxis, use Food Allergy Canada's acronym Think F.A.S.T. (face, airway, stomach, total body). Watch for signs that occur suddenly and are obvious changes in appearance or behavior. *If ANY combination of signs is present and there is reason to suspect anaphylaxis, give epinephrine immediately and activate 911/EMS.* There is clear evidence that a delay in injecting epinephrine increases the odds of the person dying from anaphylaxis. Prompt treatment of anaphylaxis with an epinephrine auto-injector decreases the likelihood of needing repeated doses because of prolonged or recurrent symptoms.

Face

- Red watering eyes
- Runny nose
- Itchiness
- Redness and swelling of face, lips and tongue
- Hives (red, raised & itchy rash)

Airway

- A sensation of throat tightness
- Hoarseness or other change of voice
- Difficulty swallowing
- Difficulty breathing
- Coughing
- Wheezing
- Drooling

Stomach

- Severe vomiting
- Severe diarrhea
- Severe cramps

Total body

- Hives on the body - itchiness
- Feeling a "sense of doom"
- Change in behavior – The child may say he doesn't feel right, become unusually quiet or withdrawn, become suddenly tired, scream, appear very agitated or stop eating in the midst of eating well.
- Pale or bluish skin
- Dizziness and fainting are signs that blood pressure is dropping
- Loss of consciousness

Responding to an Anaphylactic Reaction

1. Inject the epinephrine auto-injector in the outer middle thigh.
 - It is essential that the epinephrine auto-injector is given as soon as possible. Giving the first dose in a timely manner decreases the likelihood of needing additional doses of epinephrine.
 - i. Secure the child's leg. The child should be sitting or lying down in a position of comfort.
 - ii. Identify the injection area on the outer middle thigh.
 - iii. Hold the epinephrine auto-injector correctly.
 - iv. Remove the safety cap by pulling it straight off.
 - v. Firmly press the tip into the outer middle thigh at a 90° angle until you hear or feel a click. Hold in place to ensure all the medication is injected.
2. Activate 911/EMS.
 - It is essential that a person having an anaphylactic reaction be taken to a hospital to receive immediate medical attention, even if the epinephrine auto-injector has been given and the signs of anaphylaxis disappear.
 - Activating 911/EMS should be done simultaneously with injecting the epinephrine auto-injector by delegating the task to a responsible person. NEVER leave the child who is experiencing an anaphylactic reaction alone.
3. Notify the child's parent/guardian.
4. If signs of anaphylaxis persist or recur, give another epinephrine auto-injector (if available) every 5 to 15 minutes.
 - Signs that the reaction is not under adequate control are that the child's breathing becomes more difficult or there is a decreased level of consciousness.
 - It is important to note the time of administration of the first epinephrine auto-injector.
 - The administration of more than two doses may increase risk of cardiac side effects but if a child is in extreme medical distress due to anaphylaxis (e.g. unable to breathe, loss of consciousness), additional doses are warranted.
 - Whenever possible, parents/guardians should provide a back-up epinephrine auto-injector for use at the community program in the event that a second dose of epinephrine is required.
5. Stay with the child until the EMS personnel arrive.
 - Information that should be provided to EMS personnel includes signs of anaphylaxis seen in child, time frames, where epinephrine auto-injector was given (right or left thigh) and effect of epinephrine on the child.

Self-care

It is important to encourage the child's participation in their health care and foster their independence, as appropriate. The ability of the child to provide their own health care can give them greater freedom during their participation in the community program.

The amount of assistance a child requires with health care interventions will vary depending on the complexity of the procedure and the developmental and functional level of the child. Each child must be individually evaluated as to their physical and psychosocial abilities to assist in or perform health care interventions. Many children with physical disabilities can learn to verbally direct the care provider and/or assist

during aspects of the health care intervention. Some children may be capable of learning to perform health care intervention independently.

In addition to the child's developmental/functional stage, other factors that may be relevant in their ability to assist in or perform health care procedures include:

- ability of child to tolerate required position and/or procedure;
- fine motor and self-help skills;
- ability to imitate others;
- ability for independence;
- acquisition of self-recognition and self-identity;
- emotional development to feel comfortable with procedure; and
- ability to solve problems in unfamiliar settings.

Methods used to teach self-care might include simulation or demonstration. Using an anatomically correct doll to teach children how to perform health care interventions can be useful, as dolls are associated with play, which may enhance the child's participation. Because simulation on a doll is non-invasive, it may provide more opportunity for teaching with minimized embarrassment to the child. It may lessen the child's anxiety and desensitize the child so that they may perform the intervention themselves. Finally, the use of a doll allows errors to be detected and corrected before actual performance. Using anatomic illustrations, videotapes or other visual aids may also provide opportunities to demonstrate a health care intervention to the child.

HEALTH CARE PLAN

When a community program receives URIS Group B support for children with a URIS 'Group B' health care need, a written health care plan is developed and maintained by a registered nurse on an annual basis, minimally. The development and implementation of the health care plan should reflect the principles of inclusion, normalization and independence. From a practical standpoint, these principles mean:

- A child with a gastrostomy is foremost a child within a family, child-care facility, classroom or other community program.
- Interventions should be as non-intrusive as possible and be delivered in a manner that respects the child's dignity and privacy as well as the normal routines and patterns of the community program.
- The parent/guardian and child have rights and obligations and should be actively encouraged to participate in decisions affecting themselves and their children.

Consultation with the parent/guardian and community program is required to develop a health care plan that is relevant to the child's needs and the community program setting. For some children, the management of their gastrostomy at the community program may be complex and require consultation with health care professionals who are involved in the management of the child's gastrostomy.

When a child has multiple health care needs, all relevant information should be integrated into one comprehensive health care plan. The format of the health care plan should be user friendly and provide the community program with the information required to safely manage the child's health care need(s).

The health care plan should be kept in a location that is secure and accessible to community program personnel. Community program personnel that may be responsible for a child with a gastrostomy should be aware of the location of the health care plan. The health care plan should accompany the child on excursions outside the facility.

Content

The following information is included in the gastrostomy health care plan. The *Health Care Plan – Gastrostomy Feed* contains this information and is included as a supplement to this document.

Demographic information

- Child name
- Birth date
- Community program name
- Parent/guardian name and phone number(s)
- Alternate emergency contact name and phone number(s)
- Physician(s)
 - Gastroenterologist/feeding specialist and phone number
 - Family physician/pediatrician and phone number

Medical information

- Medical diagnoses and other relevant conditions
- Known allergies
- Availability of Medic-Alert® identification, if relevant
- Prescribed medications
 - If medication is administered at home, name of medication is required only
 - If medication is administered at the community program, additional information is required. See *Administration of medication* (below) for more details.

Gastrostomy information

- Reason for gastrostomy
- Type of gastrostomy tube (e.g. MIC-KEY®, PEG)
- Size of gastrostomy tube
- Date of insertion
- Other information that is relevant to attendance in the community program (e.g. fundoplication)

Gastrostomy feed

When child requires gastrostomy feed(s) during attendance at the community program, the health care plan includes the following information.

- Type of feed (e.g. bolus feed, continuous feed)
- Source of feed (e.g. feeding bag, syringe, pump)
- Feeding schedule and length of feed
- Type and amount of liquid food
- Type & amount of water flush
- Supplies required for feed
- Other information
 - Position of child during feed
 - Preferred location
 - Activity level after feeding
 - Amount of food/drink child can take by mouth, if applicable
 - Child's tolerance of feeds
- Step by step procedure for administering feed – see page 17-27
- Record of feeds administered
 - Date/time
 - Amount
 - Signature of community program personnel

Daily management

- Stoma care
- Mouth care
- Cleaning, storage and replacing equipment
- Storage information for liquid food

Emergency situations

- Aspiration
- Feeding tube falls out

Potential problems

- Child gags or vomits during feed
- Nausea, cramping during feed
- Blocked gastrostomy tube
- Disc/tube is not flush with skin
- Child appears uncomfortable or stomach is bloated
- Fever, nausea and/or vomiting, diarrhea
- Redness, swelling, change in color or odor at stoma site
- Feed is leaking around the stoma
- Bleeding or drainage around stoma
- Troubleshooting with pump equipment, if relevant

Documentation

- Template for recording interventions and actions performed by nurse and/or community program personnel (e.g. communication, actions taken)
- Signatures & dates
 - Nurse signature & date(s) of health care plan development/review
 - Parent/guardian signature & date

If child does not require a gastrostomy feed and/or medication to be administered at the community program, the health care plan includes the following information. The *Health Care Plan - No Feed* contains this information and is included as a supplement to this document.

Demographic information

- Child name
- Birth date
- Community program name
- Parent/guardian name and phone number(s)
- Alternate emergency contact name and phone number(s)
- Physician(s)
 - Gastroenterologist/feeding specialist and phone number
 - Family physician/pediatrician and phone number

Medical information

- Medical diagnoses and other relevant conditions
- Known allergies
- Availability of Medic-Alert® identification, if relevant
- Name of prescribed medication(s)

Gastrostomy information

- Reason for gastrostomy
- Type of gastrostomy tube (e.g. MIC-KEY®, PEG)
- Size of gastrostomy tube
- Date of insertion
- Other information that is relevant to attendance in the community program (e.g. fundoplication)

Emergency situations

- Aspiration
- Feeding tube falls out

Potential problems

- Child appears uncomfortable or stomach is bloated
- Fever, nausea and/or vomiting, diarrhea
- Redness, swelling, change in color or odor at stoma site
- Feed is leaking around the stoma
- Bleeding or drainage around stoma

Daily management

- Stoma care
- Mouth care

Documentation

- Template for recording interventions and actions performed by nurse and/or community program personnel (e.g. communication, actions taken)
- Signatures & dates
 - Nurse signature & date(s) of health care plan development/review
 - Parent/guardian signature & date

If the child requires administration of medication at the community program, the health care plan includes the following information. The *Administration of Medication* Template contains this information and is included as a supplement to this document.

- Name of medication
- Type (e.g. pill, liquid)
- Dose
- Time/frequency
- Location of medication
- Procedure for administering medication (see page 28)
- Record of medication(s) administered
 - Date/time
 - Amount
 - Signature of community program personnel

If child has a latex allergy or alert, the health care plan includes the following information. The *Latex Allergy Alert* Template contains this information and is included as a supplement to this document.

- Latex precautions
- Signs of anaphylaxis
- Responding to anaphylactic reaction
- Type, dosage and location of epinephrine auto-injector, if prescribed

TRAINING

When a community program receives URIS Group B support, training is provided to community program personnel by a registered nurse. Training is provided on an annual basis, minimally. The training of community program personnel should reflect the principles of adult learning. From a practical standpoint, these principles mean:

- Identifying and integrating the learning needs of participants into the training session.
- Information should be applicable to the participants' responsibilities and focus on what is most useful to them.
- Adults have accumulated a foundation of life experiences and knowledge and need to connect learning to this knowledge/experience base.
- An organized training session with clearly defined elements assists participants in identifying and attaining learning goals.

It is recommended that 2-3 community program personnel are designated to provide gastrostomy care during the child's attendance at the community program. It is the responsibility of the community program to designate personnel to provide care.

It is recommended that the child does not attend the community program if trained community program personnel are not available. In such situations, alternate arrangements may be made (e.g. parent/guardian administers feed at the community program).

Adequate time should be scheduled for training to ensure community program personnel obtain the knowledge and skill necessary to safely respond to the needs of children with a gastrostomy in their facility. The amount of time required to train community program personnel will vary depending on several factors such as the existing knowledge of community program personnel and number of personnel trained. It is recommended to keep a written record of training provided. *Gastrostomy Training & Monitoring* may be used for this purpose and is included as a supplement to this document.

Content

The following standard clinical information and child specific information is included in the training session.

Standard clinical information

- Stoma care
- Care, storage and replacing supplies
- Use and storage of liquid food
- Emergency situations
- Potential problems
- Mouth care
- Oral stimulation
- Infection Control Guidelines
- Latex alert, if applicable

Child specific information

- Gastrostomy type and description of its parts
- Type of feeding (e.g. bolus or continuous)
- Type and amount of liquid food/puree and water flush
- Length of feed
- Demonstration and return demonstration of gastrostomy feed
- Demonstration and return demonstration of administering medication, if applicable

Training Resources

Handouts

The following information may be used as handouts for community program personnel

- Balloon gastrostomy tube - page 7
- MIC-KEY® low profile feeding tube - page 8
- Bard Button™ - page 9
- Percutaneous Endoscopic Gastrostomy (PEG) tube - page 10
- MIC® regular jejunal feeding tube - page 11 & 14
- MIC-KEY® low profile jejunal feeding tube - page 12 & 14
- MIC-KEY® low profile jejunal feeding tube with gastric port - page 13 & 14
- Bolus feed – Feeding bag (gravity) - page 17
- Bolus feed – Syringe (gravity) - page 18-19
- Bolus feed – Feeding bag (gravity) & Syringe (push method) for water flush - page 20-21
- Bolus feed - Syringe (push method) - page 22
- Bolus or continuous feed – Joey/epump pump - page 23-24
- Bolus or continuous feed - Kangaroo pump - page 25-26
- Water flush only - page 27
- Administering medication via gastrostomy tube - page 28

PowerPoint

The Gastrostomy PowerPoint is included as a supplement to this document and may be used when providing standard clinical information to a group of community program personnel.

On-line resources

On-site training by a registered nurse is required to delegate the knowledge and skill to community program personnel. Other teaching strategies may be used as supplements to on-site training at the discretion of the nurse. The following on-line resources may be useful for teaching purposes.

- <http://www.mic-key.com/media/118926/another-way-to-eat.swf>
- <http://www.kangaroompumptraining.com/>

MONITORING

Monitoring of trained community program personnel by the nurse is required on an annual basis, minimally, to ensure that the knowledge and skill necessary to safely care for children with a gastrostomy has been retained. The frequency and timing of monitoring is based on the professional judgment of the nurse as well as the complexity of information taught, maturational issues and the skill demonstrated by community program personnel.

The following strategies may be used for monitoring purposes.

- Completion of questions by community program personnel regarding acquisition of relevant knowledge and skill. *Gastrostomy Training & Monitoring* includes such questions and is included as a supplement to this document.
- After training is completed, scheduling another session to observe community program personnel perform a return demonstration and to review relevant information.

REFERENCES

Caring for Your Child with a Gastrostomy Feeding Tube at Home; A Booklet for Families and Caregivers. Winnipeg Regional Health Authority. September 2013