

Your child's nasogastric tube

Home feeding and care guide

This book belongs to:

Type of tube:

Size:

Date inserted:

Length of tube outside of the body:

Date of next tube change:

Tip: Keep this booklet with your feeding supplies for quick reference.

Nasogastric tubes

You and your medical team have decided that your child will benefit from a feeding tube. The goal for your tube is to help you provide a safe way to feed your child at home that will promote health and growth. This resource has been developed to provide support, guidance and reassurance and be a helpful tool during this time. We want you to feel confident and empowered to support your child, we recognize this is likely a big change for you and your child.



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Feeding methods

Types of feeding Schedules:

There are two different ways to feed through a nasogastric tube: continuous and intermittent/bolus. The dietitian will discuss your child's feeding program and work with you to develop a feeding plan. The plan can be adjusted if your child's nutritional needs change over time.

Continuous feedings: are given at a constant, steady rate through out the day (16-24 hours). The feed is administered into the stomach using a feeding pump to deliver a given amount of feed over a number of hours.

Intermittent/bolus feeding: larger amounts of formula are given at specific mealtimes during the day. Gravity set- ups, feeding pumps or syringes are used for these feedings.

Types of feeding preparations:

Formula that is powder via NG:

Keep unopened containers in a dry place at room temperature

Check the best before and expiry date

After you have opened the container:

- Write down the date and time you opened it on the container
- Keep the container closed when you aren't using it.
- For infants, ensure you are using boiled water that has been cooled to prepare feeding. You may prepare a whole day's worth of formula and keep it in the fridge until you use it . Do not prepare more than 1 whole day at a time.

Liquid formula via NG:

Can be kept at room temperature until it's opened

Once it is opened, it can only be kept in the fridge and only for up to 24 hours. Then it must be discarded. For this reason, do not prepare more than 24 hours of formula at once

Sometimes these formulas need to have liquid added to them (these are sometimes call concentrates)- speak to your dietitian if you need guidance on these preparations.

Some formula preparations are thicker and may cause the pump to alarm—if this is happening speak to your dietitian.

If your child is partially orally fed with top ups- then milk that has been in your child's bottle must be discarded after 1 hour, your child's saliva will mix with the milk in the bottle and cause it to break down faster.



For more information on preparation of infant formula: <https://www.canada.ca/en/health-canada/services/milk-infant-formula/preparing-handling-powdered-infant-formula.html>

Human milk NG:

Keep bottles or bags of in the fridge or freezer.

Put a date and time pumped on the bag or bottle.

Fill bottles $\frac{3}{4}$ full if freezing because they will expand.

Thaw frozen milk in the fridge for up to 24 hours. It can help to write the date and time that it is thawed. Never re-freeze human milk.

Once pumped milk has been warmed it can be used for up to 4 hours then discarded, don't put this milk back in the fridge once it's been warmed.

If your child is partially orally fed with top ups- then milk that has been in your child's bottle must be discarded after 1 hour, your child's saliva will mix with the milk in the bottle and cause it to break down faster.



For more storage information click here: <https://www.cdc.gov/breastfeeding/breast-milk-preparation-and-storage/handling-breastmilk.html>

Never share pumped milk.

How to give pumped milk by NG tube

Human milk has important fats that babies need to grow and stay healthy. When breastmilk sits in a container, the fats can rise to the top and may not reach the baby unless we are careful. The goal is to make sure the fats go into the baby and do not get stuck in the tube or container.

1. Syringe feeding

Put the human milk in a syringe.

Let the milk flow slowly into the NG tube.

Use the same syringe to flush the tube as you did to feed to ensure the fats have all gone to the baby

2. Pump with a bag or gravity bags

When milk is in a feeding bag, the fats can stick to the sides of the bag and not go into the baby.

To prevent this, gently jostle or swirl the bag during feeding.

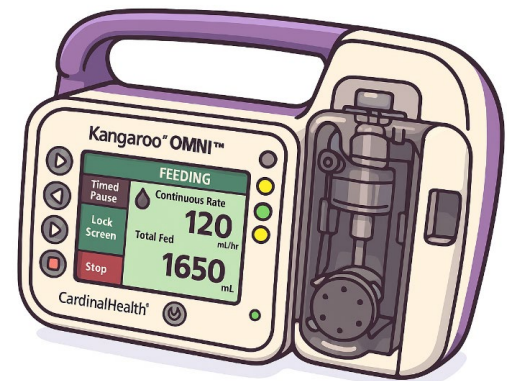
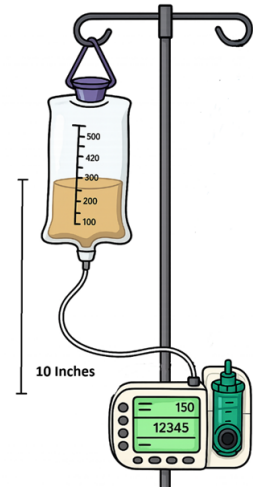
This keeps the fats mixed inside the milk so the baby gets all of it.

Why This Matters

Babies need the fats in human milk to help their brain and body grow. If the fats stay in the container or tubing, the baby misses important nutrition. Keeping the fats mixed makes feeding safer and better.

Steps to feeding your child with a pump

- 1) Wash your hands
- 2) Check placement of the tube
 - a) Measure the external length of the tube
 - b) Check the pH by drawing stomach content with a syringe and testing on pH test strips
- 3) Check the expiry date on the formula, if required. Allow refrigerated formula warm to room temperature
- 4) Pour feed into the bag. Do not put more than 4 hours of feed into the bag at once.
- 5) Hang the feeding bag on the pole. To ensure accurate delivery, hang the feeding bag so that the distance from the top of the pump to the fluid level in the bag is 10 inches. Connect the cassette into pump
- 6) Ensure the pump is plugged into an electrical outlet or adequately charged
- 7) Prime tubing on the pump. Priming the tubing allows the air to be removed so that it does not enter your child's stomach
- 8) Set the delivery rate and volume if required. Your child may receive their feed as a continuous feed or intermittent feed
- 9) Flush the tube as directed prior to connecting the feed tubing.
- 10) Connect the tip of the delivery set to the feeding tube.
- 11) My child's feeding rate is _____ the amount of time the feed runs over is _____.
- 12) While feeding, your child must be supervised and positioned upright well supported, with a slight incline. Some children may be more prone to vomiting while feeding, if your child is experiencing this try to keep them more upright during their feeds.

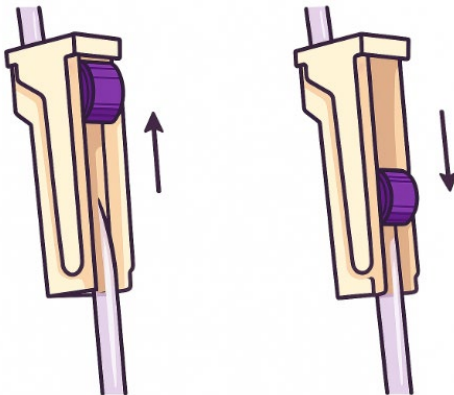
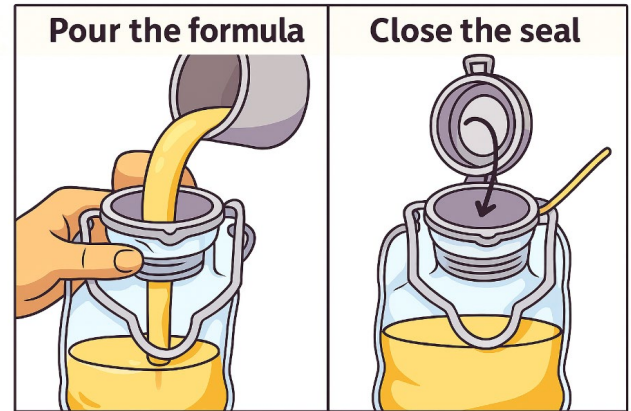


If your child is feeding continuously speak to an occupational therapist about the best ways to position your child during nighttime feeding. Pump troubleshooting videos from the manufacturer if permitted:
OMNI - Troubleshooting video snippets | Cardinal Health Canada

Your pump will come from _____

Steps to feeding your child by gravity

- 1) Wash your hands
- 2) Check placement of the tube
 - a) Measure the external length of the tube
 - b) Check the pH by drawing stomach content with a syringe and testing on pH test strips
- 3) Check the expiry date on the formula, if required. Allow refrigerated formula warm to room temperature
- 4) Pour feed into the bag. Do not put more than 4 hours of feed into the bag at once.
- 5) Hang the feeding bag so that it is higher than your child's head
- 6) Fill the drip chamber ½ full by slowly opening the roller clamp. With the roller clamp partially open, prime the tubing to remove the air.



- 7) Flush the tube as directed prior to connecting the feed tubing.
- 8) Connect the tip of the delivery set to the feeding tube
- 9) Using the formula provided and desired time for feed deliver, determine the drops per minute

$$\text{Drops per minute} = \frac{\text{Time (minutes)}}{\text{Total Volume (mL)}} \times \text{Drop Factor (drops/mL)}$$

My child's

Time _____ / Total Volume _____ X Drop Factor _____ = drops per minute _____

The drop factor can be found on the feeding bag packaging. Gtts= drops.

- 10) Open the roller clamp you child should have _____ **drops per minute.**
- 11) While feeding, your child must be supervised and positioned upright well supported, with a slight incline. Some children may be more prone to vomiting while feeding, if your child is experiencing

this try to keep them more upright during their feeds. If your child is able to sit in a highchair this is a great option, this ensures feeds are treated as mealtimes and keeps them supported and upright.

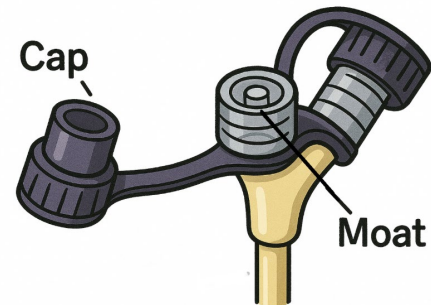
Keeping NG supplies clean at home

Tube Cleaning

The moat of the feeding tube should be cleaned every day.

If your child's tube is removed and it has not been in use for more than one (1) month, the tube can be cleaned and re-inserted

In hospital staff use more disposable supplies for feeding for a variety of reasons. At home it is safe to use feeding supplies more than once.



Cleaning the bag at home:

This is important to prevent bacteria from growing.

Between feeds, store it in the refrigerator. The cool temperature helps decrease the growth of bacteria

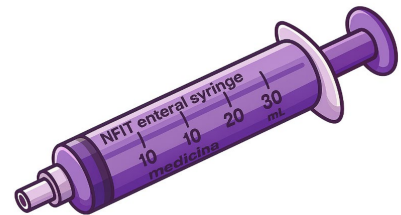
Once a day you need to take the syringes apart, wash them with soapy water, rinse them and let them air-dry

After the last feeding of the day, wash the bag and tubing as usual with hot soapy water and then rinse with a vinegar solution (1/4 cup vinegar mixed with 1 cup water). Rinse again with water and store as usual in the refrigerator

Children who are fed continuously should have their feeding stopped every 4 hours to have their bag cleaned in the same way.

Change feeding bags about once a week, or earlier if necessary.

Syringes: can be washed with soap and water for one week; ensure when reassembled they are not warped or damaged and that you can still read the markings.



Insertion

When possible, alternate the nostril that your child's NG tube is inserted into.

Step 1:

Make sure you have everything you need within reach. It's easier to have two caregivers perform this task together if possible.

You will need:

- Your child's NG tube
- Tape: there are commercially available tapes, but whatever tape you use it's easier to have it cut and ready before starting.
- Water (sometimes this needs to be sterile - check with your provider if you are unsure)

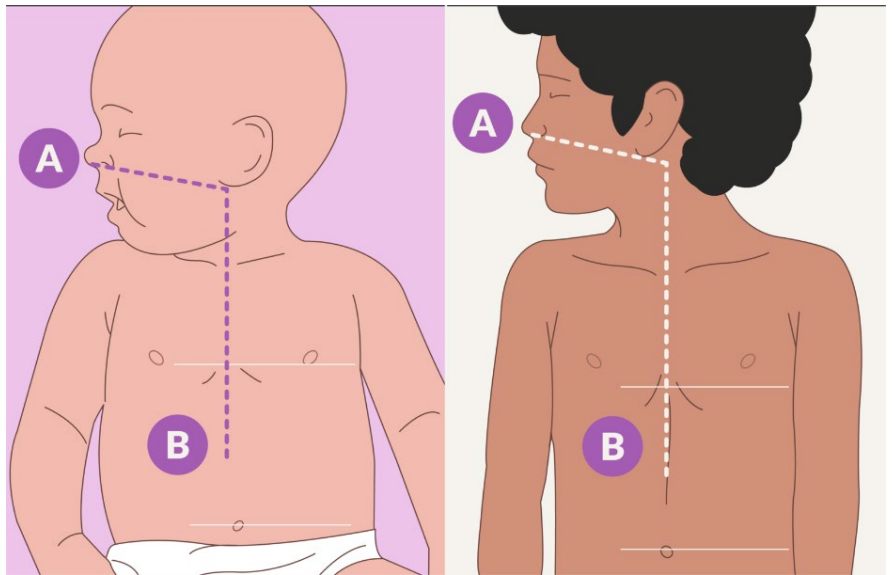
- A non-toxic permanent marker
- 2 syringes
- pH test strips

Step 2:

Wash your hands and prepare your space. Smaller infants and children may need to be bundled on a flat surface. Older children may appreciate distraction and could sit in a chair. If you're not at home and you have to re-insert your child's tube, consider places like change tables to help with positioning for smaller children.

Step 3:

Measure your NG tube. Hold the tube at the first hole where the feed comes out, place that against the tip of your child's nose, then measure to their earlobe and down to their breastbone/sternum. The halfway mark between their breastbone/sternum and their belly button is the correct length. Mark this spot on the tube with your marker. Then measure again and check that you get the same measurement.



Step 4:

Dip the tube in water or water-soluble lubricant (some tubes have a coating that should only have water used)



Insert the end of the tube into the nostril and keep advancing towards the back of the nose. Aim down.

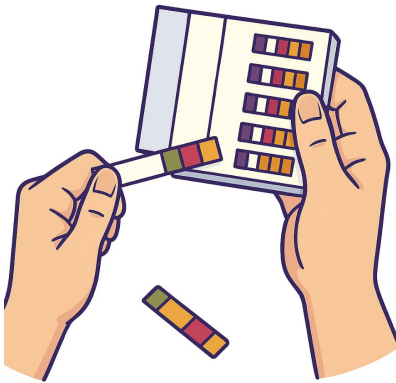
Continue advancing until the measurement you have marked on the tube. If you hit resistance stop, do not force the tube. Sometimes older children, who are safe to do so, may swallow water at the same time to help advance the tube. Infants may suck on a soother to help with advancing the tube.

If at any point your child's colour changes or they are coughing or choking, stop and withdraw the tube. The windpipe is very close to the esophagus (the structure that brings food from your mouth to your stomach), the tube may have gone into the windpipe instead of the esophagus.

Step 5:

Tape the tube in place. Bring the tape as close to the nose as possible. Avoid causing kinks in the tube when you tape it. If at any point the tape on your child's tube becomes wet, loose or soiled replace it to avoid the tube coming out accidentally.

Step 6:



Attach a syringe to the NG tube's side port and pull out some of the stomach contents. You only need 1-2mL.

Place this fluid on the pH test strips. The pH should be 5.5 or less.

Sometimes you can't withdraw any fluid — that can happen if your child has recently vomited or the tube could be high in the stomach. See the troubleshooting section for steps you can take if this happens.

Remember: it's not safe for your child to use this tube until you have made sure it's in the stomach.

Step 7:

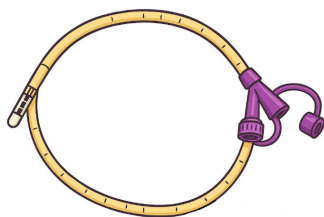
Only proceed to this step if you have confirmed the placement using pH.

If your child's tube has a guidewire, flush the tube with 10mL of water through the side port (for small babies 2mL is enough).

Tube placement verification

Tube Measurement

Confirm the internal length of the tube by checking the measurement at the nostril



Confirm the external length of the tube by measuring the tube from the nostril to the hub at the end of the tube

pH Level Measurement

Attach an ENfit syringe that is greater than 5 ml to the port of the tube, withdraw a small amount of fluid to check the pH – if the tube was flushed with water prior discard that amount prior to testing

If the fluid is at a pH of 5-5.5 or less, it is likely to be gastric contents and, in the stomach

Stomach contents may look like formula or feed. If you are unable to take out fluid, see the troubleshooting section.

Troubleshooting pH level

Ensure the syringe is greater than 5 ml as a smaller size can cause the tube to collapse

Use of X-Ray for NG placement

While in hospital our child's tube may have been verified using an x-ray. This is done for several reasons which may include critical illness, neurological impairment, sedation or a difficult insertion.

In the home setting, tube placement is verified using internal and external measurements AND pH gastric levels. If there is a concern that the tube is not in the correct location, the tube is to be removed and re-inserted. The use of an x-ray is not required for home verification.

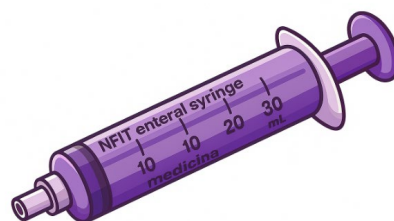
Flushing

Flushing the NG tube is an important step to keeping it clean and preventing blockages in the tube. You should clean it often by flushing water through it. If the NG tube is not flushed, formula sticks in it and blocks the tube. Flushing also gives extra fluid that your child needs. Your dietitian will tell you how much to flush your child's tube with.

My child's flush routine is

_____ mL before and after each feed

_____ mL with each medication



You should flush the tube:

- Before and after each feed.
- Every 4 hours during continuous feeding.
- Before and after giving your child medicine through the NG tube and between each medication if giving multiple.

Water flushes should be done with a 30 ml syringe or larger to limit excessive pressure on the tube and stomach – smaller syringes cause more pressure and can rupture the tube.

If you ever feel resistance when flushing **STOP** and see the troubleshooting section. Never force a flush into the tube.

Medication administration

- Verify tube placement
- If your child is receiving a feed and the medication cannot be given before or after, pause the feed
- Flush using a 35 ml syringe with a pre-determined volume
- If using tablets, ensure they are approved by pharmacy for crushing
- Tablets should be crushed very finely to ensure they are not going to block the tube.
- Ensure that the tablet is completely dissolved prior to administration, even small particles can block the tube.
- Additional flushes of 1-5 ml should be given between and after each medication. Flushing ensures the medication is not stuck in the tube which could lead to it clogging, it also stops medications from mixing together in the tube, which may cause blockage.



- Medication should not be mixed with formulas- this can thicken the feed leading to a clog or can lead to inaccurate medication administration
- Liquid medication should also be diluted 1:1 with water to decrease the risk of tube blockage. Diluting also to lessen tummy upset that can occur as many medications that are sweet and sticky can cause vomiting or diarrhea when given directly into the stomach.
- Sometimes medicines are in very small doses that need smaller syringes, you can use smaller syringes with gentle force after you have confirmed the tube is working well with a 30mL syringe first.
- Complete final flush before closing the tube or returning to feeding.

Daily Activities:

Safety:

- All feedings must be supervised.
- Have your child sit up at a 30-degree angle (or higher) during feedings to prevent the formula from getting into the breathing tubes.
- Secure the tube to prevent it from being pulled out or choking your child.

Swimming:

Your child may go swimming with an NG tube in place, ensure that the tape holding the tube in place is changed after swimming.

Shower after swimming and completely dry the area surrounding the nostril after swimming.

Clothing:

You do not need special clothing. However, please remember:

- Do not pin the NG tube to your child's clothes. The pin could pierce the tube. Use tape if you have excess tube length.
- Avoid clothing with a tight neck, as taking it on and off could pull out the tube.
- Mittens or socks on little hands may help prevent a baby from pulling on the NG tube.

Activities:

- Your child may return to their normal activities once your doctor says so.
- Talk with your doctor about contact or rough sports
- Give babies a soother (if your baby will take one) during the feeding. This can help with feeding, as it imitates the normal process of sucking during feeding.
- Hold your baby while the feeding is being delivered to comfort and bond with your baby.
- If your child can sit comfortably, have your child sit at the table during meals, as tolerated
- Talk to your health care provider about any specific activities that your child participates in for recommendations on participation with an NG tube.

Travel:

- Careful planning is needed, so make a checklist of things you will need.
- Make sure that you pack extra supplies and have proper storage for formula
- Use bottled water when you're not sure if the water is clean
- Carry an emergency kit of supplies with you at all times, in case the tube needs to be replaced while away from home
- Keep all supplies together in one place (e.g., large Ziplock bag or plastic container)
- For safety reasons, feeding a child through an NG tube while in a moving vehicle or other form of transportation is not recommended unless directly supervised.
- There are commercially available backpacks intended to house feeding supplies and keep formula cold that could be helpful if feeding while out of the house.



Mouth care:

Important for maintaining the normal conditions of the mouth when children cannot have foods orally.

- Steps you can take to ensure proper mouth care:
- Rinse your child's mouth out four to six times a day with water, mouthwash, a cloth, or Toothette. It is important to make sure your child's teeth are brushed and flossed twice a day
- Keep lips moist
- At the advice of a doctor, children can suck candies, soothers, etc. to help with the flow of saliva (oral stimulation)

Skin care:

Cleaning the skin around the nose and cheek where the NG tube is, it is important to keep the skin healthy. Not having the tube pull against the nostril is also important, as pulling can put pressure on the nose and can cause sores to develop.

Replacing the tape when soiled or wet will help keep the skin healthy. Rotating the side of the nose that the tube is inserted in will also help.

If your child is experiencing redness, flakiness, pain or itching to the site speak to your care team about options to help protect the skin.

Explaining the tube to others

Keep it simple and positive. Try:

- "This tube gives my body food"
- "It is like a straw into my belly to help me grow"
- "My child uses a feeding tube for nutrition. It supports their health and growth"
- "It is a medical device that helps me thrive"

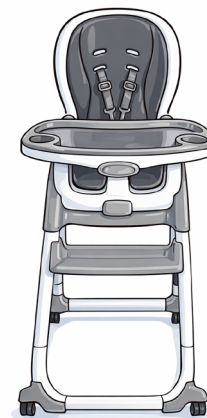
Siblings

Depending on the age of the other children at home there may be questions about your child's feeding tube. Educating yourself on the tube will allow you to give the best answers to your child's siblings. Remember curious siblings may be tempted to pull at the tube - ensure the tubing is coiled and taped to your child's clothing to prevent accidental dislodgement.

Mealtimes

Mealtimes for a child who gets tube feedings

- Do the same things with your baby during a tube feeding that you would do during an oral feed
- Hold your baby in a supported position during feeding to promote bonding.
- Give your child sensory experiences in and around the mouth and encourage them to use their lips, jaw and tongue. You can use things like a soother, a toothbrush, or the child's hand.
- Associate mealtimes and eating with pleasure.
- For toddlers or older children, running a tube feeding and sitting at the table if able, during a family meal helps the child be part of the family and learn about eating food.

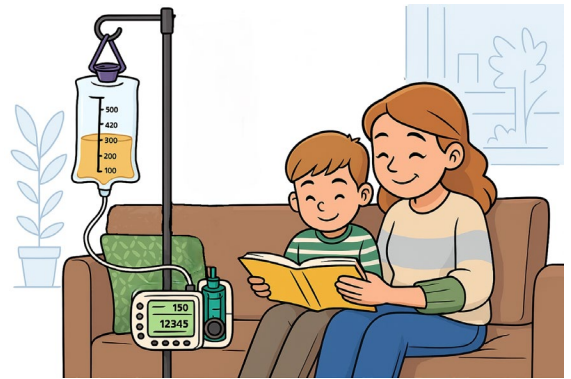


Consult your physician or occupational therapist for Individualized oral feeding recommendations based on your child's needs.

Troubleshooting

Pump-related problems

1. Ensure the pump is plugged in
2. Does the battery need to be recharged
3. Is the cassette lined up and clicked into place correctly
4. Are there are kinks or bends in the tubing



The pump has alarms that ring if there is a problem. Follow the prompt on the screen if you hear an alarm.

Gravity-related problems

1. Is the tubing clamped with the roller?
2. Is the drip chamber over filled?
3. Is the tubing kinked?
4. Did the feed go too fast? The bag needs to be lowered, or the roller clamp needs to be closed more.
5. Did the feed go too slow? The bag needs to be lifted higher, or the roller clamp needs to be opened more.

Suspected blockage/resistance

- Always use a 30 mL or larger syringe to flush. If resistance is encountered STOP do not force a flush
- Gently pull back with a 30mL syringe to pull out the clog.
- if you aren't able to pull out the clog, try gently flushing with warmed water (not hot).
- Do not use vigorous syringe force to overcome an obstruction — too much force can cause the tube to rupture.
- Do not use syringes less than 30mL when flushing to avoid excessive pressure.
- If you are unable to fix the clog the tube may need to be replaced.
- Do not use air to try to force a clog- this can become pressurized and rupture the tube.

Child has diarrhea

- Some medications may cause diarrhea, talk to your pharmacist
- Sometimes the tube can move into the small intestine which can cause diarrhea, check the position of the tube using pH, if diarrhea continues contact your child's care team.

Child is vomiting/nauseous

- Your child could feel sick because:
- Their feed is too fast, pause feeding for a short time and then try feeding at a slower rate. If they're still vomiting contact your child's care team.
- They may have reflux when feeding, try feeding them sitting up or on an incline
- They are sick with a virus

- The tube is in the wrong position- confirm position of the tube using pH

Tube is leaking

- Check that the ports for feeding and medications are closed. If the problem persists the tube may need to be changed.
- Avoid adding tape to the tube to stop leaks. Consider reinsertion of a new tube if leaking persists.

Skin around the cheek or nose is red or swollen

- Try to keep the skin dry.
- Check that the tube is in the correct position (not being pulled) and taped well.
- Change the tape as needed.
- Consider trying a different type of tape.
- If the problem continues, call your health care team.

Can't get fluid back to test pH

- Sometimes this happens if your child has recently vomited or if they haven't eaten in several hours. If they recently vomited wait 30 minutes and try again.
- Sometimes the tube is high in the stomach, try having your child lie on their left side for 15-30 minutes then withdraw again.
 - instill 3mL of air into the tube, try to withdraw again.
- If your child is permitted to feed by mouth, have them take some of their feed by mouth first, then re-attempt to get fluid back.
- Sometimes the tube is coiled in the esophagus instead of going into the stomach, if you are unable to withdraw anything after trying these steps, withdraw and insert again.

The pH isn't below 5.5

- Sometimes if your child was just fed the pH maybe high. Wait 30 minutes and re-test.
- Some medications may make your child's pH high, talk to your pharmacist about the medications your child is on.
- The flush that you last used needs to be discarded before you take a sample to test. If your child's tube was flushed withdraw 3mL and then take a second syringe and withdraw another 1-2mL to test.

Financial Considerations as of January 2026

Ontario

Assistive Devices Program – Application for Funding Enteral Feeding Pump and Supplies

How much will the ADP pay:

Pump: a grant of \$549.75 (portable pump) or \$355.50 (stationary pump) will be sent directly to the “agent: to help cover the costs. Only can be used to purchase a feeding pump. This funding cannot be used to cover rental costs

Supplies: Families will receive an annual grant of \$1,500. The grant is to be used to purchase the supplies items. The annual grant is paid directly in four installments of equal amount, on a quarterly basis

If the Family is receiving social assistance benefits under Ontario Works (OW), Ontario Disability Support Program (ODSP), or Assistance to Children with Severe Disabilities (ACSD), you will receive an annual grant of \$2,000.

Will my health insurance company cover my share of the cost?

Some private insurance plans do offer coverage for feeding supplies. If you have private medical coverage, check with your insurer or agent to see if they will pay your share of the cost.

Quebec

Ministerial Enteral Feeding Program

The Ministerial Enteral Feeding Program is intended for individuals, both children and adults, living at home who have an eating disorder for which enteral feeding is indicated on an irreversible basis and who meet the legal definition outlined in Article 1, paragraph g) of the Act respecting the exercise of the rights of persons with disabilities.

"Any person with an impairment resulting in a significant and persistent disability who is likely to encounter obstacles in performing everyday activities."

CHU Sainte-Justine manages the supply of home enteral feeding in accordance with the mandate entrusted to it by the Ministry of Health and Social Services (MSSS) and ensures uniform coverage of the required services for the entire disabled population of Quebec with a feeding disability.

Our primary principle is to maintain universality, accessibility, and free provision of technical aids and supplies for the targeted clientele.

If a Family has private insurance, the Ministerial Enteral Feeding Program will provide the feeding pump. The IV pole will come from CISSSO. The Family will receive a starter package with the feeding pump from the Program. After this, the Family will have to go through their insurance for ongoing

feeding supplies. If their insurance does not recognize coverage, the program will provide feeding supplies, so I have been told.

If the Family does not have private insurance, it all gets funded by the Program.

The Program does not provide pH strips.

Nunavut

Please speak to your assigned case worker.

Obtaining feeding equipment:

If you live in Quebec Families:

- Will get an IV pole from CISSSO (Qc's Home Care).

If you live in Ontario Families:

- Feeding pump loaners from Home Care
- We ask families to purchase a 3M sticker hook to position their feeding bag above the pump
- If families rent from Ontario Medical Supplies, they get an IV pole with the pump rental.
- If families purchase their feeding pump, we get them to buy an IV pole. (Feeding pump, IV pole and backpack).
- Assistive Devices Program- Application for Funding Enteral Feeding Pump and Supplies

