

# Caring for your child's G-button





**The team at Dell Children's Medical Center is honored to help care for your child and family during this time. We are here for you during this time of recovery and learning and will be with you throughout your child's journey.**

# Introduction to a G-button and your child's surgery

## What is a G-button?

A G-button (also called a gastrostomy button, gastrostomy tube or G-tube) is a small tube that is surgically placed into your child's stomach through a small cut in the abdomen. A G-button is used to give your child formula, additional fluids, and/or medications. When you feed your child through the G-button, this process is referred to as giving feeds.



## How is G-button surgery performed?

A G-button is typically inserted laparoscopically, meaning that the surgeon will use small cuts to insert instruments and perform the surgery. Occasionally, the surgery is done through a larger incision on the abdomen which is called an "open" procedure. An open procedure may be done depending on your child's medical conditions or history of previous surgeries.

## Why does my child need a G-button?

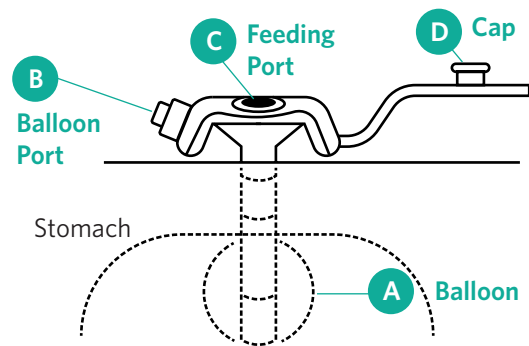
Your child may need a G-button for many different reasons, including difficulty swallowing or eating by mouth, severe vomiting or reflux, or other conditions preventing your child from eating enough calories by mouth for proper growth.

## How long will my child need a G-button?

Your child may only have the G-button for a short period of time or may need the G-button for years depending on his/her medical condition. Your child might be able to eat or drink by mouth along with the G-button feeds depending on his/her medical condition. Make sure to discuss feeding your child by mouth with your healthcare provider before doing so.

## What are the parts of a G-button and what do they do?

There are several brands of G-buttons, but at Dell Children's Medical Center, your child will have a MIC-KEY brand G-button placed in surgery. Occasionally, older children will receive a G-tube, which has a few inches of tubing in your child's abdominal wall. The G-button and G-tube have similar parts that are described below.



**A Balloon:** The G-button has a balloon filled with water that is placed in the stomach to keep the G-button secure and in place.

**B Balloon port:** There is a port outside of the G-button where the water in the balloon can be removed or added. Do not remove water from the balloon port until instructed by the surgeon (at least six weeks after surgery). If the water in the balloon is removed too soon before the stomach is healed, it could result in complications that could require additional surgery. The volume of water in the balloon is typically 5 mL; however, a smaller amount may be placed in the balloon if your child is small. Your child's nurse or caregiver will tell you how much water is in the balloon, and you can document the amount in your records.

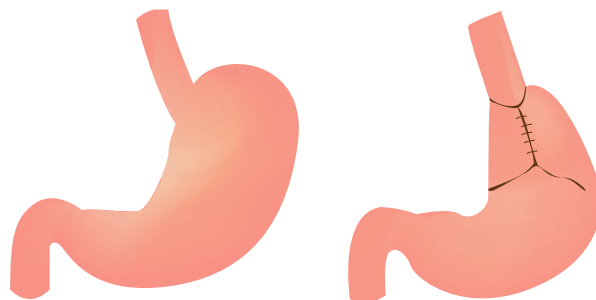
**C Feeding port:** The feeding port is where the extension tubing is attached to give feeds and medications. There is an anti-reflux valve located on the inside of the feeding port that prevents stomach contents from leaking out of the G-button when the cap is off.

**D Cap:** The cap is used to cover the feeding port when you are not giving your child feeds or medications.

**Extension tubing:** Extension tubing is used to give medications and feeds and allows you to “vent” (release gas from the stomach). The extension tubing should be removed between giving feeds and medications.



## Nissen Fundoplication



Normal stomach

After surgery

### What can I expect after surgery?

After surgery, your child will have an intravenous line (IV) to provide fluids that will keep your child hydrated and to provide pain medicine. At first, the G-button will not be used for feeds. Instead the G-button will be attached to a small container to allow fluid in the stomach to drain out. This is called placing the G-button “to gravity.”

Your child’s provider will decide when feeds can be started depending on their medical condition and how much fluid is coming out of the G-button after surgery. Feedings are typically started the day after surgery but may be started the night of surgery. Once your child begins receiving feeds, the number of feeds will be increased slowly.

### What is nissen fundoplication surgery and when is it needed?

A nissen fundoplication is a surgical procedure that is sometimes done at the same time that a G-button is inserted if your child has severe reflux or frequent vomiting. The surgery involves taking the top of the stomach and wrapping it around the bottom of the esophagus, like a bun around a hot dog. There may be post-operative challenges associated with this surgery, such as difficulty releasing gas from the stomach or burping, bloating, and continued reflux after surgery. If your child’s care provider thinks that your child will benefit from this surgery due to the severity of your child’s reflux or vomiting, they will have a more detailed conversation with you about this procedure.

# Going home and general post-operative care

## How active can my child be after the surgery?

- For two weeks after surgery, your child will need to limit their activity. They should not run, ride a bike, or participate in any activities that use their abdominal muscles.
- Infants should not do tummy time (unless done on a soft surface, such as an egg-crate mattress topper, with a hole cut out for the G-button) or other activities that cause pressure to the G-button site for two weeks.
- Be sure to protect the G-button from being pulled on by making sure your child is wearing a onesie, shirt, or G-button belt. A G-button belt consists of a soft fabric that is applied over the G-button around the stomach like a belt to provide protection and prevent your child from pulling on the G-button. You can purchase a G-button belt from a number of online providers. Your insurance may cover the cost of the G-button belt.



## How do I care for umbilical dressing?

- If a dressing is applied to the umbilical laparoscopic incision, this will need to be removed on post-operative day five.
- There will be small pieces of tape on the umbilical incision called steri-strips. After the outer dressing is removed, you may gently clean over this incision with soap and water, and the steri-strips will start to peel up and fall off on their own. If steri-strips are still present two weeks after surgery, you may remove them.

## What type of clothing should my child wear?

Your child can wear almost any kind of clothing. Infant outfits that have snaps or fasteners all the way down the front give easier access to the gastrostomy site. As babies get older, they like to play with the G-button, so it is very important to keep them in a onesie or a G-button belt to keep the G-button covered and prevent pulling or accidental removal of the G-button.



G-button belt

## How do I bathe my child?

- It is important not to submerge the G-button in water for two weeks following the surgery. Therefore, your baby or child should not take any baths.
- Your child may take a sponge bath starting on post-operative day two.
- One week after surgery your child may take a shower.
- Two weeks after surgery, your child may bathe normally, and the incision and G-button may be submerged under water in a bath.



# How to care for your child's G-button

## What will I need to know?

Caring for your child with a G-button may be a little scary at first, but your nurses at the hospital will teach you what you need to know to take care of your child and help you become comfortable with your child's care before you take him or her home.

These are the things you will need to learn:

- I. Cleaning around the G-button site
- II. Protecting the G-button from being pulled on or out
- III. What to do if the G-button comes out
- IV. How to replace the G-button
- V. How to vent the G-button
- VI. How to give medications through the G-button
- VII. How to give G-button feeds
- VIII. Problems to watch for and troubleshooting



## I. Cleaning around the G-button site

You need to clean around the G-button site twice a day with water and cotton-tipped applicators (a Q-tip works well). The nurse will teach you how to do this after surgery.

1. Wash your hands well with soap and water.
2. Have all supplies together, ready to use:
  - Cotton-tipped applicators (Q-tips)
  - Water (use sterile or bottled water for the first two weeks after surgery, then you can use tap water)
  - Split 2x2 gauze
3. Remove the old gauze, if present.
4. Gently clean around the G-button site by rolling a cotton swab dipped in water around the site to remove any drainage. Start by cleaning the skin around the G-button and then move outwards. Dry with a dry cotton-tipped applicator.

5. Check the skin around the G-button. If there is increased redness or granulation tissue (red, beefy tissue), call the surgery clinic.
6. If there is a little drainage at the G-button site, place split 2x2 gauze under the G-button. Change it as needed to keep the site dry.
7. Apply a G-button belt (if you have one), shirt, or onesie to protect the G-button and prevent accidental pulling.

## II. Protecting the G-button from being pulled on or out

The stoma, or opening in the skin, will heal slowly. It takes about two months to completely heal. Keeping the G-button from moving is very important for healing, as well as to prevent accidental removal of the G-button and to minimize leaking around it.

You can help protect the G-button by keeping your child's G-button covered with a onesie, shirt, or G-button belt.

## III. What to do if the G-button comes out

The stoma (the hole in the abdomen that the G-button is in) will close up within a few hours if the G-button comes out. It is important that a new G-button be placed as soon as possible.

1. Place a gauze dressing over the stoma to absorb any fluid. Stomach contents might leak out of the stoma, and the site may bleed a very small amount, especially if the G-button was accidentally pulled out. Apply gentle pressure to stop the bleeding.
2. **Do not replace the G-button if it has been less than six weeks from surgery or you have not been taught how to replace the G-button.**
3. If this is the first time the G-button has come out, or you have not been taught how to replace the G-button, call the surgeon's office immediately. You will be instructed to take your child to the surgery office or an emergency room to have a new G-button put in. Bring the extra G-button you have with you to the clinic or hospital. If you do not have a new G-button, bring the one that came out. The doctor will need to know the type and size your child uses.

## IV. How to replace the G-button

Once the gastrostomy site has healed (at least six weeks from surgery), the surgeon or surgery nurse practitioner may teach you to replace the G-button at home. The G-button needs to be replaced every six months. This can be done in the surgeon's office or, once you have been trained, you can change the G-button at home. You may need to replace the G-button at home if it falls out or is accidentally pulled out by your child.

To replace the G-button:

1. Wash your hands well with soap and water.
2. Have all supplies together, ready to use:
  - Extra G-button
  - Lubricant (water-soluble, like KY Jelly; do not use vaseline or petroleum jelly)
  - 5 mL syringe filled with water (tap water is fine)
  - Split 2x2 gauze
3. Check the new G-button balloon by filling the balloon with 5 mL water. Attach a 5 mL syringe filled with 5 mL of water on the balloon port, push in the water and watch to see if there is a leak of water. Then pull back on the syringe plunger to drain the 5 mL of water from the balloon.
4. Apply a small amount of lubricant to the tip of the G-button. Water may be used if no lubricant is available.



5. If you are changing out the G-button, remove the current G-button by placing a 5 mL syringe on the balloon port and pulling the water from the balloon. Once the balloon is deflated, gently pull the G-button out. Have a small towel or gauze nearby to clean any fluid that may come out of the G-button site once it is removed.



6. Insert the G-button into the stoma gently. Make sure to insert the G-button straight in, not at an angle.



7. Once in, attach the 5 mL syringe and push in the water to fill the balloon.



8. Check the G-button for correct placement by withdrawing stomach fluid or formula from the G-button. This is called aspirating stomach contents.



- You do this by attaching the extension tubing, then attaching a syringe and pulling back. Stomach contents will look clear or yellow tinged or may be formula or food colored if you child has eaten recently.
- If you do not aspirate stomach contents, try to reposition your child (sit them up, lay them down, or roll on their side) and try to aspirate again.
- Call the surgery clinic with any concerns.

## V. How to vent the G-button

Venting the G-button is a way to release the gas from your child's stomach. You can think of it as "burping" your child. You want to vent your child's G-button when they have abdominal distension, vomiting, gagging, or are very fussy.

To vent the G-button:

1. Attach the extension tubing and close the clamp.
2. Remove the plunger from a large syringe (50-60 mL) and attach the syringe to the extension tubing.



3. Open the clamp on the extension tubing.
4. You may hear a rush of air escaping the stomach or see stomach contents or formula fill the syringe.
5. If the syringe fills with formula, you can raise the syringe up higher above your child's stomach and the formula will start to flow back into the stomach.
6. After you are done venting the G-button, make sure all the stomach contents have emptied from the syringe into your child's stomach and close the clamp on the extension tubing.
7. Remove the syringe and extension tubing.
  - There is no set length of time that you need to vent the G-button. Venting for 30 seconds is usually sufficient, but you can do it for as long as you feel your child needs it to release the gas from their stomach.
  - If your child had a nissen fundoplication, it is very important to vent the G-button before and after feeds as they cannot burp through their mouth to release gas in their stomach.
  - Vent the G-button as needed for abdominal distension, vomiting, gagging, or if your child is very fussy.

## VI. How to give medications through the G-button

Use liquid medicines when available. If a medicine is a tablet or capsule, ask the pharmacist whether it can be crushed or opened. A pharmacist can also help you with the best times of day to give your medication and if the medication can be given with food or should be given on an empty stomach. Before you begin a new medication, please call your pharmacy to discuss any possible interactions with current medications.

Use the following procedures depending on the form of the medicine:

**Tablet:** Crush in a pill crusher or between two spoons to make a powder, then dissolve in a 1-2 teaspoons of water. Draw medication in a syringe to give through the G-button.

**Capsule:** Open the capsule, pour contents into a cup, and dissolve in 1-2 teaspoons of water. Draw medication into a syringe to give through the G-button.

**Liquid:** Draw up the prescribed amount of fluid in a syringe to give through the G-button.

Do not mix a medicine with other medicines unless you have been directed to do so by your child's doctor or pharmacist.

If your child is receiving continuous feedings and the medicine they need cannot be given with food, discuss how you should give the medicine with your child's doctor.

How to give medications:

1. Attach the G-button extension tubing and close the clamp.
2. Attach the syringe with the medicine to the extension tubing, unclamp the clamp, and give the medication.
3. Close the clamp on the extension tubing and remove the medication syringe. Flush the G-button extension tubing after giving medications with enough water to clear the tubing (3-5 mL).



## VII. How to give G-button feeds

There are several ways to give a G-button feed. The type, amount of formula, and length of feeding time will be decided by your child's doctor depending on your child's needs. Do not change your child's formula or diet without approval from your child's doctor.

**Bolus feedings** are given over a short period of time. The feed is either given through a syringe over a few minutes (called a gavage feed) or through a feeding pump usually over 30-60 minutes.

**Continuous feedings** are given over a long period of time, several hours a day, up to all day. A feeding pump is used to give the G-button feeds at a slow, steady rate. Some children are fed only during the daytime and some may only be fed at nighttime depending on their medical conditions and feeding abilities or schedule.

**Water bolus:** some children need additional water for hydration through their G-button, in addition to feeds. Discuss with your child's primary care provider or dietician if your child needs a water bolus. You will be told how much and how many times a day you need to give your child a water bolus.

### How to give a bolus feed

1. Wash your hands well with soap and water.
2. Gather all equipment:
  - Extension tubing
  - Feeding bag or large syringe (50-60 mL)
  - Feeding pump
  - Formula or breast milk
  - Medicine (if needed)
  - Water for water bolus (if needed)
3. Position your child for the feeding. To prevent choking have your child's upper body raised at least 30 degrees. An infant can be held in the curve of your arms, in a car seat, or in a bed with the head raised. The upper body should stay raised throughout the feeding and for at least 30 minutes afterward.

**See your child's specific feeding information that you have documented in this booklet.**

4. Attach the G-button extension tubing and close the clamp.
5. Pour formula or breast milk into the feeding bag. Run the formula through to the end of the tubing (also called "priming" the tubing).
6. Turn the pump on and set up the pump and feeding bag tubing according to the directions from the medical supply company.
7. Set the rate as instructed by your child's provider.
8. Connect the feeding bag tubing to the extension tubing.
9. Unclamp the extension tubing.

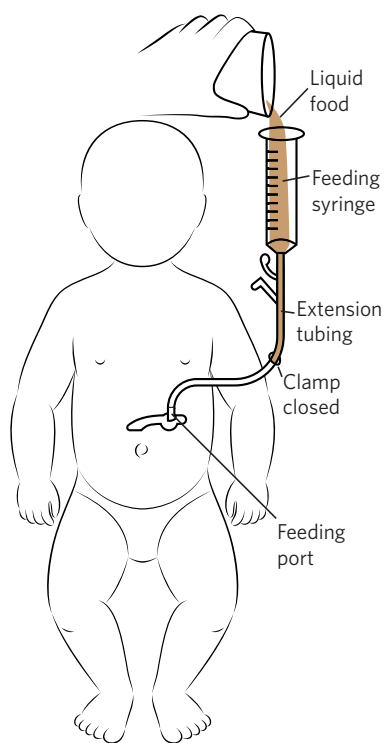
10. Start the feed on the pump. Check to make sure the formula is moving through the tubing.
11. When the feed is complete, disconnect the feeding bag tubing from the extension tubing and flush the G-button with 3-5 mL water to clear the formula/breast milk.
12. Close the clamp on the extension tubing and remove the extension tubing. Close the cap of the G-button.

### How to give a gavage bolus feed (feed given through a syringe)

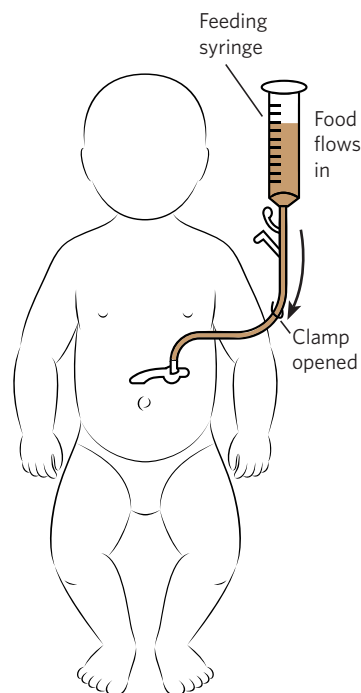
Follow steps 1 through 3 above.

4. Attach the G-button extension tubing and close the clamp.
5. Put the syringe (without plunger) into the feeding port.
6. Pour the formula or breastmilk into the syringe.
7. Unclamp the extension tubing clamp.
8. Allow the feed to flow by gravity. Do not force it.
  - Raise the syringe above your child's stomach to speed up the rate of the feed.
  - Lower the syringe at times to allow air bubbles to escape or to slow the feed.
9. Continue adding formula or breastmilk to the syringe until the entire amount is given.
10. Once the feed is done, close the clamp of the extension tubing, remove the syringe, and flush the extension tubing with 3-5 mL water to clear the formula/breast milk.
11. Close the clamp on the extension tubing and remove the extension tubing. Close the cap of the G-button.





**Fill the feeding syringe with liquid food**



**Give the feeding by letting the liquid food run through the extension tube by gravity**

### After the bolus feed

- Allow air to escape by venting (leaving the tube open to air) or burping.
- The upper body should stay raised for at least 30 minutes after feedings.

### How to give a continuous feed

**See your child's specific feeding information that you have documented in this booklet.**

Follow steps 1 through 3 on page 9.

4. Attach the G-button extension tubing and close the clamp.
5. Pour formula or breast milk into the feeding bag. Run the formula through to the end of the tubing. This is known as priming the tubing.
6. Turn on the pump and set up the pump and feeding bag tubing according to the directions from the medical supply company.
7. Set the feed rate as instructed by your child's provider.
8. Connect the feeding bag tubing to the extension tubing.
9. Unclamp the extension tubing clamp.
10. Start the feed on the pump. Check to make sure the

formula/breast milk is running through the tubing.

11. Add more formula or breast milk as instructed. Typically, you can only place four hours-worth of formula or breastmilk in the feeding bag at a time. If your child has formula that comes in a closed bottle that you attach to the feeding tubing, this is typically good for 24 hours. Ask your home health company that provides your formula and feeding supplies for specific instructions.
12. If your child's feeds run 24 hours a day, change out the feeding bag every 24 hours.
13. Once the feed is done (if they are not running 24 hours a day), close the clamp of the extension tubing and flush the extension tubing with 3-5 mL water to clear the formula/breast milk.
14. Close the clamp on the extension tubing and remove the extension tubing. Close the cap of the G-button.

### During the continuous feed:

- Allow air to escape the stomach by venting the G-button every four hours or as needed when your child is fussy, gagging, or has abdominal pain or distention.
- The upper body should stay raised during feeds and at least 30 minutes after feeds are completed.

## VIII. Problems to watch for and troubleshooting

Feeding problems	What to do
<b>Vomiting</b>	<ul style="list-style-type: none"><li>• Stop the feed.</li><li>• Place your child in a side-lying or sitting position with head tilted forward.</li><li>• Vent the G-button to release gas in the stomach.</li><li>• Start feeding again when your child feels better.</li><li>• If your child vomits again, stop the feed for 30 minutes to one hour and when your child feels better, restart the feed at a slower rate.</li><li>• Call your child's primary care doctor for persistent vomiting, green/bloody vomit, or if they are not tolerating feeds (gagging, abdominal pain, or swollen belly).</li></ul>
<b>Gas or upset stomach</b>	<ul style="list-style-type: none"><li>• Vent the G-button to release gas in the stomach.</li><li>• If venting does not help, stop the feed for a few minutes and restart when your child is feeling better.</li><li>• Try giving the feed at a slower rate.</li><li>• If gas or upset stomach is persistent, call your child's doctor.</li></ul>
<b>Increase in abdomen size (abdominal distention)</b>	<ul style="list-style-type: none"><li>• Vent the G-button to relieve gas in the stomach.</li><li>• Consider constipation. If your child has not had a bowel movement recently, they may be constipated, resulting in abdominal distention.</li><li>• Call your child's doctor if the abdominal swelling does not improve or they are also having abdominal pain, gagging, or vomiting.</li></ul>
G-button problems	What to do
<b>Leaking around G-button (more than a small amount)</b>	<ul style="list-style-type: none"><li>• Place a split 2x2 gauze or other dressing under G-button to bolster up the G-button (this will fill any loose space between your child's abdominal wall and the G-button).</li><li>• If the G-button appears too long (easily moving in and out of the stoma), call the surgeon's office to make an appointment to see if your child needs a shorter G-button.</li><li>• If it has been more than six weeks since the G-button was put in and you have been shown how, check the water in the G-button balloon.</li><li>• If leaking continues, call the surgeon's clinic.</li></ul>

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### Skin redness and irritation around the G-button



### Infection around the G-button



- If your child has been having a lot of leaking around the G-button, the redness may be irritation from the drainage. Clean the site and apply a barrier cream, such as diaper rash cream (Aquaphor or Desitin) or Calmoseptine.
- Change the gauze around the G-button site when wet with drainage to prevent irritation.
- If your child has redness around their G-button along with fever or pain and swelling to the G-button site, this may indicate an infection. Call your child's primary care doctor or the surgeon's office.

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### Granulation tissue



- Granulation tissue is red or pink soft tissue that forms around the G-button. This is normal and very common. This is the body's attempt to heal the G-button site.
- Secure the G-button to prevent excessive movement as this can lead to granulation tissue forming.
- Discuss treatment options for granulation tissue with your surgeon. Some options are silver nitrate sticks, triamcinolone cream, or a mixture of 50/50 Alum powder and Desitin.

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### Bleeding around the G-button

- Look for granulation tissue. If present, call the surgeon's office to make an appointment to discuss treatment options.
- Granulation tissue will bleed when rubbed, but usually stops quickly. If there is persistent bleeding, apply gentle pressure with a clean cloth or gauze for five minutes. If there is still bleeding after five minutes, call the surgeon's office.

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### G-button fell out

- If the G-button was placed more than six weeks ago and you have been shown how to replace the G-button, replace the G-button as you were shown.
- If the G-button was placed less than six weeks ago, or you have not been shown how to replace the G-button, cover the G-button site with gauze and tape and call the surgery clinic or go to Dell Children's emergency room to have it replaced.

## Your child's G-button information

G-button brand: \_\_\_\_\_

Type: \_\_\_\_\_

Size: \_\_\_\_\_

Volume of water in the balloon: \_\_\_\_\_ mL

Date of surgery: \_\_\_\_\_

Surgeon: \_\_\_\_\_

### Feeding method and schedule

See your child's discharge instructions for feeding details. Be sure to ask your child's doctor or nurse if you do not have this information.

#### Bolus feed

Formula Type: \_\_\_\_\_

Amount: \_\_\_\_\_

How often to give feed: \_\_\_\_\_

How fast to give bolus feed: \_\_\_\_\_

#### Continuous feed

Formula Type: \_\_\_\_\_

Rate of continuous feeds: \_\_\_\_\_

Time of continuous feeds if only given at nighttime: \_\_\_\_\_

- If you give extra water: \_\_\_\_\_ mL \_\_\_\_\_ times a day
- After feeding, flush tubing with water to clear tubing (3-5 mL)

### Medication

See your child's discharge instructions for medication information.

- If a medication is due to be given at the same time as a feed, give the medication first and then start the feed.
- If a feed is not due after a medication is given, give the medication and then flush with 3-5 mL of water to clear the tubing.

### G-button supplies

Caring for your child with a G-button will require supplies. Here is a list of items that you will need to keep on hand at home. It is also helpful to make a travel pack that includes all these things to have easily accessible when you are not home.

- Cotton-tipped applicators
- Water for cleaning around the G-button
- Extra G-button
- Extension tubing
- Feeding bag and pump
- Split 2x2 gauze
- Water-soluble lubricant (such as KY Jelly)
- Large syringe (50-60 mL) and a 5 mL syringe

## Phone Numbers

Primary care provider:

Gastroenterologist:

Surgeon:

Dietitian:

Emergency room:

Home care company:

Medical equipment company:

Occupational therapist:

Speech-language pathologist:

### When should I call for help?

Call the surgeon's office if:

- G-button is accidentally pulled out and you don't know how to replace it, or you are unable to replace it
- Redness and tenderness around the G-button, which can be signs of an infection
- Temperature above 100.5°F for a child less than one year or above 101.4°F for a child older than one year
- Abdominal pain that doesn't go away
- Vomiting that doesn't go away
- Constipation (hard, painful bowel movements)
- Bleeding around G-button that will not stop by holding gentle pressure
- Persistent leaking around the G-button that is not improved by adding a split gauze dressing
- Increase in granulation tissue around the G-button







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