



PATIENT & CAREGIVER EDUCATION

Tube Feeding Using the Bolus Method

This information will help teach you how to use the bolus method to feed yourself and take your medications through your percutaneous endoscopic gastrostomy (PEG) or gastrostomy (G) tube.

A feeding tube will be used to give you nutrients while you cannot eat, swallow safely, or maintain your weight. Nutrients provide energy and promote healing.

Tube Feeding

Nutritional goals

Formula: _____

Cans per day: _____

Total calories per day: _____

Total liquid volume per day: _____

Additional water to take per day: _____

You can take additional clear liquids, such as tea, coffee, broth, or juice, through your feeding tube. These liquids should be at room temperature. **These liquids are not to replace the amount of formula you need to take each day.**

Your tube feeding should be set-up and done in a clean, comfortable place. Never set up or do your tube feeding in the bathroom.

- **Sit up in a chair during your tube feeding. If you are receiving your tube feeding while in bed, use a wedge pillow to prop your torso up to at least 45 degrees (see Figure 1). Stay in this upright position for 1 hour after the feeding is finished.** This will prevent the formula from entering your lungs if you happen to vomit. You can get up and walk around during the feeding, if you wish.



Figure 1: Sitting up at a 45-degree angle

Important Points

- Always reclamp your feeding tube before removing your catheter tip syringe to avoid leakage.
- Move the location of the clamp on your feeding tube to avoid permanent kinking of the tube.
- To avoid clogging, always flush your feeding tube with the amount of water recommended by your nurse or dietitian (usually 30 to 60 mL) before and after:
 - Each feeding.
 - Taking each medication.
 - Taking additional clear liquids.
- If you are not using your feeding tube daily, flush it with 60 mL of water at least once a day.

Tube feeding schedule

You can choose the times of your feedings, as long as you reach your daily nutritional goals. Write in the times you prefer or your doctor, nurse, or dietitian recommends.

Suggested times	Amount of formula	Water flushes before and after feeding
____ am	____ can(s) or ____ mL	____ mL
____ am pm	____ can(s) or ____ mL	____ mL
____ am pm	____ can(s) or ____ mL	____ mL
____ pm	____ can(s) or ____ mL	____ mL
____ pm	____ can(s) or ____ mL	____ mL

If you are admitted to the hospital and need tube feedings, your nurse will contact your dietitian so that there is no change in your feeding schedule. Bring your button adapter with you to the hospital, if you have one. During your first week at home, your nurse will call to check your progress with the feeding tube.

Instructions for tube feeding

1. Gather the following supplies:
 - Amount of formula prescribed by your doctor
 - Empty container
 - Cup
 - Container of water (tap water is okay as long as it's safe to drink)
 - A 60 mL catheter tip syringe
 - Tape
 - A button adapter, if you have a button (see Figure 2) instead of a tube (see Figure 3).

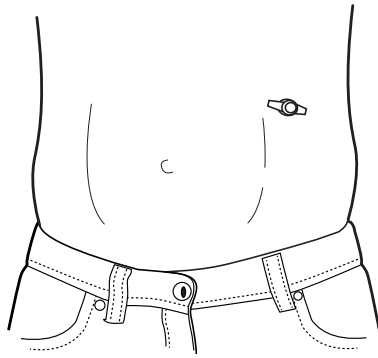


Figure 2: Button

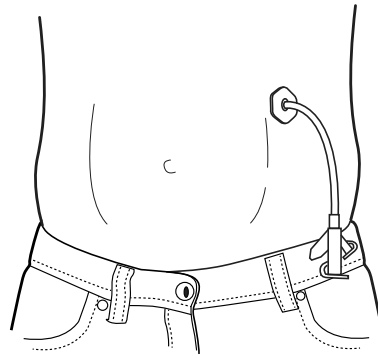


Figure 3: Gastrostomy tube

2. Wash your hands thoroughly with soap and water or use an alcohol-based hand sanitizer.
3. Open the plug at the end of your feeding tube (see Figure 4). If you have a button, insert the adapter into it (see Figure 5). If you are using a tube without a clamp, such as one that was placed in Interventional Radiology, pinch the end of the tube to avoid leakage or put the tube in a cup.
4. Draw up the amount of water recommended by your nurse or dietician into the catheter tip syringe (see Figure 6). This amount is listed on your feeding schedule on page 2. Insert the syringe into the end of your feeding tube or button adapter.

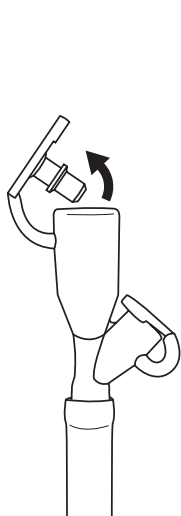


Figure 4:
Opening plug at end
of feeding tube

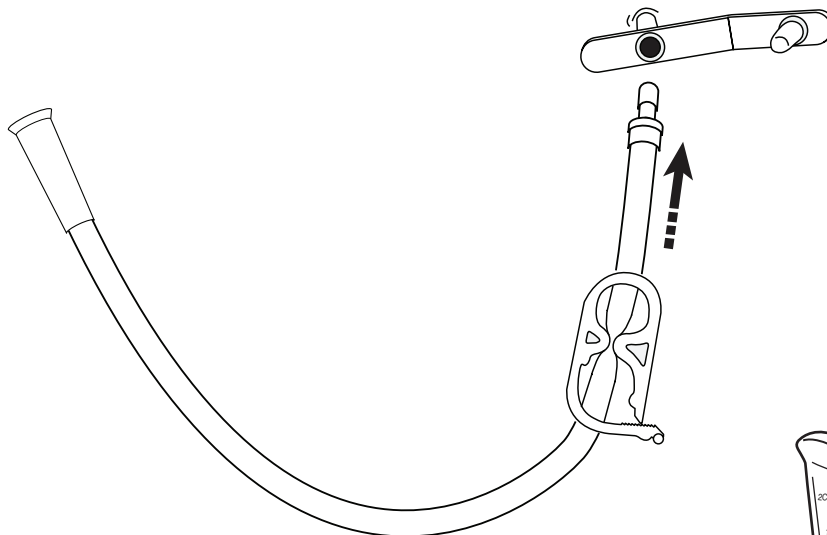


Figure 5:
Inserting adapter into button

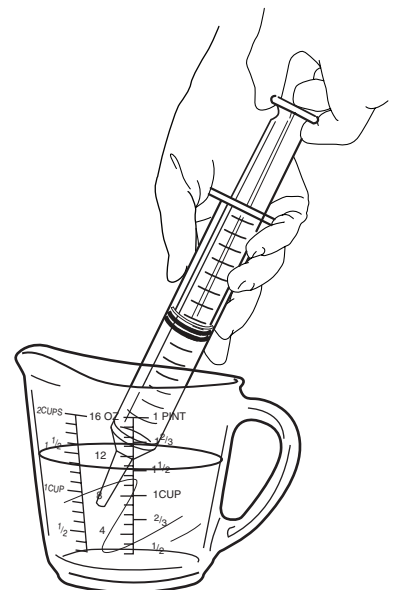


Figure 6:
Drawing up the water into
syringe

5. Unclamp your feeding tube (see Figure 7). Inject the water into your feeding tube to flush it (see Figure 8).
6. Reclamp your feeding tube. Disconnect the syringe.
7. Wipe the top of the formula can with a clean cloth or paper towel. Pour the prescribed amount of formula into the empty container. Draw up the formula into the syringe (see Figure 9).



Figure 7:
Unclamping the
feeding tube

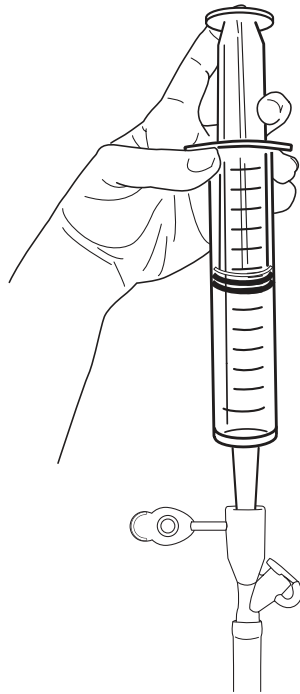


Figure 8:
Flushing the feeding tube

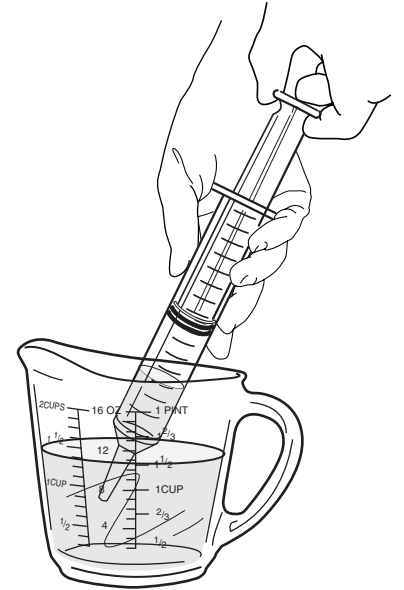


Figure 9:
Drawing up the formula
into the syringe

8. Insert the tip of the syringe into your feeding tube or button adapter (see Figure 10). Make sure that the tip of the syringe is inserted firmly. You can put a piece of tape over the connection to keep it from separating.
9. Unclamp your feeding tube and slowly push the plunger down. Clamp your feeding tube in between each bolus to prevent leakage.
10. Refill the syringe with formula. Repeat the procedure until you have injected the prescribed amount of formula. Clamp your feeding tube.

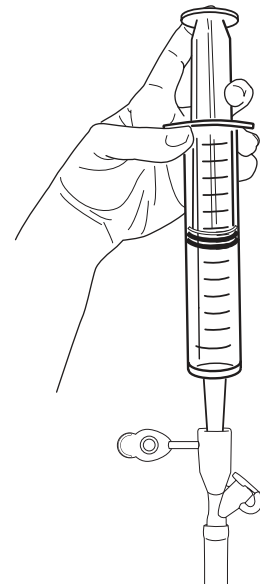


Figure 10:
Inserting the syringe
into the feeding tube

11. If you feel full, wait 10 to 15 minutes before you continue the feeding. Instead, you can:

- Remove the plunger from the syringe.
- Insert the tip of the syringe into your feeding tube.
- Hold the syringe upright and fill it with 30 to 60 mL of water.
- Unclamp your feeding tube.
- Let the water drip in. Refill the syringe with the formula when the level gets low (see Figure 11).

12. Unclamp your feeding tube.

13. Fill the syringe with the amount of water recommended by your nurse or dietitian. Insert the syringe into your feeding tube and flush the feeding tube.

14. Clamp your feeding tube, remove the button adapter (if you are using one), and cap your feeding tube.

15. Repeat steps 1-14 with each feeding.

16. Repeat the full procedure 3 4 5 times a day.

If you feel too full or are having nausea and vomiting, tell your doctor, dietitian, or nurse.

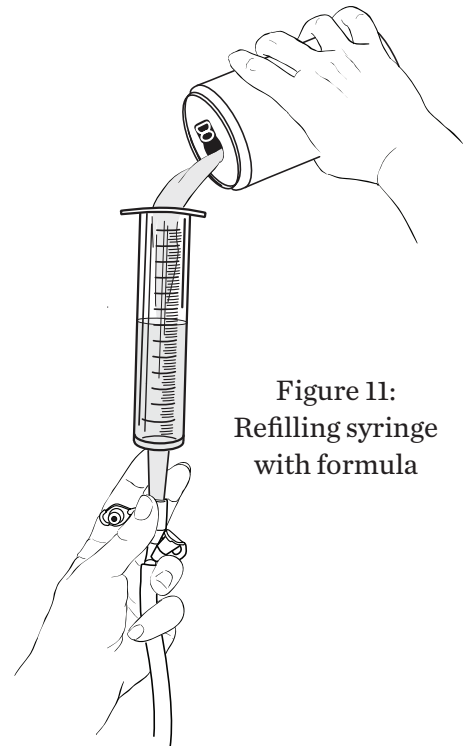


Figure 11:
Refilling syringe
with formula

Taking Medications

Ask your doctor or pharmacist if you can take your medications through your feeding tube. Most medications that you normally take by mouth can be taken through your feeding tube. Medications must be in liquid form or crushed into a powder to prevent your feeding tube from getting clogged. Many medications come in a liquid form. Ask your doctor or pharmacist about liquid forms if you take pills, tablets, or capsules. If you take spansules, ask your pharmacist, doctor, or nurse how to take them. Spansules are capsules that are long-acting, meaning that the medication is released over time rather than all at once.

Some medications have to be taken on an empty stomach while others must be taken with food. If you are taking lansoprazole (Prevacid®) or omeprazole (Prilosec®), ask your pharmacist, doctor, or nurse how to take these medications through your feeding tube.

Write down your medication schedule and keep it readily available. Update it when anything changes. That will make it easy for all family members or caregivers to know your medication schedule. Bring a copy of the schedule to your doctor visits. Your doctor will want to review your medications at each visit.

Always flush your feeding tube with 30 to 60 mL of water before and after you take each medication. This will prevent clogging.

Instructions for taking medications

1. Gather the following supplies:

- A small cup or glass
- A 60 mL catheter tip syringe
- Medication in liquid or powder form

- Mortar and pestle or a pill crusher, if needed
 - Water (tap water is okay as long as it's safe to drink)
 - Spoon
 - Button adapter, if you have a button
2. Wash your hands thoroughly with soap and water or use an alcohol-based hand sanitizer.
 3. Flush your feeding tube with 30 to 60 mL of water. Clamp the feeding tube.
 4. If your medication is in **liquid form**:
 - Liquid medications contain sorbitol. Sorbitol can cause bloating, cramping, diarrhea, or all of these symptoms if not taken as directed.
 - Pour the medication into a small cup or measure the exact amount using a small measuring spoon. Unless you are given other instructions, give each liquid medication separately.
 - Add 30 mL (1 ounce) of water to the medication. Draw up the solution using the catheter tip syringe.
 - Go to step 5.

If your medication is in **tablet or pill form**:

- Tablets and pills must be crushed to a fine powder using a mortar and pestle or a pill crusher. You can buy these at your local pharmacy. Crush each medication separately.
- Add 30 mL (1 ounce) of warm water to each medication. Mix it well with the spoon until the medication dissolves.
- Draw the prepared medication into the catheter tip syringe.
- Go to step 5.

If your medication is a **capsule**:

- Capsules must be opened so that the powder inside can dissolve. Open the prescribed number of capsule(s).
 - Add 30 mL (1 ounce) of warm water to the medication. Mix it well with the spoon until the medication dissolves.
 - Draw the prepared medication into the catheter tip syringe.
 - Go to step 5.
5. Attach the syringe to the feeding tube or button adapter, if you are using one. Unclamp the tube and gently push in the medication. Reclamp the tube.
 6. Attach the syringe filled with 30 to 60 mL of water to your feeding tube. Unclamp the tube and flush it thoroughly. Reclamp it before removing the syringe. Repeat the flushing if the water moves too slowly through the tube.
 7. Close the plug or reattach the cap at the end of your feeding tube. Remove the button adapter, if you are using one.
 8. After taking the medication(s), pull the syringe apart and wash all of the equipment with warm, soapy water. Rinse all the equipment well.

Do not mix different medications together unless instructed by your doctor or pharmacist. **If you are taking a large number of medications, ask your pharmacist if you can take any of them together.**

Tracking Symptoms

Keep a diary

A diary will help if you have any problems or questions. It will also help you document what has been going on at home if you need to come to the hospital. In your diary:

- Record your weight twice a week.
- If you're allowed to eat or drink by mouth, keep track of the amount. This will tell you your total nutritional intake.
- Note any swelling of your face, hands, or feet.
- Note any changes in your stool or urine color, consistency, frequency, or amount.
- Note any abdominal discomfort, nausea, vomiting, or other problem that may relate to your feeding. If you're not sure, write it down and talk with your doctor, nurse, or dietitian about it.

Monitoring your fluid balance

- Weigh yourself 2 times a week at the same time of day and in the same type of clothing. Record it in your diary.
- Call your doctor, dietitian, or nurse if you:
 - Gain more than 5 pounds in 1 week
 - Lose more than 2 pounds in 1 week
 - Develop swelling of your feet, legs, hands, or face
 - Feel very thirsty
 - Feel dizzy
 - Have difficulty breathing

Managing Symptoms

Constipation

Your bowel movements may change while you are on tube feedings. They may also change if you are on pain medication. The length of time between bowel movements varies from person to person, but if you're having fewer bowel movements than what is normal for you, you are constipated.

To avoid constipation, talk with your doctor or nurse about taking a stool softener such as docusate sodium (Colace®), a mild laxative such as senna (Senokot®), or a fiber supplement such as Metamucil®.

If you develop constipation:

- Drink liquids if you are allowed, or take additional liquids through your feeding tube.
 - Take 1 cup of liquid 3 times a day between your feedings through your feeding tube.
 - Take 4 ounces of prune juice every day. If you're taking the prune juice through your feeding tube, flush your feeding tube with 30 to 60 mL of water after taking the juice.

- If you have any of the symptoms below, call your doctor, nurse, or dietitian for advice.
 - Your stool is hard and dry
 - You do not have a bowel movement after 2 days
 - You have nausea or vomiting

Bloating, nausea, stomach cramps, and/or diarrhea

If you develop bloating, nausea, stomach cramps, and/or diarrhea (3 or more watery bowel movements a day):

- Replace the formula in your next feeding with an equal amount of clear liquid. Clear liquids are anything you can see through, such as ginger ale, tea, or broth. For example, if you take 240 mL of formula per feeding, take 240 mL of clear liquid diluted with 240 mL of water.
- For your next feeding, take half as much formula as you usually take and double the amount of water you usually use for your water flushes. Allow it to drip slowly.
- When your symptoms go away, take the full amount of formula and your usual water flushes before and after each feeding.
- If the bloating, nausea, stomach cramps, or diarrhea last longer than 24 hours or you vomit, call your doctor or nurse.

Ordering Supplies

Your case manager will check with your insurance company about your insurance coverage. If you have appropriate insurance coverage, you will be referred to a home care provider. They will supply you with formula and equipment. After being ordered, the supplies usually arrive the next day. If your insurance does not cover the formula, you can buy that brand or a generic substitute at a local pharmacy, grocery store, or from a pharmaceutical company on the Internet.

If you are no longer having tube feedings, your leftover supplies can be donated. Check with your local visiting nurse service (VNS), hospice program, nursing home, food bank, or church to see if they can accept the supplies.

Storing Formula

- Check the expiration date of your formula. Unopened cans of formula can be stored at room temperature for long periods of time.
- Cover open cans of formula and store them in the refrigerator between feedings. Throw away any open, unused cans of formula after 24 hours.



Call Your Doctor or Nurse if You:

- See any of the following at your insertion site:
 - Bleeding that soaks a small gauze pad
 - Pus or drainage with a foul smell
 - Redness
 - Swelling
 - Increased pain not relieved by medication
- Feel too full after feedings

- Have abnormal swelling in your abdomen
- Have nausea or vomiting for more than 24 hours
- Have bloating, stomach cramps, and/or diarrhea for more than 24 hours
- Have not had a bowel movement in 2 days
- Have hard and dry stool
- Have changes in your stool or urine color, consistency, frequency, or volume
- Have a temperature of 101° F (38.3° C) or higher, with or without chills
- Gain more than 5 pounds per week
- Lose more than 2 pounds per week
- Develop swelling of your feet, legs, hands, or face
- Develop excessive thirst or dizziness
- Have difficulty breathing

Contact Information

If you have any questions or concerns, call the Nutrition Service office at (212) 639-6985 and ask for the outpatient nurse. You can reach the office Monday through Friday from 9:00 am to 5:00 pm. After 5:00 pm, during weekend, and on holidays, please call (212) 639-2000 and ask for the GI fellow on call.

Doctor: _____

Telephone: _____

Home care agency: _____

Telephone: _____

Home care agency contact person: _____

Telephone: _____

Follow-up appointment:

Date: _____ Time: _____