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), gastrostomy tube (GT), or nasogastric tube (NGT).

About Tube Feeding

Tube feeding is when you get your nutrients through a feeding tube if you aren’t able to get enough through eating and drinking, or if you can’t swallow safely. Nutrients provide energy and help you heal.

The bolus method is a type of feeding where a syringe is used to send formula through your feeding tube. The syringe you’ll use is called a catheter syringe. A catheter syringe doesn’t have a needle. It has a hole with a plunger in it. You draw up formula through the hole in the syringe then push the formula into your feeding tube with the plunger. A bolus refers to 1 “meal” of formula.

You may have a feeding tube with a legacy connector or an ENFit connector. In this resource, we’ll show images of both types of connectors.

For more information about your feeding tube, including how to manage side effects, read Tube Feeding Troubleshooting Guide.
Tube Feeding Guidelines

Formula: __________
Total cans per day: ____________________ (8 ounces each)
Calories per day: __________

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, advanced practice provider (APP), or clinical dietitian nutritionist recommends.

<table>
<thead>
<tr>
<th>Suggested times</th>
<th>Amount of formula</th>
<th>Water flushes before and after feeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>________ am</td>
<td>___can(s) or ___mL</td>
<td>_______mL</td>
</tr>
<tr>
<td>_____ am</td>
<td>pm</td>
<td>___can(s) or ___mL</td>
</tr>
<tr>
<td>_____ am</td>
<td>pm</td>
<td>___can(s) or ___mL</td>
</tr>
<tr>
<td>________ pm</td>
<td>___can(s) or ___mL</td>
<td>_______mL</td>
</tr>
<tr>
<td>________ pm</td>
<td>___can(s) or ___mL</td>
<td>_______mL</td>
</tr>
</tbody>
</table>

Your clinical dietitian nutritionist will talk with you about your daily nutrition and hydration goals. Follow their recommendations. In addition to your formula, be sure to give yourself the recommended water flushes listed above to meet your fluid needs. If you’re admitted to the hospital, bring your button adapter with you, if you have one.

Tube Feeding Instructions

Follow the steps in this section during your tube feeding. Read How to Prevent Aspiration (www.mskcc.org/pe/prevent_aspiration) before tube feeding to learn how to avoid having your formula go down your airway.

1. Clean your hands.
   - If you’re washing your hands with soap and water, wet your hands, apply soap, rub them together thoroughly for at least 20 seconds, then rinse. Dry your hands with a towel and use that same towel to turn off the faucet.
   - If you’re using an alcohol-based hand sanitizer, be sure to cover all of your
hands with it, rubbing them together until they’re dry.

2. Gather your supplies in a clean and comfortable place. Don’t set up or do your tube feeding in the bathroom. You’ll need:

- The amount of formula prescribed by your healthcare provider
- An empty container
- A cup
- A clean cloth or paper towel
- A container of water. You can use tap water as long as it’s safe to drink.
- A 60 milliliter (mL) legacy catheter tip or ENFit syringe
- Tape
- A button adapter, if you have one instead of a tube (see Figure 1 and 2)

3. Open the plug at the end of your feeding tube (see Figure 3). If you have a button, put the adapter into it (see Figure 4).

- If you’re using a tube without a clamp, pinch the end of the tube to avoid leakage or put the tube in a cup. For the rest of this resource, when we use the words “unclamp” or “reclamp,” you should “unpinch” or “repinch” your feeding tube instead.
4. Fill the syringe with the amount of water recommended by your healthcare provider (see Figure 5). Place the syringe into the end of your feeding tube or button adapter.

5. Unclamp your feeding tube (see Figure 6). Flush your feeding tube (see Figure 7).
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. Fill the syringe with the formula into the syringe (see Figure 8).

![Figure 8. Fill the syringe with formula](image)

8. Put the catheter tip syringe into your feeding tube or button adapter (see Figure 9). Make sure that the tip of the syringe is placed firmly. You can put a piece of tape over the connection to keep it from separating.

![Figure 9. Place the syringe into your feeding tube with legacy connector (left) and ENFit (right)](image)

9. Unclamp your feeding tube and slowly push the plunger down. Clamp your
feeding tube in between each syringe of formula to prevent leakage.

10. Refill the syringe with formula (see Figure 10). Repeat steps 7 to 9 until you’ve injected the prescribed amount of formula. This should take at least 15 minutes. Clamp your feeding tube when you’re done.
   - You also have the option to remove the syringe plunger and slowly drip in the formula over at least 15 minutes.

11. Fill the syringe with the amount of water recommended by your healthcare provider. Place the syringe into the end of your feeding tube or button adapter.

12. Clamp your feeding tube, remove the button adapter (if you’re using one), and cap your feeding tube.

13. After each feeding, pull the syringe apart and rinse all of the equipment with warm water. Let your supplies air dry.

14. Repeat steps 1 to 13 with each feeding.

**Important points**

- Always reclamp your feeding tube before removing your legacy catheter tip or ENFit syringe to avoid leakage.

- Move the clamp to different sections of your feeding tube to avoid permanent kinking the tube.

- To avoid clogging, always flush your feeding tube with the amount of water recommended by your healthcare provider (usually 60 mL) before and after:
  - Each feeding.
  - Taking each medication.

- If you aren’t using your feeding tube daily, flush it with 60 mL of water at least once a day.
Taking Medications Through Your Feeding Tube

Ask your healthcare provider 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 healthcare provider about liquid forms if you take pills, tablets, or capsules.

Tablets or capsules that are enteric-coated, extended-release (XR), or slow-release (SR) can’t be taken through your feeding tube. If you take any medications in that form, ask your healthcare provider if you can get the medication in a different form.

Don’t mix different medications together unless instructed by your healthcare provider. If you’re taking more than 1 medication, ask your healthcare provider if you can take any of them together.

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

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

Instructions for taking medications

1. Clean your hands.
   - If you’re washing your hands with soap and water, wet your hands, apply soap, rub them together thoroughly for at least 20 seconds, then rinse. Dry your hands with a clean towel, and use that same towel to turn off the faucet.
- If you’re using an alcohol-based hand sanitizer, be sure to cover all of your hands with it, rubbing them together until they’re dry.

2. Gather your supplies in a clean and comfortable place. Don’t set up or do your tube feeding in the bathroom. You’ll need:
   - A small cup or glass
   - A 60 mL legacy catheter tip or ENFit syringe
   - Medication in liquid or powder form
   - Mortar and pestle or a pill crusher, if needed
   - Water (You can use tap water as long as it’s safe to drink)
   - A spoon
   - A button adapter, if you have one

3. Flush your feeding tube with 60 mL of water. Clamp your feeding tube.

4. If your medication is in **liquid form**:
   - Liquid medications may contain sorbitol. Sorbitol can cause bloating, cramping, diarrhea (loose or watery bowel movements), or all of these symptoms. If you have any of these symptoms, talk with your healthcare provider.
   - Pour the medication into a small cup or measure the exact amount using a small measuring spoon. Unless you’re given other instructions, take each liquid medication separately.
   - Add at least 30 mL of water to the medication. Fill the syringe with the solution.
   - 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 at least 30 mL of warm water to each medication. Mix it well with the spoon until the medication dissolves.

• Fill the syringe with the medication. Remember to draw up each medication separately unless your healthcare provider instructs you differently.

• 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 at least 30 mL of warm water to the medication. Mix it well with the spoon until the medication dissolves.

• Fill the syringe with the medication.

• Go to step 5.

5. Attach the syringe to your feeding tube or button adapter, if you’re using one. Unclamp the tube and gently push in the medication. Reclamp the tube.

6. Attach the syringe filled with 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’re using one.

8. After taking the medication(s), pull the syringe apart and wash all of the equipment with warm water. Let your supplies air dry.

**Ordering Supplies**

Your case manager will check with your insurance company about your insurance coverage. If your insurance covers tube feedings, we’ll refer you to a home care provider. They’ll supply you with formula and equipment.

If your insurance doesn’t cover your formula or supplies, you can buy that brand or a generic substitute at a local pharmacy, grocery store, or online. Always reorder
formula and equipment when you have at least 10 days of supplies at home so you never run out of formula.

If you’re no longer having tube feedings, you can donate your leftover supplies. Contact the Oley Foundation by calling 518-262-5079 or visit their website at www.oley.org

**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.

**When to Call Your Healthcare Provider**

Call your healthcare provider if you:

- See any of the following at your insertion site:
  - Bleeding that soaks a small gauze pad
  - Pus or drainage that smells bad
  - Redness
  - Swelling
  - Increased pain that doesn’t go away with medication
- Have any of the following changes to your bowel function:
  - Haven’t had a bowel movement (pooped) in 2 days
  - Have hard and dry bowel movements
  - Have any changes in your bowel movement, such as in the color, consistency, frequency, or amount.
- Have any changes in your urine (pee), such as in the color, frequency, or amount.
• Have changes in your weight, such as:
  ○ Gain more than 5 pounds (2.3 kilograms) per week
  ○ Lose more than 2 pounds (0.90 kilograms) per week
• Feel too full after feedings
• Have swelling in your abdomen (belly), feet, legs, hands, or face
• Have nausea (feeling like you’re going to throw up)
• Are vomiting (throwing up)
• Have bloating, stomach cramps, or diarrhea
• Have a fever of 100.4° F (38° C) or higher
• Have chills
• Are dizzy
• Have trouble breathing

**Contact Information**

If you have any questions or concerns, call the Nutrition Service office at 212-639-6984 and ask for the outpatient APP. 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, call 212-639-2000 and ask for the gastrointestinal (GI) fellow on call.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.