



PATIENT & CAREGIVER EDUCATION

Tube Feeding Using the Gravity Method

This information will help teach you how to use the gravity method to feed yourself and take your medications through your percutaneous endoscopic gastrostomy (PEG), gastrostomy tube (GT), or nasogastric tube (NGT).

After you have your feeding tube placed, please call 212-639-6984 to schedule a follow-up appointment in the nutrition clinic.

About Tube Feeding

A feeding tube will give you nutrients 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 gravity method is a type of feeding where formula flows out from your feeding bag and into your feeding tube by gravity.

Tube Feeding Nutritional Guidelines

Formula: _____

Cans per day: _____ (8 ounces each)

Total calories per day: _____ Calories

Additional water to take per day: _____ mL

Total liquid volume per day: _____ mL

You can take additional clear liquids through your feeding tube. Clear liquids are anything you can see through, such as tea, black coffee, broth, clear sodas (such as 7-Up[®], Sprite[®], ginger ale, seltzer, or Gatorade[®]), or clear juices (such as white cranberry, white grape, or apple). You should take them at room temperature. **These liquids shouldn't replace the amount of formula you need to take each 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 practitioner (NP), 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're admitted to the hospital and need tube feedings, your NP will contact your dietitian so that there's no change in your feeding schedule. Bring your button adapter with you to the hospital, if you have one.

Tube Feeding Position

Sit up in a chair during your tube feeding. If you're getting your tube feeding while in bed, use a wedge pillow to prop yourself up to at least 45 degrees (see Figure 1). You can buy a wedge pillow through websites such as Amazon.com or at your local surgical supply store.



Figure 1. Sitting up at a 45-degree angle

Sit or stand in an upright position for 1 hour after the feeding is finished. This will prevent the formula from entering your lungs if you vomit. You can also get up and walk around, if you'd like.

Tube Feeding Instructions

1. Clean your hands.
 - If you're washing your hands with soap and water, wet your hands, apply soap, rub them together thoroughly for 15 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 will need:
 - The amount of formula prescribed by your doctor or NP
 - A gravity feeding bag
 - A cup
 - An IV pole or hook for hanging the feeding bag
 - 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 mL catheter tip syringe
 - A clean cloth or paper towel
 - Tape
 - A button adapter, if you have a button (see Figure 2) instead of a tube (see Figure 3)

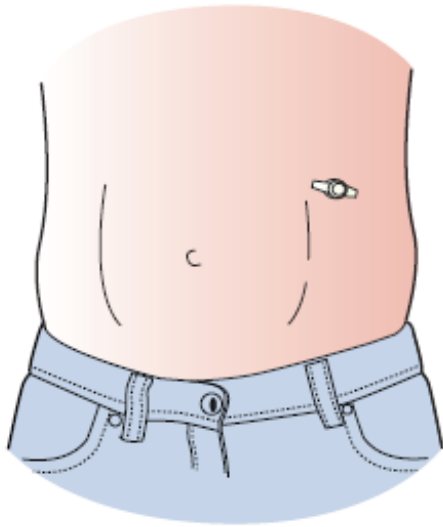


Figure 2. Button

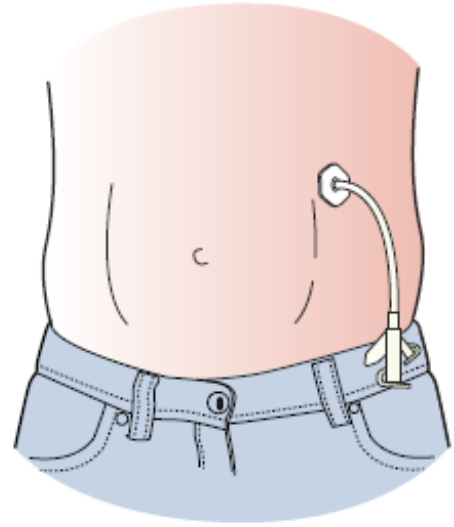


Figure 3. Gastrostomy tube

3. Close the roller clamp on the feeding bag (see Figure 4).

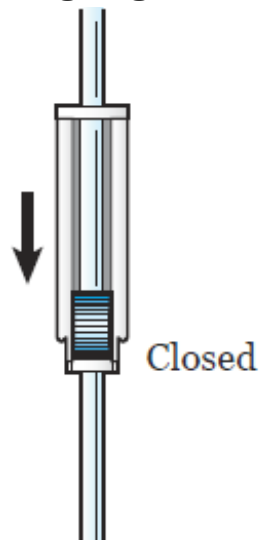


Figure 4. Closing the roller clamp

4. Wipe the top of the formula can with a clean cloth or paper towel. Pour the prescribed amount of formula into the feeding bag (see Figure 5). This amount is listed in the “Tube feeding schedule” section of this resource.

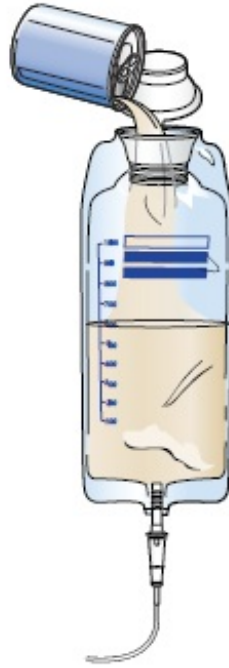


Figure 5. Filling the feeding bag

5. Hang the feeding bag 2 to 3 feet above you on either an IV pole or hook (see Figure 6). It should be close to a comfortable chair or your bed.

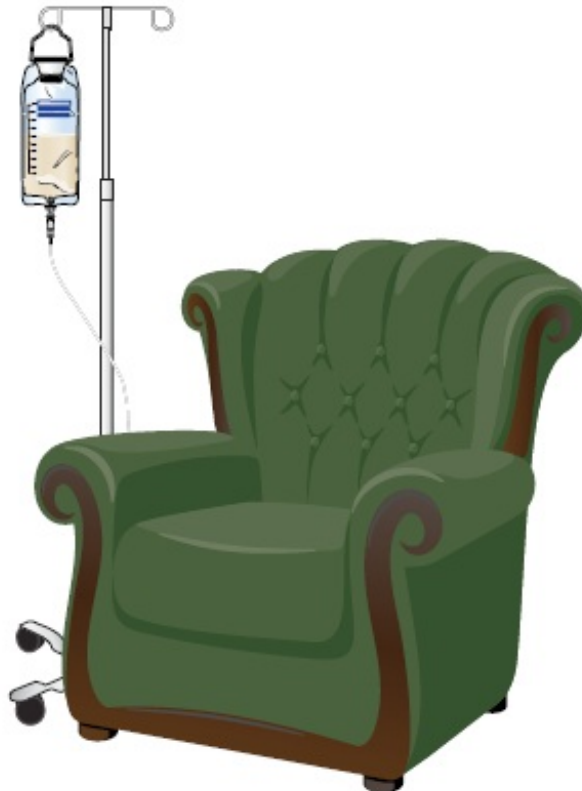


Figure 6. Hanging the feeding bag

6. Hold the end of the feeding bag tube over a cup. Remove the cap at the end of the tube. Slowly open the roller clamp on the feeding bag tube (see Figure 7). Allow the formula to run through the tubing, then close the clamp. This

gets the air out of the tubing. If your feeding bag tubing doesn't have a roller clamp, slowly open the cap and pinch the tubing until the liquid gets to the end.

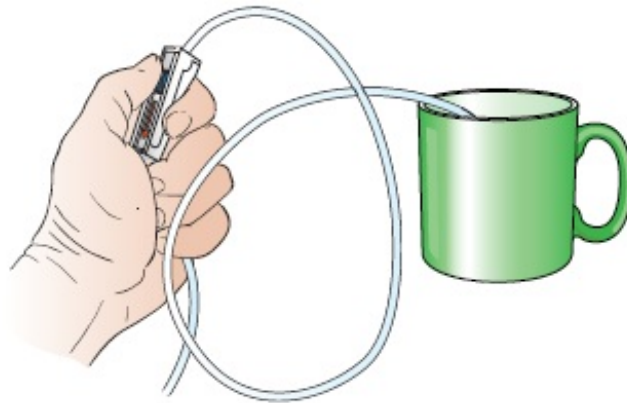


Figure 7. Opening roller clamp on feeding bag tube

7. Open the plug at the end of your feeding tube (see Figure 8). If you have a button, insert the adapter into it (see Figure 9).
 - If you're 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. For the rest of this resource, when we use the words "unclamp" or "reclamp", you should "unpinch" or "repinch" your feeding tube instead.



Figure 8. Opening plug at end of feeding tube

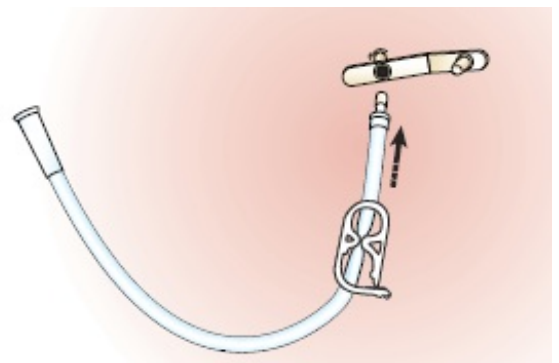


Figure 9. Inserting adapter into button

8. Fill the syringe with the amount of water recommended by your NP or dietitian into the catheter tip syringe. This amount of water to use is listed in the "Tube feeding schedule" section of this resource. Place the syringe into your feeding tube or button adapter.
9. Unclamp your feeding tube (see Figure 10). Flush your feeding tube (see Figure 11).



Figure 10. Unclamping the feeding tube



Figure 11. Flushing the feeding tube

10. Reclamp your feeding tube. Disconnect the syringe.
11. Connect the end of the feeding bag tubing to your feeding tube or button adapter (see Figure 12). Make sure that the end of the tube is placed firmly. You can put a piece of tape over the connection to keep it from separating.

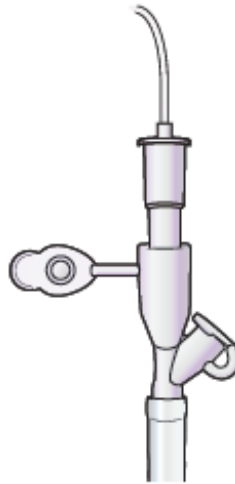


Figure 12. Connecting feeding bag tubing to feeding tube

12. Unclamp your feeding tube and slowly open the roller clamp on the feeding bag tubing (see Figure 13). Allow the formula to drip in over 30 to 45 minutes. Check the bag every 15 minutes. If the formula is flowing too fast or too slowly, adjust the roller clamp as needed (see Figure 13). You can also lower or raise the bag to change the flow of the formula. As you do this more and more, you will learn how high to hang the bag.

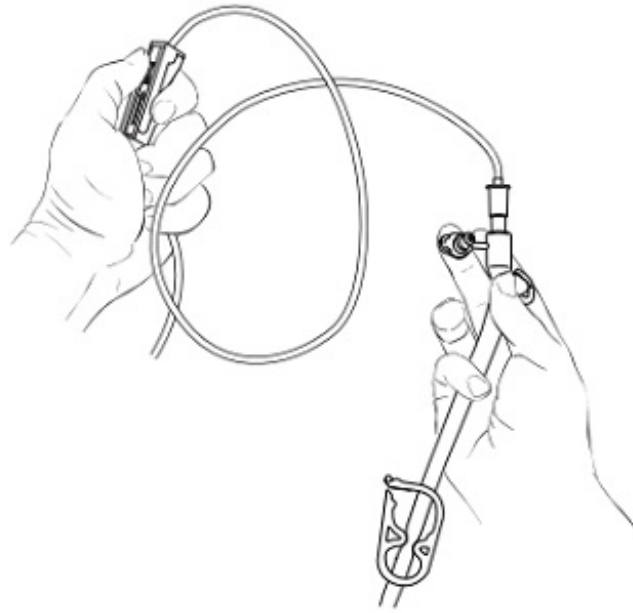


Figure 13. Unclamping feeding tube and opening roller clamp on feeding bag tubing

13. When the feeding bag is empty, close the roller clamp on the feeding bag tubing and close the clamp on your feeding tube. Disconnect the feeding bag and set it aside.
14. Fill the syringe with the amount of water recommended by your NP or dietitian. This amount is listed in the “Tube feeding schedule” section of this resource. Insert the syringe into your feeding tube. Unclamp and flush your feeding tube.
15. Clamp your feeding tube, remove the button adapter (if you’re using one), and cap your feeding tube.
16. Rinse the feeding bag and syringe with warm water after each feeding. Let your supplies air dry. Use a new feeding bag every 24 hours to prevent infection.
17. Repeat steps 1 to 16 with each feeding.
18. 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 NP.

Important points

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

- Move 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 NP or dietitian (usually 30 to 60 mL) before and after:
 - Each feeding.
 - Taking each medication.
 - Taking additional clear liquids.
- 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 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.

Enteric-coated, extended-release (XR), or slow-release (SR) tablets or capsules cannot be given through your feeding tube. If you take any medications in that form, ask your doctor or pharmacist if you can get the medication in a different form.

Do not mix different medications together unless instructed by your doctor or pharmacist. **If you're taking more than 1 medication, ask your doctor or pharmacist if you can take any of them together.**

Some medications have to be taken on an empty stomach while others must be taken with food. Talk with your doctor about how to take your medications. Take esomeprazole (Nexium®), lansoprazole (Prevacid®), omeprazole (Prilosec®), and pantoprazole (Protonix®) at least 30 minutes before eating, with or without using a feeding tube.

Write down your medication schedule and keep it readily available. 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 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. Clean your hands.
 - If you're washing your hands with soap and water, wet your hands, apply soap, rub them together thoroughly for 15 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 will need:
 - 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 (You can use tap water as long as it's safe to drink)
 - A spoon
 - Button adapter, if you have a button
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 may contain sorbitol. Sorbitol can cause bloating, cramping, diarrhea (loose or watery bowel movements), 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're given other instructions, take 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. Remember to draw up each medication separately unless directed otherwise.
- 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're 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'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.

Tracking Symptoms

Keep a diary

Keeping a diary can help you keep track of any problems or questions you may have. It will also help you remember what has been going on at home if you need to come to the hospital. In your diary:

- Write down 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.
- Write down any swelling of your face, hands, or feet.
- Write down any changes in your bowel movement, such as in the color, consistency, frequency, or amount.
- Write down any changes in your urine, such as in the color, frequency, or amount.
- Write down any abdominal (belly) 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, NP, 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. Write it down in your diary.
- Call your doctor, dietitian, or NP if you:
 - Gain more than 5 pounds (2.3 kilograms) in 1 week
 - Lose more than 2 pounds (.90 kilograms) in 1 week
 - Have swelling in your feet, legs, hands, or face
 - Feel very thirsty
 - Feel dizzy
 - Have difficulty breathing

Managing Side Effects

Constipation

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

To avoid constipation, talk with your doctor or NP 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're constipated, discuss the following options with your doctor, NP, or dietician:

- Drink liquids if you're 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.

Call your doctor, NP, or dietitian if:

- Your bowel movements are hard and dry.
- You don't have a bowel movement after 2 days.
- You have nausea or vomiting.

Bloating, nausea, stomach cramps, or diarrhea

If you have bloating, nausea, stomach cramps, or diarrhea:

- Replace the formula in your next feeding with an equal amount of clear liquid, such as tea, coffee, broth, or clear juices (white cranberry, white grape, or apple). For example, if you take 240 mL of formula per feeding, take 240 mL of clear liquid diluted with 240 mL of water instead of formula.
- Then, 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 NP.

Ordering Supplies

Your case manager will check with your insurance company about your insurance coverage. If your insurance covers tube feedings, we will refer you to a

home care provider. They will 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 only 10 days of supplies at home.

If you're no longer having tube feedings, your leftover supplies can often be donated. Please contact the Oley Foundation by calling 518-262-5079 or going to 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.

Call Your Doctor or NP 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 that doesn't go away with medication
- Feel too full after feedings
- Have swelling in your abdomen
- Have nausea or vomiting for more than 24 hours
- Have bloating, stomach cramps, or diarrhea for more than 24 hours
- Haven't had a bowel movement 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, such as in the color, frequency, or amount.
- Have a temperature of 101° F (38.3° C) or higher
- Have chills
- Gain more than 5 pounds (2.3 kilograms) per week
- Lose more than 2 pounds (.90 kilograms) per week
- Have swelling of your feet, legs, hands, or face
- Are dizzy
- Have difficulty breathing

Contact Information

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

Doctor: _____

Telephone: 212-639 6984

Home care agency: _____

Telephone: _____

Home care agency contact person: _____

Telephone: _____

For more resources, visit www.mskcc.org/pe to search our virtual library.

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