

Naso-enteric Feeding Tubes

A naso-enteric feeding tube is placed through the nose and advanced until it reaches the stomach or small intestine. Different size tubes may be used.

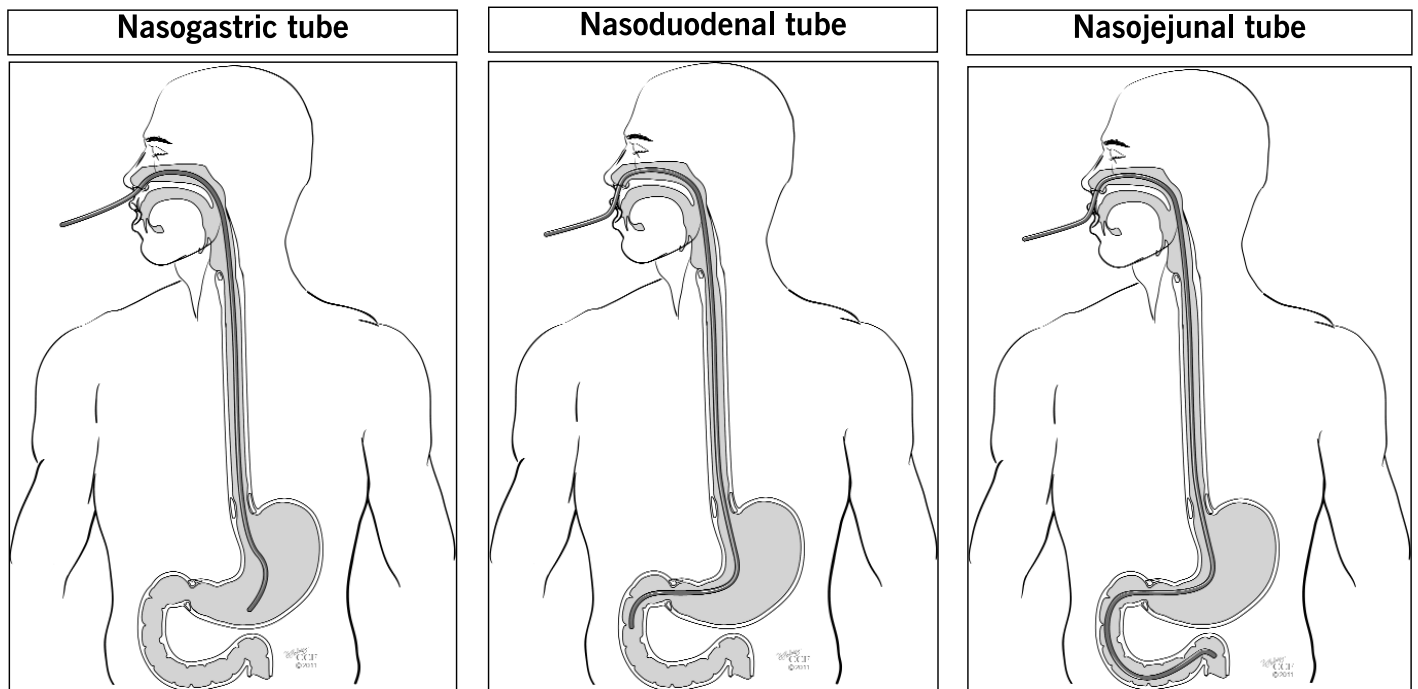
The type of tube you have is a _____.

The tip rests in your _____.

With all types of naso-enteric tubes, the feeding may be given by one of two methods:

1. Bolus - a method of giving a large amount of formula over 15 - 30 minutes several times a day, as tolerated
2. Continuous - a method for giving formula over an 8 - 24 hour period

Your feeding will be the _____ type.



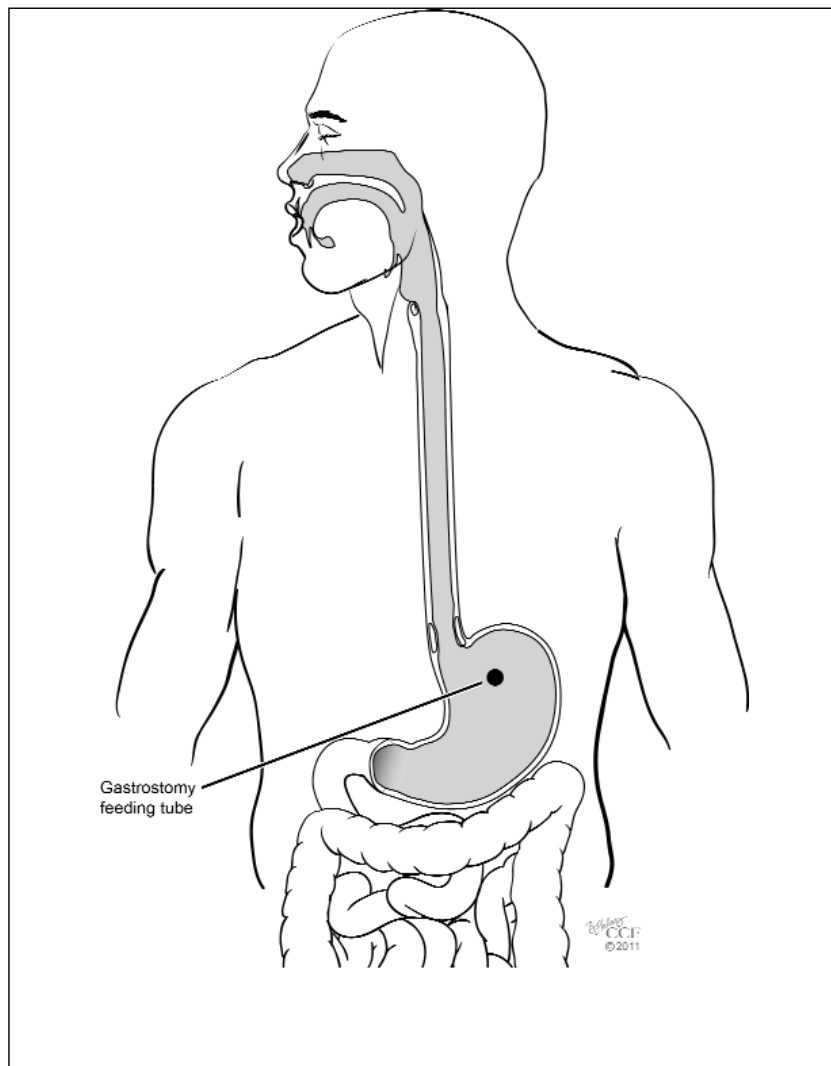
Gastrostomy Feeding Tubes

A gastrostomy tube is a feeding tube that is placed by a doctor through your abdomen into your stomach, bypassing the mouth and the esophagus.

With all types of gastrostomy tubes, the feeding may be given by one of two methods:

1. Bolus - a method of giving a large amount of formula over 15 - 30 minutes several times a day, as tolerated.
2. Continuous - a method for giving formula over an 8 - 24 hour period.

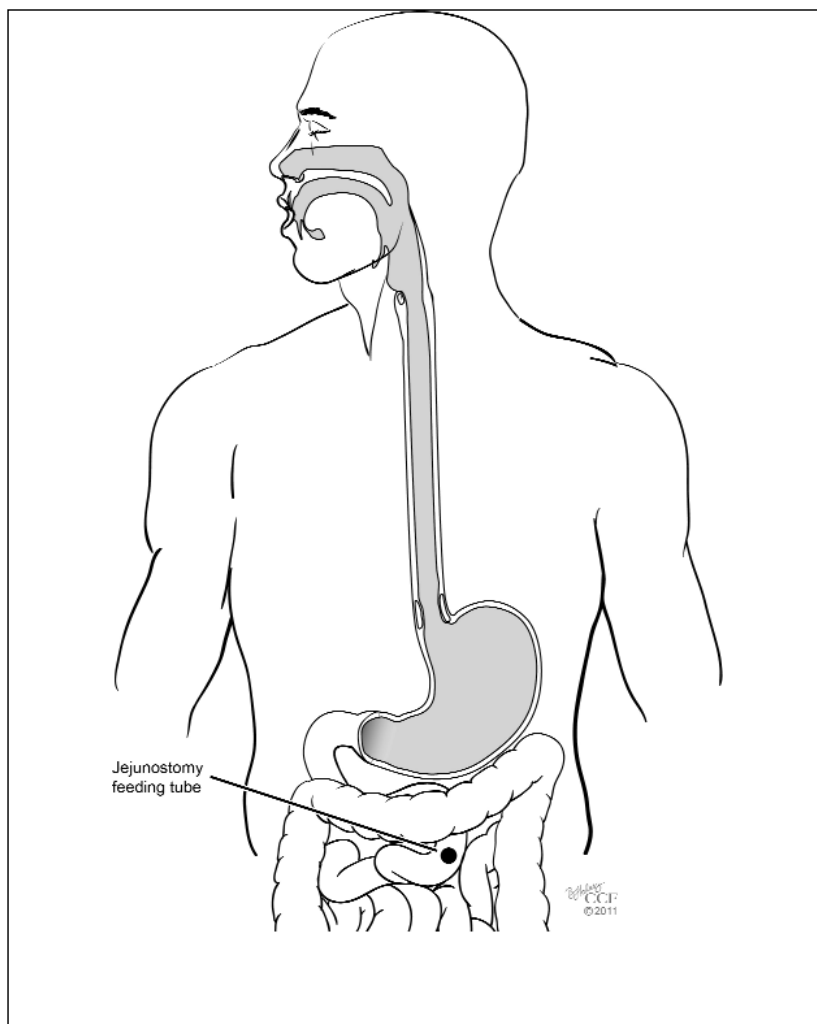
Your feeding will be the _____ type.



Jejunostomy Feeding Tubes

A jejunostomy tube is a feeding tube that is placed by a doctor through your abdomen into your small intestine (jejunum). Feeding into the jejunum bypasses the mouth, esophagus, and stomach.

Your feeding will be given by the continuous method. This is a method for giving the formula over an 8 - 24 hour period.

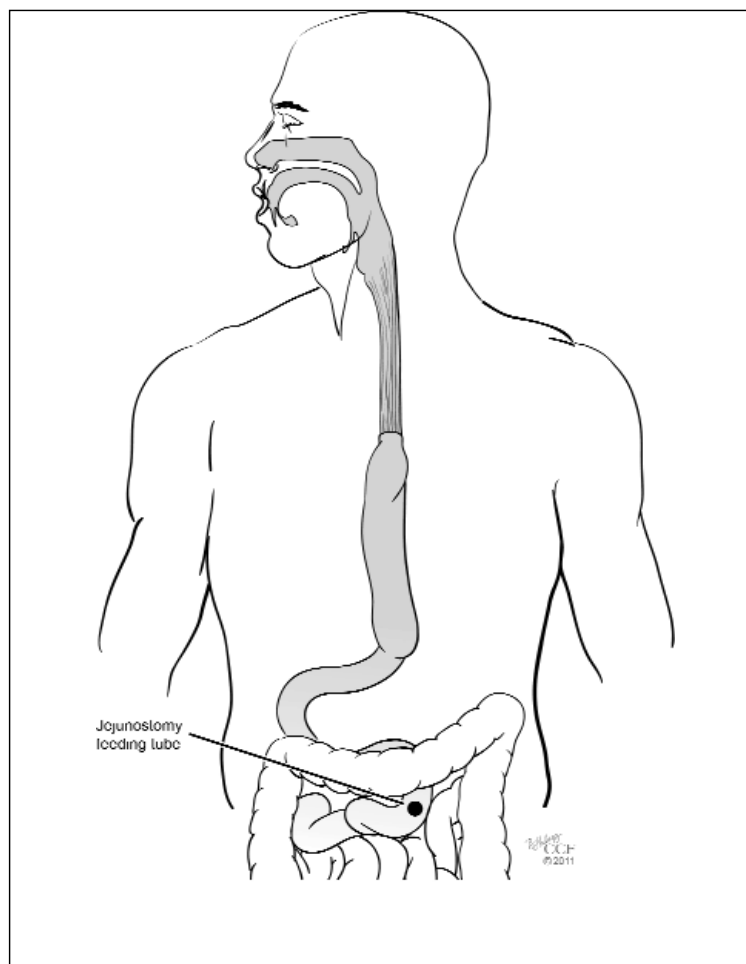


Surgically-placed Jejunostomy Feeding Tubes

A jejunostomy tube is a feeding tube that is placed through the skin in your abdomen into your small intestine (jejunum) during surgery. This feeding tube is used for food, water, and medication (instead of taking them by mouth).

Your tube feeding will be given continuously through a feeding pump. You will also need to give yourself plain water flushes with a syringe 6 times a day. The amount of the tube feeding and water flush is determined by your dietitian. To reduce reflux, you should never lie flat while the tube feedings are running. The head of the bed should be at a 30-degree angle, or more.

For some patients, the jejunostomy tube is a catheter with an internal balloon that holds the tube in place. The balloon port holds 1 - 3 ml of normal saline or water and is used to keep the tube in place. This port is to be checked twice weekly to keep the balloon from becoming over-inflated.



CARE OF YOUR SKIN AND STOMA

The dressing should be changed every day, or sooner if it becomes wet or soiled. Your nurse will show you how to change your dressing.

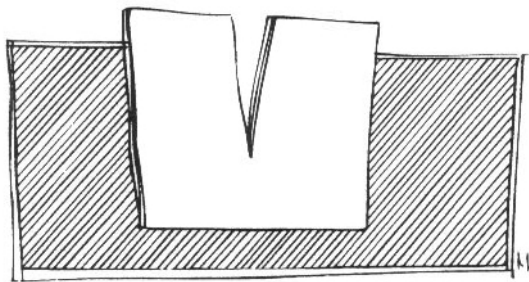
A. Gather supplies

1. soap and water
2. skin tape (if using)
3. gauze pad (if using)
4. scissors (if using)

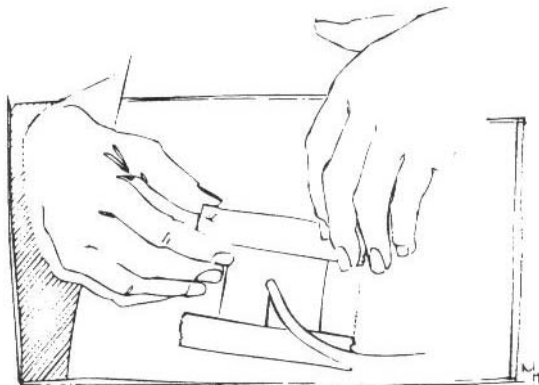
B. Wash hands with warm water and soap

C. Once each day, cleanse the area with soap and water. Rinse with tap water to remove all soap. Apply dressing as needed.*

D. Check for any changes in the skin or tube. Report any redness or swelling to your doctor.



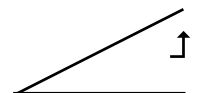
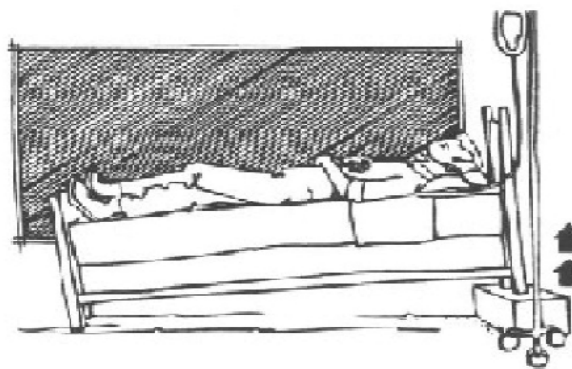
*To apply dressing:
cut a slit about
halfway through a
small gauze dressing
and put it around the
tube.



Tape around the edges.

PREPARATION FOR GIVING YOUR TUBE FEEDING

1. Wash your hands thoroughly with soap and water.
2. Gather supplies:
 - a. **cans of formula**--Store unopened cans of tube feeding formula at room temperature in a dry location. Shake can well before opening. Make sure the top of the can is clean. Once a can is opened, use immediately. Any unused portion should be stored in the refrigerator, covered, and dated. When refrigerated formula needs to be used for the next feeding, let it sit out at room temperature for approximately 30 minutes and then use. **Throw away any formula that has been opened for more than 24 hours.**
 - b. **syringes**--Clean with warm, soapy water and air dry between each use.
 - c. **cup of lukewarm tap water**--It does *not* need to be sterile or distilled water.
 - d. **feeding bag (if using)**--Make sure to use a new bag every day. Throw the bag away after 24 hours of use.
 - e. **feeding pump (if using)**
 - f. **IV pole (if using)**
3. Make sure you remain in a sitting position, or elevate the head of your bed to approximately 30-45 degrees during and after your feeding.



If you are giving a bolus feeding, wait at least an hour before lying down. If you are on a 24-hour continuous feeding, your head must be elevated at all times.

CHECKING RESIDUALS*

- * You can check residuals through a gastrostomy feeding tube (PEG).
- * Do NOT attempt to check residuals through a small bore feeding tube (Corpak), as they are easily occluded and displaced.
- * It is NOT necessary to check residuals on postpyloric feeding tubes (nasoduodenal, nasojejunal, or jejunostomy tubes).

To ensure that your stomach is emptying properly, you should check the residual. The residual is the amount of formula or gastric juice remaining in the stomach. If all of the feeding has not moved through the stomach before another feeding is given, you may experience nausea or bloating.

If you are on continuous tube feeding, it is recommended that you check the residual at least every 8 hours. If you are on bolus feedings, it is recommended that you check residual before each feeding.

PLEASE NOTE: If the patient is able to report whether or not his or her stomach feels full, it may not be necessary to check residuals. Otherwise, please follow the guidelines below.

To check the volume of residual:

1. Attach your syringe to the end of the feeding tube. Without pulling on the feeding tube, draw back on the plunger to withdraw stomach contents. This fluid is called the residual and contains electrolytes and enzymes that your body needs.
2. Note the amount of residual by checking the numbers on the side of the syringe. You may need extra syringes if you have a residual greater than 60 ml.
NOTE: If your stomach is empty, you may not be able to get any residual.
3. After recording the amount of residual, put the fluid back into your tube. Do not throw this fluid away. Flush your tube with 30 ml water after checking residuals. Plug the end of the feeding tube.
4. a. If the residual is less than 250 ml, put the fluid back into the feeding tube and resume the tube feeding as scheduled.

b. If the residual is greater than 250 ml and less than 400 ml, put the fluid back into the feeding tube and resume the tube feeding as scheduled. Recheck the residual after another 4 hours. At this time, if the residual is greater than 250 ml, please stop the feeding and call your doctor.

c. If the residual is greater than 400 ml at any time, stop the feeding immediately, discard the residual, and call your doctor.

GIVING YOUR BOLUS FEEDING (for nasogastric or gastrostomy tube feeding)

Bolus Syringe Method

1. Draw up _____ ml of warm water in the syringe. Gently flush the water through the tube to make sure the feeding tube is clean and open. Disconnect the syringe. Recap the end of the feeding tube.
2. There are two methods to follow. Follow method A / B. (circle one)

A	B
I) Remove the plunger from the syringe.	I) Pour _____ ml or _____ cups/cans of feeding into a clean cup.
II) Uncap the feeding tube.	II) Uncap the feeding tube.
III) Attach the syringe directly to your feeding tube. Pour _____ ml or _____ cups/cans of feeding into the syringe, allowing it to flow freely until all of the feeding is given.	III) Draw up the feeding with the syringe and plunge into the feeding tube slowly.
	IV) Repeat until all of the feeding is given.

3. Take the syringe and draw up ____ ml warm water. Gently flush the water through the tube again to make sure the tube is clean and open. This water also helps keep you hydrated.
4. Disconnect the syringe from the feeding tube.
5. Recap the feeding tube.
6. Repeat the procedure _____ times a day. If you do not tolerate the prescribed amount of formula, notify your dietitian.

Gravity Drip Method

1. Draw up _____ ml of warm water into the syringe. Gently flush the water through the tube to make sure the feeding tube is clean and open. Disconnect the syringe and recap the end of the feeding tube.
2. The roller clamp on the feeding set should be at lowest or “off” position.
3. Pour _____ ml or _____ cups/cans into bag. Close the bag.
4. Hang the feeding bag on an IV pole or hook that is higher than your head.
5. Hold the end of the feeding bag tube over a cup. Remove the cap at its end and adjust the roller clamp up to the “on” position, allowing feeding to flow to end of the tubing. Allow the formula to run through the tubing, then close the clamp. This gets air out of the tubing.
6. Uncap the feeding tube. Attach the end of the feeding bag tubing to your feeding tube. Adjust the roller clamp to the “on” position and allow the formula to drip in over 30-45 minutes. Take whatever length of time works best for you. Keep in mind that the slower you give the feeding, the better you will tolerate it.
7. When the bag is empty, add _____ ml warm water to the bag and allow to run freely. The roller clamp should be in the up or open position. This added water is needed by your body and is also needed to keep the feeding tube from clogging.
8. Disconnect the bag from your feeding tube when the water has run completely out of the tubing. Plug the end of the feeding tube.
9. Repeat the procedure _____ times a day. If you do not tolerate the prescribed amount of formula, notify your dietitian.

Pump-assisted Feeding

Kangaroo Joey Pump--Normal Operation "Feed Only Set" Directions for Use

There are two methods to operate the Joey pump. You may choose the normal operation mode or the EZ operation mode.

General Instructions-Normal Operation Mode

1. Fill feeding container prior to setting up pump.
2. Turn pump on - Press **Power** button in lower right-hand corner.
3. **In order to achieve proper accuracy, the fluid line in the feeding set bag must be 6 inches above the top of the feeding pump, when initiating the feeding cycle.**
4. Select ► **"Keep Settings"** or ► **"Clear Settings"** (for day-to-day use with the same feeding regimen, the ► **"Keep Settings"** option should be selected).
5. Load the Feeding Set. **Do not overstretch the tubing.**
6. Make sure to use a new bag every day. Throw the bag away after 24 hours of use.

Priming the Pump

1. Press ► **"Prime Pump"** to access the pump priming options.
2. Press ► **"Auto Prime"** to automatically prime the pump set, or press ► **"Hold to Prime Feed."**
The pump will quickly prime the feed line and stop the formula before reaching the end of the feeding line.
3. Press the ► **"Hold To Prime Feed"** menu selection to manually top off the line.
4. Press ► **"Done."**
5. Connect feeding set adapter to your feeding tube.

Setting the Feed Rate

1. Select ► **"Adjust Feed"** then ► **"Feed Rate."** Use the buttons on the left to program the pump to ____ ml per hour. Select ► **"Enter"** when desired rate is set.
2. Select ► **"Run."** You will notice a small drop scroll down the screen when running.

Re-Priming the Pump after the Feed Bag Empties

1. A pump set bag that has been emptied will trigger the **Feed Error** screen. In this condition, the pump set bag can be refilled to continue the feeding, but only after the pump set has been re-primed.
2. Disconnect the feeding line from the patient.
3. Refill the bag.
4. Press ► **"Continue"** to begin the pump running.
5. Press ► **"Hold,"** then press ► **"Adjust Settings,"** then press ► **"Prime Pump."**
6. Press ► **"Hold To Prime"** to prime the line. (Do Not Use Auto Prime.)
7. Press ► **"Done,"** then select ► **"Run."**

To Change Rate or Clear Volume

1. Select ► **"Hold."**
2. Select ► **"Clear Vol Fed"** to clear the volume.
3. Select ► **"Adjust Settings"** to adjust all settings.
4. Select ► **"Run"** to return to normal operations.

EZ Mode Operation

The EZ mode was designed specifically for home care. The EZ mode blocks many programming features and makes the pump very simple to use. The EZ mode setting will be stored in the pump memory and saved when the pump is shut off.

1. Press Power button in lower right hand corner.
2. While the Kangaroo is jumping, press and hold the top left button.
3. Press **Biotech Options**, then **EZ Pump Mode**, and then **Done**.
4. Follow instructions for continuous mode operation.

Battery Information

1. Keep the pump plugged into a wall outlet whenever possible to keep the battery fully charged. The pump will charge whether it is turned off or running.
2. When using the power cord, make sure the cord adaptor is pushed all the way into the back of the pump for proper charging.
3. The battery will last for approximately 18 hours if fully charged and takes about 8 hours to re-charge.
4. The pump displays a battery icon in the lower right hand corner of the screen to indicate how much battery life is left. A totally black battery icon indicates a fully charged battery.
5. The pump will display "BATTERY LOW" when there is about 15 minutes of battery life remaining. You may continue to run the pump if you plug the power cord into an outlet.

Kangaroo Joey Pump- Flushing Mode Operation “Flushing Set Required” Directions For Use

General Instructions

1. Fill feeding container and water bag prior to setting up pump.
2. Turn pump on - Press **Power** button in lower right-hand corner.
3. **In order to achieve proper accuracy, the fluid line in the feeding set bag must be 6 inches above the top of the feeding pump when initiating the feeding cycle.**
4. Select “**Keep Settings**” or “**Clear Settings**” (for day-to-day use with the same feeding regimen, the “**Keep Settings**” option should be selected).
5. Load the set per diagram. **Do not overstretch tubing.**
6. Make sure to use a new bag every day. Throw the bag away after 24 hours of use.

Priming the Pump

1. Press “**Prime Pump**” to access the pump priming options.
2. Press “**Auto Prime**” to automatically prime the pump set. The pump will quickly prime both feed and flush lines, starting with the flush line. The formula will stop before reaching the end of the feeding line.
3. Press the “**Hold To Prime**” menu selections to manually top off the line.
4. Press “**Done.**”

Setting the Feed Rate

1. Select “**Adjust Feed**” then “**Feed Rate.**” Use the buttons on the left to program the pump from 1 to 400 in increments of 1 ml. Select “**Enter**” when desired rate is set.

Note the Volume To Be Delivered - “VTBD” Rate - *is an optional feature.*

Only use the “VTBD” option if you want the pump to stop and alarm once a set amount of formula is delivered.

1. Select “**Adjust Flush**” then “**Flush Volume**” to set the volume of water per flush cycle to be administered, from 10 to 500 in increments of 1ml. Select “**Enter**” when desired rate is set.
2. Select “**Flush Interval**” to define the time interval between the start of each flushing cycle, from 1 to 24 hours in increments of 1 hour. Select “**Enter**”, select “**Done.**”
3. Select “**Run.**” You’ll notice a small drop scroll down the screen when running.

(continued on next page)

Re-Priming the Pump after the Feed Bag Empties

1. A pump set bag that has been emptied will trigger the **Feed Error** screen. In this condition, the pump set bag can be refilled to continue the feeding, but only after the pump set has been re-primed.
2. Disconnect the feeding line from the patient.
3. Refill the bag.
4. Press "**Continue**" to begin the pump running.
5. Press "**Hold**," then press "**Adjust Settings**," then press "**Prime Pump**."
6. Press "**Hold To Prime Flush**" until the water has reached the valve in the pump.
7. Press "**Hold To Prime Feed**" until formula reaches the stepped connector at the end of the set.
8. Press "**Done**," then select "**Run**."

To Change Rate or Clear Volume

1. Select "**Hold**."
2. Select "**Clear Vol**" to clear the volume.
3. Select "**Adjust Settings**" to adjust all settings.
4. Select "**Run**" to return to normal operations.

ADJUSTING TO THE TUBE FEEDING

The change from eating to tube feeding may be difficult at first. You may miss your favorite foods or the ability to taste and chew food. There are some things you can do to adjust to this change:

1. You can take your feeding at the same time the rest of the family eats. If you are required to take your feedings at other times, socialize with your family and friends at mealtime and then take your feeding when scheduled.
2. You may use mouthwashes and flavored lip balms to freshen your mouth.

Tube placement

There is a possibility that the tube can fall out or become misplaced. This can cause complications if the tube is no longer in the stomach or the intestines.

To be sure your naso-enteric tube is properly placed, check the position of the black mark on your feeding tube. Make certain it is the same length from your nose each day. The black mark is _____ centimeters at your nose at the time you are leaving the hospital.

A naso-enteric tube can also be secured using a tube bridle to prevent inadvertent feeding tube displacement. Call your doctor or dietitian if the tube moves by two inches (or 5 centimeters) either way.

If your tube falls out, go to the nearest Emergency Room as soon as possible to have the tube replaced.

MOUTH CARE

If you are unable to take anything by mouth, mouth dryness or bad breath may occur. To prevent this:

1. Brush your teeth, tongue, and gums at least twice a day.
2. Rinse your mouth several times a day. Use a mouthwash or a mild salt or baking soda solution (1 teaspoon salt or soda in a glass of water).
3. If allowed, try sugarless gum or sugarless candy.
4. Avoid licking your lips, since this may cause drying and chapping. Use a lip balm or petroleum jelly for dry lips.



If you have had surgery or radiation to your mouth area or have a tendency toward bleeding, check with your health care professional for instructions.

GUIDELINES FOR GIVING MEDICINES

1. Give medicines through your feeding tube only if you are unable to swallow them.
DO NOT ADD YOUR MEDICINES TO YOUR FEEDING BAG UNLESS SPECIFICALLY INSTRUCTED TO DO SO. Take your medicines by syringe method directly into the tube.
2. A liquid form of medicine is best. Ask your doctor or pharmacist to order a liquid form of your medicine, if possible. If your medicine only comes in pill form, it must be crushed first. **NOTE: Before crushing any non-liquid medication, first check with your physician or pharmacist.**

For giving medications through your tube feeding, all pills must be crushed into a **FINE** powder. To prevent the medicine from sticking to the side of the feeding tube, mix it with some warm water. Draw up the medication mixture into the syringe and attach it to the end of the feeding tube and push the plunger. Make sure all the medicine has been pushed into the tube.

3. **Always flush the tubing.** Using the syringe, flush the tubing with at least 30 ml warm water before and after each medication. This will ensure that all the medicine is given and prevent the tube from clogging.

TROUBLESHOOTING

Sometimes, problems may develop with tube feedings. Listed below are some common problems and how you can prevent or solve them.

Diarrhea

Since the tube feedings are liquid, your stools may be soft instead of formed. This is normal and should not cause you concern. However, if you have frequent, watery stools, with 6-8 or more bowel movements each day, you have diarrhea.

If you are on:

1. Continuous tube feedings--slow down the rate of the tube feeding. Call your dietitian to determine how much to adjust your feeding.
2. Bolus tube feedings--slow down the rate of the tube feeding. Divide the feedings into smaller amounts and take them more often. For example, if you usually take 240 ml of formula every 2 hours, you may change to 120 ml every hour.

Diarrhea may also be caused by spoiled formula or poor hand washing. Always wash your hands before giving the tube feeding. Opened cans should be covered and refrigerated. Throw away any formula that has been open for more than 48 hours.

If you do get diarrhea, you will need to take extra fluids. Increase the amount of water you drink or use to flush the tubing, or add extra water to the feeding bag. You may need to take an extra 500-1000 ml (2-4 cups) of water each day.

If diarrhea continues for more than 48-72 hours, be sure to call your doctor. He/she may want to change your formula or give you a medicine to help control diarrhea.

Constipation

Most tube feedings are low in fiber, so you may find that you have less than one stool a day. You should have a bowel movement every one or two days. However, there may be times when you feel constipated.

If you have not had a bowel movement in two days or your stools are hard, you are constipated. You may also have pain or discomfort in the rectum or intestine.

If you have constipation, increase your physical activity, take more water, or add 120 ml (1/2 cup) of prune juice to your feeding each day. Be sure to flush the tube with 30-50 ml of warm water after giving juice. If you have no stool for 3-4 days, call your doctor.

Nausea

When you feel sick to your stomach, changing the way you give the feeding may help.

If you are on:

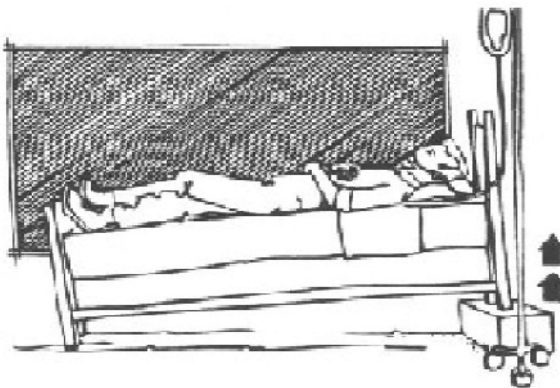
1. Continuous tube feedings--slow down the rate of the tube feeding. Call your dietitian to determine how much to adjust your feeding.
2. Bolus tube feedings--slow down the rate of the tube feeding. Divide the feedings into smaller amounts and take them more often. For example, if you usually take 240 ml of formula every 2 hours, you may change to 120 ml every hour.

If the nausea continues, hold the feeding for a few hours. Call your doctor if you are nauseated for more than 24 hours.

Vomiting and Aspiration

If you vomit while taking the feeding, stop the feeding right away and call your doctor. Sometimes vomit or saliva is inhaled into the lungs. This is called aspiration. It usually happens when you vomit and cannot clear your throat of these fluids. This can be very serious and cause problems.

Always keep your head up 30 to 45 degrees when you give yourself the feeding. Never sleep in a flat position while feeding. NOTE: If at any time you begin to choke, cough up formula, wheeze or have trouble breathing, stop your feeding right away and call your doctor. If breathing becomes extremely difficult, call an ambulance.



Dehydration

Dehydration means that the body is not getting enough water. Usually, your formula and the water used to flush your tubing should meet your fluid needs. However, if you have been sweating more than usual, running a fever or have diarrhea, you may become dehydrated. This can be very serious.

To prevent dehydration, make sure that you use all the extra water needed each day (see the page, "Your Tube-Feeding Prescription"). If you tend to sweat a lot, such as during hot weather, or if you have a fever or diarrhea, use more water. If you are still thirsty or have a dry mouth, call your doctor or dietitian.

Abdominal discomfort

There may be times when you have some abdominal discomfort. You may feel bloated or sick to your stomach. Your abdomen may feel firm and look bigger. If this occurs, stop the feeding for a few hours. If the discomfort continues, call your doctor.

If you get cramps, check to see that the feeding is not too cold. Remember, feedings should be given at room temperature.

Missed feedings

There may be times when you miss your feeding or are late in starting it. This is not usually a serious problem unless you have diabetes, or feedings are being missed regularly.

If you are using the continuous method and your feeding must be stopped, remember to flush your feeding tube with water. You may make up missed feedings by running the feeding longer, but do not increase the rate since this may cause diarrhea, bloating, or nausea.

If you are using the bolus method and miss one feeding, you can add it on at the end of the day. For example, if you normally take your feedings every three hours, with your last feeding at 8:00 p.m., you can add the missed feeding at 11:00 p.m.

“Bad days”

There may be times when you are simply not feeling well and your tube feeding may have to be adjusted. If you miss your feeding more than a day, call your dietitian or doctor.

TUBE CLOGGING

If your tube becomes clogged, the formula will not be able to run through the tube. The best way to keep the tube from clogging is to flush the tube with water as directed. If the feeding does not run, the clog is probably within the tubing.

1. Draw up 30-50 ml **warm water** into the syringe.
2. Attach the syringe to the feeding tube and flush the tube. Mild pressure may be needed.
3. If this does not work, gently pull back and forth on the syringe. Repeat this several times. Do not pull back on the feeding tube itself.
4. If the tube is still clogged, call your home care nurse or primary care doctor.
5. **Do not** use any other liquid or solution such as carbonated beverages or meat tenderizer to unclog your tube.
6. Never put a wire or anything else into the feeding tube to unclog it. This could puncture the feeding tube, hurt your stomach or intestines, or cause other problems.
7. If you are using a feeding bag and the formula will not run through the tubes:
 - a. Make sure the bag is not empty.
 - b. Check that the roller clamp is in the “up” or “open” position.
 - c. Follow the tubing from the bag to your feeding tube to be sure it is not twisted or kinked.

WHEN TO CALL YOUR DOCTOR:

1. Diarrhea (more than 6 stools per day) for more than 2-3 days
2. Constipation for more than 3-4 days
3. Nausea or stomach upset for more than 24 hours
4. Any vomiting
5. Signs of dehydration: thirst, dry mouth, weakness, fever, or small amounts of dark, strong-smelling urine
6. Losing or gaining more than 2 pounds per week
7. Fever, weakness, or other symptoms that you cannot explain
8. Missing your feeding for more than a day
9. Skin around the stoma becomes red or swollen
10. If the area around your nose becomes red, swollen, or indented
11. If the feeding tube falls out, call your doctor or visit your nearest emergency room as soon as possible to have the tube replaced.

