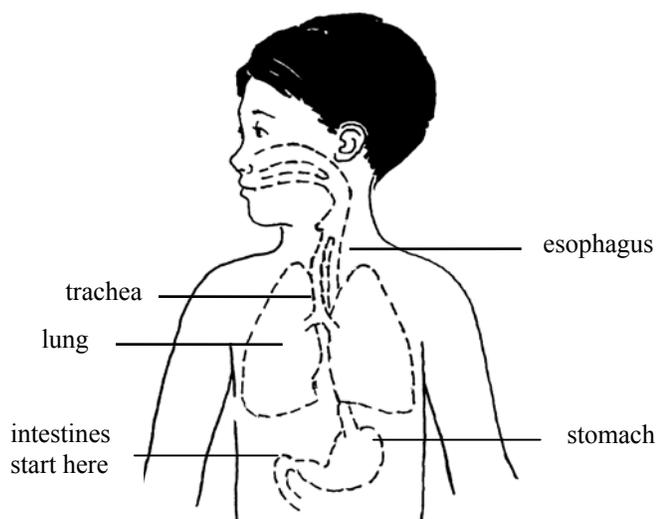


## Nasogastric tube feeding

### What is a nasogastric tube feeding?

A nasogastric (NG) tube is a small tube that goes into the stomach through the nose. Breast milk, formula, or liquid food is given through the tube directly into the stomach, giving your child extra calories. Feeding this way helps your child get enough nutrition to grow, develop, recover from illness, play, and learn.



Tube feeding can be done for children of any age. Some children will depend on tube feeding only until they are able to eat by mouth. Using the gastrointestinal (GI) tract for feedings keeps it healthy and working normally.

Other children can continue to eat as usual, and also get tube feedings for extra calories.

There are several ways to give an NG feeding. The type of tube, how often it needs to be changed, type and amount of formula, and length of feeding time will be

decided by the doctor and dietitian, depending on your child's needs.

Follow **only** the checked instructions in this sheet.

### Your child's special instructions:

Type and size of feeding tube \_\_\_\_\_

Change the feeding tube every \_\_\_\_\_

**Do not** change the feeding tube yourself.

What to feed \_\_\_\_\_

Amount to feed \_\_\_\_\_

How often to feed \_\_\_\_\_

Method:  bolus  continuous

Type of pump \_\_\_\_\_

Rate of feeding \_\_\_\_\_

Flush the feeding tube at the end of each feeding with \_\_\_\_\_ ml of warm water.

Other: \_\_\_\_\_

### Care of feeding bag and tubing:

Change every day.

After each use, wash with warm water and dish soap, rinse well with clear water, and store in refrigerator.

If the bag and tubing do not clean easily, try using a solution made of equal amounts of white vinegar and cool water (for example 1 cup vinegar with 1 cup water). Rinse well and store in refrigerator. Throw away the feeding bag and tubing after 1 week; sooner if you cannot get it clean or if it begins to leak.

## Definitions

aspiration	getting fluid into the lungs, which can cause trouble breathing
bolus	feeding over a short time
continuous	feeding over an extended time
GI tract	the esophagus, stomach, and intestines
gavage tube	another name for feeding tube; may be put in through mouth
lubricant	water-soluble substance such as K-Y® jelly, used to help the tube slip in more easily - <b>do not use Vaseline®</b>

## Inserting the feeding tube

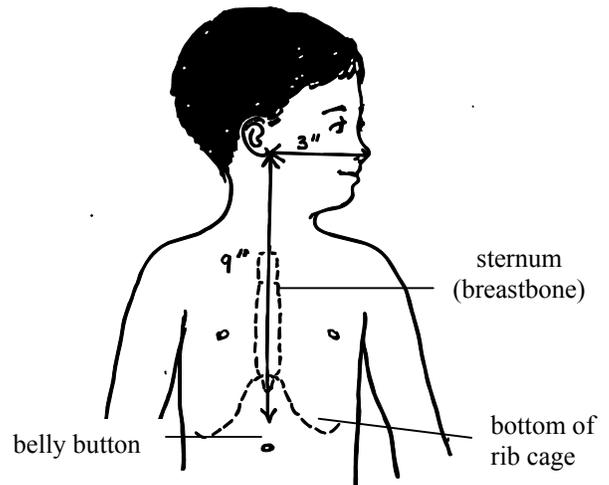
It takes time and practice to learn how to insert the tube, so be patient with yourself. Do this by yourself only after you have done it successfully with the nurse present.

### Get ready:

1. Wash your hands.
2. Gather supplies:
  - feeding tube
  - tape measure
3. With your fingers, find your child's sternum (breastbone). Gently feel the bone in the center of the chest, and then find its bottom edge. It will be below nipple level, and you will feel the bottom of the rib cage curving away to each side.
4. Now imagine a spot on your child's belly that is midway between the belly button and the bottom edge of the breastbone. Keep that spot in mind.

5. Using a tape measure, measure from the tip of your child's nose to the bottom of the earlobe, then down to that spot midway between belly button and breastbone edge. Write that number down: we will call it "your child's measurement."

In this picture, the child's measurement is 12 inches (3 inches from nose to ear, plus another 9 inches down.).



**Measuring your child**  
(this child's measurement is 12 inches)

6. Now measure the tube (or find its length on the package it came in). Subtract your child's measurement from the total tube length, and write it down, too. We will call this the "extra tube length" number. Keep it handy; you will use it later to make sure the tube is placed properly.
7. Now, from the tip of the tube, measure the distance of your child's measurement (in the pictured example this would be 12 inches). Mark that spot on the tube using a permanent marker. Now you are ready to insert the feeding tube.

### Insert the tube:

1. Wash your hands.
2. Gather equipment:
  - feeding tube
  - formula
  - gauze if needed
  - water for lubrication or other lubricant
  - stethoscope
  - syringe, size \_\_\_\_\_
  - tape, type \_\_\_\_\_
  - water for rinsing if needed
3. Position the child.
  - Swaddle an infant (wrap with the arms secured in a blanket). Put the infant on the left side, either in an infant seat or on a bed, with the head raised.
  - Older children should be placed in a comfortable position, and may be held by an adult if they wish. Some children may vomit when the tube is put in. Be sure the child can be turned easily if this happens.
4. Lubricate the tube with water or put a small amount of lubricant on the end of the tube if you have been taught to do so. Most tubes have a coating that is activated with water, making the tube easier to slide in.
5. Insert the tube into the nostril, pushing the tube gently down until the mark on the tube is at the tip of the nose. Older children can drink or swallow to help the tube go down. Infants may suck on a pacifier or your fingers during tube insertion. This can be uncomfortable for your child. It may be best to have someone help you.

### Remove the tube right away if:

- coughing
- wheezing
- changing color
- cannot catch a breath
- cannot talk
- or you see the tube coming out of the mouth

Cuddle and comfort your child for a few minutes, and try again.

6. Once the tube is in place, secure it with tape as shown by the nurse.
7. Check the tube placement (see below).

### Checking the tube placement

To prevent aspiration, you **must** check the tube placement before each feeding, to be sure it has not moved.

1. Look at your child. Is your child comfortable and breathing normally? If the child appears distressed, is coughing, or cannot talk, remove the tube. **Do not start the feeding.**
2. Make sure that the mark on the tube is at the nostril. Measure the tube from the mark at the nostril to the beginning of the hub and make sure it matches the “extra tube length” number you wrote down earlier. (See “Get ready,” step 7, on page 2.)
3. Try to pull out some stomach fluids with the syringe. Using a small syringe (3 to 5 ml) will make this easier. If you do get stomach fluids, push them back into the tube. **Note:** With a 3.5 or smaller “neotube” you may not be able to pull out stomach fluids.

4. Use a syringe to inject \_\_\_\_ ml of air rapidly into the feeding tube while listening with a stethoscope over your child's stomach. If you hear a "gurgling" or "swooshing" sound, the air is probably going into the stomach. Pull the air back out. **Note:** This test is not 100% reliable. Use it only to confirm your other checking methods. Always assess correct placement by measuring the tube and checking stomach contents.

Paying careful attention to these signs will help you to be sure that the tube is placed correctly. If you have any doubts, it is best to remove the tube and replace it.

## Giving the feedings

### Bolus feeding

It may be helpful to have 2 people to do this type of tube feeding. One person can hold and comfort the child while the other gives the feeding.

1. Wash your hands.
2. Measure the correct amount of formula and warm it to the desired temperature.
3. Check tube placement as above.
4. Clamp the tube.
5. Attach a syringe to the feeding tube.
6. Pour the formula into the syringe.
7. Unclamp the tube.
8. Allow the formula to run for the same amount of time as it would take the child to drink it by mouth, or as prescribed by the doctor.

9. Ways to help the feeding flow:  
Try to start the feeding when the child is calm. You may have to "push" the feeding to get it started. To do this, place a plunger into the syringe and push slightly. Remove the plunger gently and allow the formula to flow in by gravity. If your child is crying, you may need to repeat the push several times.

A pacifier may help calm a young child and also helps to connect sucking with stomach-filling.

For older children, use activities to distract them, or involve the child with the feeding, such as holding the syringe.

10. During the feeding, keep the bottom of the syringe no higher than 6 inches above the child's stomach.

11. Continue adding formula into the syringe until the prescribed amount is given.

12. When the syringe is empty, flush the tube with the prescribed amount of warm water.

13. After the feeding:

Clamp the tube.

Leave the tube open to air. Tape a piece of gauze over the syringe to keep fluids from splashing out.

Burp your child.

Infants and young children may be most comfortable with their head and upper body raised, or lying on their left side.

Older children may be up and playing.

## **Continuous feeding with a feeding pump**

1. Wash your hands.
2. Measure enough formula for 4 hours and warm it if needed.
3. Pour formula into the feeding bag. Run formula to the end of the pump tubing.
4. Set up the pump and pump tubing according to the directions from the medical supply company. Be sure the rate is set correctly.
5. If a new feeding tube is to be inserted, see “Getting ready to insert the tube” and “Inserting the tube.”
6. Check placement (see “Checking the tube placement.”)
7. Connect the pump tubing to the child’s feeding tube.
8. Turn on the pump. Check to make sure the formula is dripping.
9. As the bag empties every 4 hours, add more formula.
10. Hold and/or talk to your child often during waking hours. Have your child’s head raised during the entire feeding.
11. Watch your child carefully to make sure there is no change in breathing or behavior. Make sure the mark on the tube is still at the nostril. It is also a good idea to measure it every few hours, because sometimes the tube can slip under the tape.

12. After the feeding period, flush the tube with the prescribed amount of warm water.

13. After the feeding:

- Plug or clamp the tube.
- Leave the tube open to air. Tape a piece of gauze over the syringe to keep fluids from splashing out
- Burp your child.
- Have child’s head raised for about 30 minutes after the feeding is done.

## **Removing the feeding tube** (if ordered)

1. Remove the tape.
2. Pinch the tubing and pull the tube out in one quick motion.
3. Hold, cuddle, and comfort your child. If your child is an infant, burp him or her.

## **Skin care**

Clean your child’s skin around the tube often with warm water, removing any secretions. If the nostril is reddened or the skin is irritated, remove the tube and replace it in the other nostril, if possible.

If you have used a transparent dressing on your child’s face, remove it by loosening it with mineral oil and gently working the dressing off. If you use adhesive remover to loosen the dressing, be sure to wash the skin with water to remove all residue, as this can be very irritating.

## Problem solving

Problem	What to do
Clogged or plugged feeding tube (follow only the checked instructions)	<ul style="list-style-type: none"> <li>• Flush tube with warm water.</li> <li>• Use Clog-Zapper® if instructed to do so.</li> <li>• Remove and replace the tube.</li> </ul>
Corpak tube falls out	<ul style="list-style-type: none"> <li>• Call the home care nurse or your clinic. Do not replace it yourself.</li> </ul>
Coughing while tube is inserted (to prevent aspiration)	<ul style="list-style-type: none"> <li>• If your child gags or coughs during the feeding, pinch the tube and pull it out. Comfort your child until calm, and try again.</li> <li>• Before starting the feeding, be sure to check the placement of the tube (see “Checking the tube placement”).</li> </ul>
Diarrhea and cramping	<ul style="list-style-type: none"> <li>• Check to see if the formula concentration is correct.</li> <li>• Allow formula to hang a maximum of 4 hours. <b>Do not</b> mix new formula with formula that has been hanging.</li> <li>• Slow the feeding rate or stop for awhile. Be sure to flush the tube with warm water to prevent clogging.</li> <li>• Warm the formula if it is cold.</li> <li>• Call your child’s doctor if this continues.</li> </ul>
Nausea (upset stomach) or vomiting (throwing up)	<ul style="list-style-type: none"> <li>• Slow feeding rate or stop feeding for a while. Be sure to flush the tube with warm water to prevent clogging.</li> <li>• Start feeding again when the child feels better.</li> <li>• Call your child’s doctor if this continues.</li> </ul>
Skin around the nose is irritated	<ul style="list-style-type: none"> <li>• Keep the area around the nostrils clean and dry.</li> <li>• Tape down, not up over the nose (ask the nurse show you how to tape the tube).</li> <li>• Alternate nostrils when replacing tube.</li> </ul>

### When should I call the doctor?

- fever
- vomiting or diarrhea that does not stop
- fussiness, hard to console
- pain or unusual distension in abdomen
- trouble breathing - **call 911**

If you are concerned about your child for any reason, call your doctor to discuss the symptoms.

### Questions?

This sheet is not specific to your child, but provides general information. If you have any questions, please call your doctor, home care nurse, or dietitian.

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