

What Is an Enteral Feeding Tube?

Enteral refers to within the digestive system or intestine. Enteral feeding tubes allow liquid food to enter your stomach or intestine through a tube. The soft, flexible tube enters a surgically created opening in the abdominal wall called an ostomy. An enterostomy tube in the stomach is called a gastrostomy. A tube in the small intestine is called a jejunostomy. The site on the abdomen where the tube is inserted is called a stoma. The location of the stoma depends on your specific operation and the shape of your abdomen.

Most stomas:

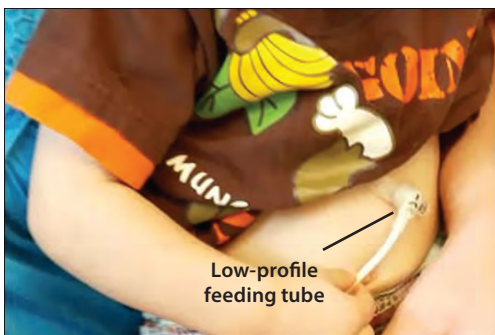
- ▶ Lie flat against your body
- ▶ Are round in shape
- ▶ Are red and moist (similar to the inside of your mouth)
- ▶ Have no feeling





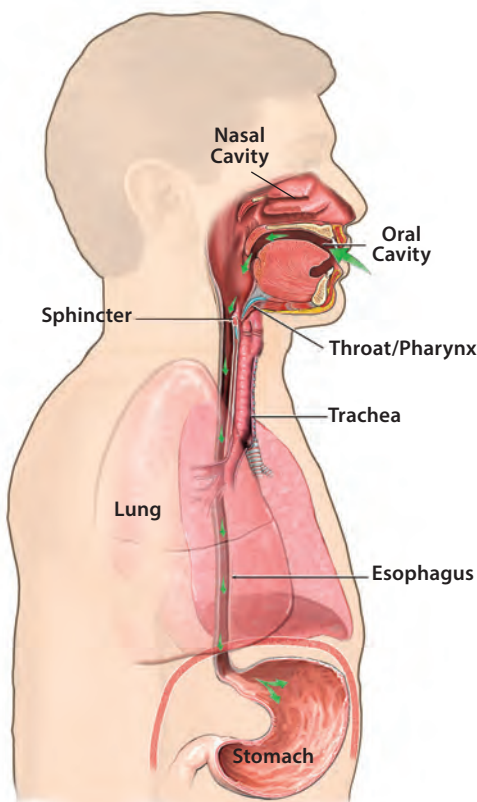
Who Needs an Enteral Feeding Tube?

Cancer, trauma, nervous system and digestive system disorders, and congenital birth defects can cause difficulty in feeding. Some people also have difficulty swallowing, which increases the chance that they will breathe in food (aspirate). People who have difficulties feeding can benefit from a feeding tube. Your doctor will explain to you the specific reasons why you or your family member need a feeding tube. For some, a feeding tube is a new way of life, but for others, the tube is temporary and used until the problem can be treated or repaired.

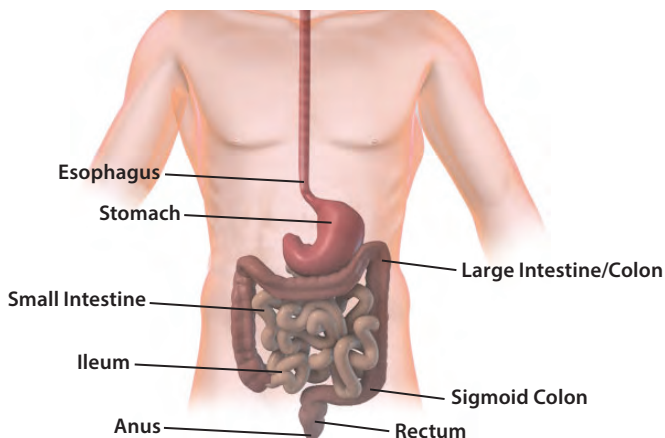


Understanding Your Digestive System

When food enters your oral cavity (mouth), the lips and tongue move it toward the back of the throat. The throat (pharynx) is the passageway leading from the mouth and nose to the esophagus and larynx (voice box). At the back of the throat, two tubes form. The trachea (airway) carries air to the lungs. The esophagus (feeding tube) moves the food down into the stomach. When food moves into the esophagus, the opening at the top of the esophagus (sphincter) tightens to stop the upward movement of the food. The pharynx acts as a doorway. When food is passing, the opening to the airway closes.



When food reaches the stomach, it is broken down into very small pieces. It then moves into the small intestine, where enzymes break down food into thick liquid. This thick liquid passes further through the small intestine, where nutrients, vitamins, and water are absorbed. The liquid then passes through the large intestine (colon). Water is absorbed from the stool in the colon. It becomes more solid and eventually moves out through the rectum.



Types of Feeding Tubes and How They Are Inserted

The type of feeding tube and the procedure to place it will depend on the patient's condition, age, and other health factors. Feeding tubes can vary in length and number of ports or openings.

The main types of tubes include:

- ▶ **Long gastric tubes**

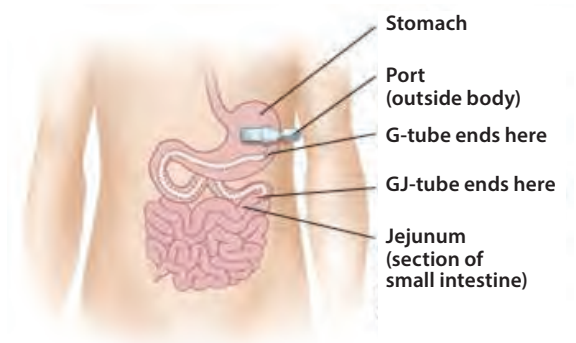
connect directly to tubing or syringes for feedings. They may have 1 or 2 ports as well as a port for placement of water into the internal balloon.

- ▶ **Low-profile gastric tubes or gastric buttons** lay flat on the abdomen when not in use and require an extension set to be attached for feedings. They also may have a port for placement of water into the internal balloon.

- ▶ **Gastro-jejunostomy tubes (GJ-tubes or low-profile GJ-buttons)**

pass through the stomach and into the small intestine (jejunum). Feedings and medication can be delivered into the stomach or small intestine depending on the patient's needs. These usually have separate ports for the stomach and the jejunum as well as a port for placement of water into the internal balloon.

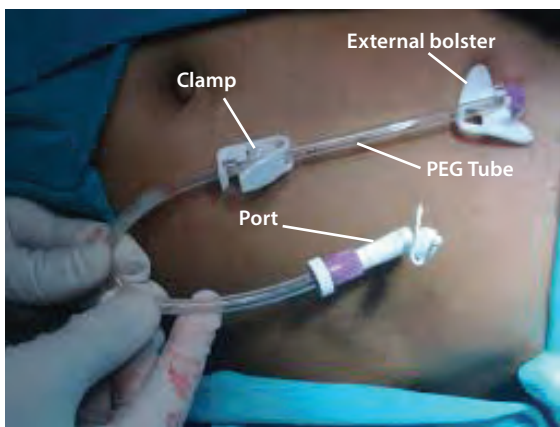
- ▶ **Jejunostomy tubes (J-tubes)** enter the jejunum (small intestine) directly and allow slow feedings to the jejunum only. These look similar to long gastric tubes.



PERCUTANEOUS ENDOSCOPIC GASTROSTOMY (PEG) TUBES

Percutaneous endoscopic gastrostomy (PEG) is the name of a procedure where a G-tube is placed by endoscopy. Placement of a PEG tube can be done under local anesthesia with sedation. A narrow tube with a light on the end (endoscope) is inserted in the mouth and moved down into the stomach. A puncture is made with large needle through the skin over the stomach, and a heavy string is pulled through it by the endoscope. The string comes out the mouth and attaches to a long tube, which is then pulled into the stomach and out of the skin incision. A bumper on the end of the tube keeps it inside the stomach, and a bolster keeps it in place from the outside. These are initially long tubes that can be changed to low-profile devices later.

The long tube may also have a Y-port that allows for one side to connect directly to the feeding and an opening for medications and water. The term “PEG” is often used to describe all G-tubes.



PERCUTANEOUS RADIOLOGIC GASTROSTOMY (PRG) TUBES

Percutaneous radiologic gastrostomy (PRG) is the name of another procedure where a G-tube is placed in the stomach. This procedure is done under local anesthesia with sedation. The abdomen is viewed by fluoroscopy, a continuous X-ray image on a monitor. A puncture is made with a large needle through the skin over the stomach. A larger opening is then created so that the gastrostomy tube can be inserted into the stomach. The tube is held in the stomach with an internal balloon and a bumper on the outside. These can be either long tubes or low-profile tubes.

SURGICAL G-TUBES AND SKIN-LEVEL DEVICES/ LOW-PROFILE BUTTONS

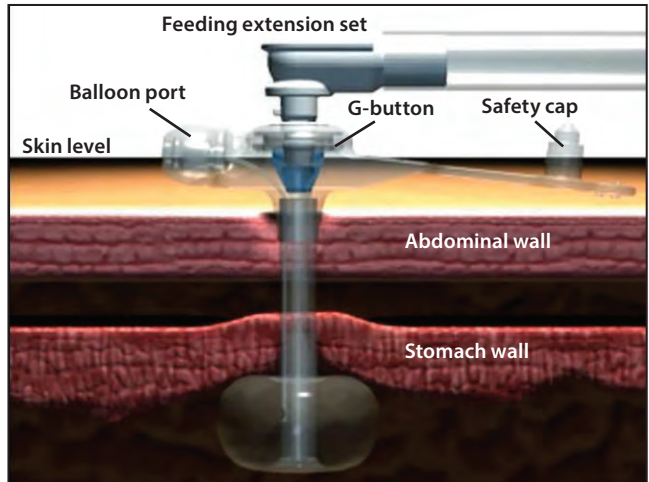
Surgical gastrostomy tubes are inserted in the operating room under general anesthesia. Either a minimally invasive approach (laparoscopy) or a standard open operation (surgery) is used to insert the feeding tube through the abdominal wall into the stomach. The tube has an internal balloon or bumper to hold it in place, but the stomach is also sutured (sewn) to the inside of the abdominal wall. Many pediatric patients receive a laparoscopic primary low-profile/ button device. Long tubes may be changed to low-profile tubes once the tract has healed—usually 6 weeks to 3 months later, depending on the technique.



Low-profile button



Low-profile button



GASTRO-JEJUNAL (GJ) TUBES

Gastrojejunal or GJ-tubes are used when feedings need to bypass the mouth, esophagus, and stomach. These tubes or low-profile devices are usually inserted through the existing healed tract of a G-tube. The tube end is moved from the stomach into the small intestine by guide wires under X-ray imaging. They can also be positioned by endoscopy or at the time of an operation. These are occasionally placed as the first tube by any of the methods described above.



Gastrojejunal (GJ) tube

The GJ-tube has two ports: gastric and jejunal. The gastric port (marked "G") is used to access the stomach and is usually used for medication. The jejunal port (marked "J") is used for feeding.

JEJUNOSTOMY (J) TUBES

A jejunostomy (J) tube is also used when feedings need to bypass the stomach. They are usually placed at the time of a related operation but can also be placed radiologically. The J-tube is inserted through the wall of the intestine. The tube is secured on the outside of the abdomen, and a small balloon may help keep it in place inside the jejunum (small intestine).

When feedings are delivered into the small intestine by either GJ-tube or J-tube, they must be slow, continuous feedings, since the intestine cannot store food like the stomach does.

Feeding Tube Supplies

Your supplies are usually delivered to your home. Supplies may include syringes, a feeding bag, a pole, feeding solution, a pump, and a backpack for carrying the pump.

SYRINGES

There are different types and sizes of syringes used with tube feedings. Large 60 mL syringes are used to give bolus syringe feedings, flush or check placement of a tube, or vent a tube. Smaller 10 mL syringes are generally used to flush children's tubes or give medication. Smaller 5 mL syringes are generally used to inflate the balloon that holds the tube in the stomach with water. There are markings on the outside of each syringe that you can use to measure how much formula or water to give.



Slip-tip syringe



Catheter-tip syringe



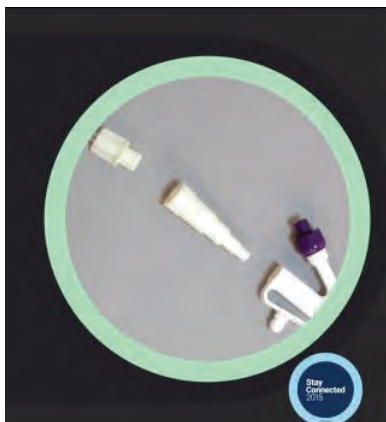
Twist-tip syringe



Transition adapter

FEEDING TUBE CONNECTORS

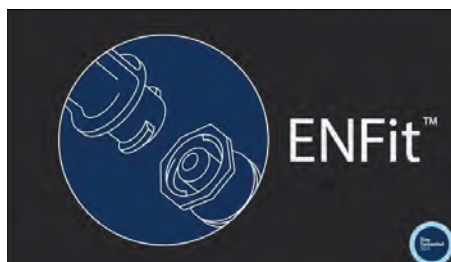
In 2015, a conversion took place to enable all feeding tube connectors and syringes to only fit other feeding tube supplies and not other tubes that enter the body. During this conversion, adapters will be used between syringes and tubes so older supplies may still be used with feeding tubes. You may be supplied with any of the various syringes, connectors, or adapters seen below. When the conversion is complete, all syringes and feeding tube connectors will have an ENFit™ twist tip that will secure the connection.



2015 transition connector
to feeding tube



ENFit feeding set to feeding
tube connector



When the connector transition is complete,
all feeding tube syringes and feeding sets
will have ENFit twist connector
safety features

Image credit to Global Enteral Device Supplier Association (GEDSA)

For more information, go to www.stayconnected.org

FEEDING TUBE BAGS AND EXTENSION SETS

A feeding tube bag holds the feeding solution. The bag is filled with feeding solution through the opening at the top.



Fill the feeding bag

Feeding tube bags can attach to a pump to deliver a consistent flow of feeding or hang for gravity flow. The bag has clamps that open and close.

One end of the extension/feed set is attached to the feeding device while the other end is connected to the food source. Between feeds, the extension/feed set can be removed after flushing the device at the end of the feeding. Extension sets are often replaced every 1 to 2 weeks.



Tubing clamped



Feeding extension set

PUMPS AND POLES



An enteral feeding pump can deliver feedings at a steady rate. The pump is electrical or battery operated, and it can be rented or purchased from a medical supply company. The medical supply company will help you set up the pump and give you instructions for its use.

Feeding pumps come in a variety of sizes, and some are portable for travel. The pump can be attached to a pole on wheels or placed in a backpack.

If the pump is running on battery power, it has alarms that alert you about the following problems:

- ▶ If there is a blockage in the flow of the feeding
- ▶ If there is a kink in the feeding tube
- ▶ If the feeding bag is empty



GAUZE DRESSINGS

If there is any drainage at the site, gauze dressings may be placed around the stoma site for the first few days after the tube is inserted. But they are not to be used routinely for everyday care of the feeding tube.