

Percutaneous Endoscopic Gastrostomy (PEG)

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1. What is a PEG?

A percutaneous endoscopic gastrostomy (PEG) is a procedure for placing a feeding tube directly into the stomach through a small incision in the abdominal wall using an instrument known as an endoscope. The procedure is performed as a means of providing nutrition to patients who cannot take food by mouth. Many stroke patients, for example, have poor control over their swallowing muscles and are unable to safely consume enough food, or they have muscle weakness that allows food to leak into the lungs when they swallow things by mouth. Many of these patients will benefit from a PEG tube in order to receive adequate nutrition and to prevent them from respiratory problems that develop when food or fluids accidentally get into the lungs.

2. What Are the Medical Indications for a PEG?

A PEG should be considered for pediatric and adult patients who are unable to consume sufficient food by mouth to meet their daily needs. These patients should be able to digest and absorb their food once it arrives in the stomach. The most common medical conditions requiring a PEG feeding tube are neurologic conditions associated with poor swallowing, such as experienced by stroke patients, and patients with cancers of the oral cavity or esophagus that prevent them from swallowing. Other diseases of the esophagus that decrease a patient's ability to swallow are also common indications for placing a PEG feeding tube. Patients with Alzheimer's disease often lose their ability to swallow near the end of their life expectancy. The benefit of PEG tube placement in this patient group remains questionable. When a patient is being considered for PEG tube placement, the patient's life expectancy after the tube is placed needs to be considered to determine if placement of a feeding tube is appropriate.

3. What is the Medical Procedure For Placing a PEG Tube?

PEG tubes are placed with the aid of an endoscope, an instrument to see inside your stomach and intestines. The patient receives sedation medication to make them comfortable. A small incision is made in the abdomen. The PEG feeding tube is placed through this incision into the stomach. The procedure takes 15 to 20 minutes.

4. Is There Discomfort After the Procedure?

There will be some discomfort after the procedure from either cramping from gas in the digestive system or pain at the incision site itself. This pain can be well controlled with pain medication if required.



5. Will the Tube Fall Out Once It Is Placed?

The tube is prevented from coming out of the stomach by one of several methods. Some commercial PEG brands have a mushroom-shaped cap on the end of the feeding tube inside the stomach. This cap is 2-3 times the diameter of the feeding tube. This cap is also called the internal bolster or internal bumper. Other systems employ a balloon at the end of the tube which is inflated once the tube is inserted, serving the same purpose. These internal bolsters prevent the PEG feeding tube from falling out.

6. What Does the PEG Tube Look Like On the Outside after Placement?

The PEG tube has a diameter size about the same as a writing pen. Approximately 6 to 12 inches of tubing will protrude from the incision area. There will be a disc or a tubular device placed around the feeding tube lying against the abdominal wall. This is known as the external bolster or external bumper. It is meant to keep the tube from migrating forward into the stomach. At the outside end of the feeding tube is a capped plug. It may be a one hole or two hole plug. The plug is meant to be closed to prevent stomach content from getting on the skin and clothes of the patient. It is opened to allow food, medications and water to be placed through the PEG feeding tube

7. What Are the Complications of a PEG Tube?

Complications from this procedure may occur. Minor complications include leakage of food or fluid around the tube onto the abdominal wall surface, pain at the incision site, mild bleeding at the incision site or infection at the incision site. You should consult with your doctor if this occurs. Major complications are rare but can occur and include major bleeding, peritonitis (an infection inside the abdominal cavity) and damage to the colon.

8. Are there Alternatives to PEG?

There are alternatives to PEG feeding tubes. Nasogastric (NG) feeding tubes are tubes passed through the nose into the stomach for feeding. It is secured to the face with tape. Long-term use of these tubes can cause irritation, infection or bleeding of the nose and throat. These tubes also have a tendency to be accidentally pulled out. Also, a surgeon can place a feeding tube into the stomach in the operating room or a radiologist can place a feeding tube into the stomach in the fluoroscopy (X-Ray) suite.

9. How Do You Take Care of a PEG Tube?

The area around the incision on the abdominal wall should be cleaned daily and the incision covered with clean gauze. Often, these gauze sponges have a slit in them so they can be placed around the PEG tube, over the incision. The tube itself has centimeter markings written on the side. The centimeter marking at or near the incision site should be noted. If this number changes, the tube should be readjusted back to the original centimeter marking. The external bolster should rest gently near the abdominal wall. This external bolster should not be placed too tightly against the abdominal wall or it may lead to infection or skin ulceration.



Should the tube accidentally come out it must be replaced within twenty-four hours or the incision may begin to close and new PEG procedure may be required. If the tube falls out, a physician should be contacted as soon as possible. If the tube needs removal or replacement, it is usually wise to wait 6 or more weeks before removal.

10. What Exact Nutritional Formula is Placed Through the PEG Tube?

After the PEG feeding tube is placed, a registered dietitian, nurse, pharmacist or physician who specializes in nutrition should assess the patient to determine their nutritional needs; this means the amount of calories, protein, and fluids that will be necessary each day, as well as the most appropriate nutritional formula. Nutritional products designed for tube feeding are formulated to provide all the nutrients the patient will need including vitamins, and minerals.

11. How is PEG Tube Used For Feeding?

The PEG tube is relatively narrow. Commercial tube feedings are available and are designed to reduce the risk of tube clogging. The PEG tube should be flushed with water before and after feedings, or after medications have been administered. The placement of table foods into the PEG tube is discouraged as it can lead to tube clogging. It is imperative that the caregiver or patient thoroughly washes their hands with soap and water before preparing formula or having contact with the PEG system.

The commercial tube feeding formula is administered at room temperature. The patient should be upright, no less than thirty degrees, to minimize the risk of regurgitation and potential aspiration (tube feeding getting into the lungs). The patient should be kept upright for thirty to sixty minutes after feeding. To prevent complications (abdominal cramping, nausea and vomiting, bloating, diarrhea, aspiration), tube feeding should be infused slowly.

The simplest method of infusing tube feeding through the PEG tube is called bolus feeding. Tube feed formula is placed within a large syringe and slowly administered to the patient through the plug cap on the end of the PEG feeding tube. In order to meet a patient's nutritional needs, this may need to be repeated 4 to 6 times per day. Sometimes continuous feeding is preferable. With this method, a feeding pump is set up and connected to the PEG tube. The tube feed formula is placed in a large bag and attached to the pump. The tube feeding is continuously administered by the pump over 12-24 hours.

12. Can I put Medications through a PEG Tube?

Most medications that come in tablet or pill form can be crushed and dissolved in water and passed through the feeding tube. In addition, there may be liquid formulations of medications that can be prescribed. However, some capsules are designed to dissolve within various portions of the gastrointestinal tract and therefore cannot be broken up. The tube should be flushed with water after introduction of medication to prevent clogging. Ask your doctor or pharmacist about specific medications.



13. Is a PEG Tube Permanent?

Depending on the medical condition, a PEG feeding tube may be temporary or permanent. After a minor stroke, for example, a patient may recover swallowing and ultimately be able to get adequate calories and nutrients from eating by mouth. However, those with more permanent neurologic damage may require a feeding tube long-term. In either case, the feeding tube can be easily removed if necessary.

14. Do PEG Feeding Tubes Last Forever?

The lifespan of the PEG feeding tube is about 1 year although the tube may wear out sooner. When the tubing begins to wear, you will notice pits, bumps and leaks on the side of the tube. In addition, the feeding tube cap may split or fail to close properly. You should notify your physician if this develops.

15. How is a PEG Tube Removed?

PEG tube removal should only be done by a trained healthcare provider. If the brand of tube has a soft internal mushroom bolster, it can be removed by pulling. This may cause some transient stinging and burning at the incision site. If it has a balloon internal bolster, the balloon is deflated and the tube is removed. There are also unique commercial PEG brands that require other methods of removal.

