How to Use and Care for an Indwelling Feeding Tube

BACKGROUND

When a pet becomes incapable of eating or refuses to eat for an extended length of time, an indwelling feeding tube may be placed by your veterinarian. An indwelling feeding tube is a tube that provides access into the gastrointestinal (GI) tract such that nutrition can be provided during a pet's recovery. The three most common types of tubes that you are likely to use for at-home feedings are named for where they enter the GI tract:

- Esophagostomy tube (E-tube), a tube that enters the esophagus on the side of the neck
- Percutaneous endoscopically placed gastrostomy tube (PEG tube), a tube that enters the stomach
- Percutaneous endoscopically placed jejunostomy tube (PEJ tube), a tube that enters the jejunum (a part of the small intestine)

GETTING STARTED

The care and use of the three types of tubes listed above is similar, and it begins on the day your pet comes home from the hospital with the tube in place. Supplies needed for maintenance cleaning around the tube site include sterile gauze, dilute antiseptic solution such as povidone-iodine (Betadine), chlorhexidine, and basic bandaging materials. The veterinary hospital staff (veterinarian or technician) can demonstrate the bandaging techniques used at these sites and provide the required supplies.

The supplies needed for feeding include canned food and fresh water (both at room temperature), a blender, and feeding syringes. The type of food best suited for these tubes should be recommended by a veterinarian. In each case, it will be liquid or canned food mixed (slurried) with water, which may need to be pureed in a blender prior to feeding.

A feeding schedule is made on a case-by-case basis, depending on a dog or cat's age, body size, and the medical reason for placing the tube. Meals may be smaller to start with but increase in volume and frequency as the pet tolerates them and as their caloric demands change. It is likely that several small meals a day will be recommended.

TROUBLESHOOTING BEFOREHAND

It is important to avoid regular canned food because it generally has small chunks that can block the tube. If the blockage is severe, the tube becomes completely plugged and unusable and must be replaced.

Watch carefully for any signs of infection at the entrance sites of these tubes into the body. Signs of infection include swelling, redness, foul odor, or moist discharge (especially yellow or green) at the entrance site of the tube, as well as lethargy, vomiting, or any decline in attitude or energy of the pet. The latter symptoms may overlap with signs of general illness already present, so trends are the most important (is energy/attitude improving or declining over a period of days?). With the appropriate care, infection can be avoided, but it is very important to report any of these signs to a veterinarian immediately to identify and treat an infection early if one occurs.

A pet may be receiving one or several medications while being treated with a feeding tube. Medications in liquid form can be easily administered down the tube, followed with water, and this is a great advantage of the tubes because oral dosing becomes unnecessary. Medications in tablet/pill form can, in some cases, be crushed into a powder and mixed with the slurry of food given into the tube. It is extremely important to make sure that it is acceptable to crush the tablets by checking with your veterinarian first. Some medications have an enteric coating, and crushing exposes the medication to being destroyed before it is absorbed. Others are too risky to be handled by people or pets when crushed, such as chemotherapy drugs.

Nausea and vomiting can be symptoms that accompany the medical problem for which the feeding tube was placed. If a pet is nauseated, he/she may need smaller meals, less frequent meals, food or water that is warm, an antiemetic (a drug to reduce vomiting), or further care for their medical problem in order to prevent vomiting of the food given through the tube. If nausea or vomiting is persistent (e.g., once or more a day), you should discuss this with your veterinarian.

If the tube seems to be plugged because food will not pass through it, try a small volume (5 mL; 1 teaspoon) of water instead. If this does not clear the obstruction, try 5 mL of a carbonated beverage like seltzer water or cola. If this does not clear the obstruction, call your veterinarian.

Blockage of the tube is best avoided by flushing the tube with at least 5 mL of tap water after every feeding and every medication dose as a final rinse to clear the inside of the tube.

Pets tolerate these tubes very well even for extended periods of time (weeks to years if needed, depending on tube type). Part of caring for these tubes is protecting them from a pet's natural desire to scratch. In most cases, a mesh "undershirt" (for PEG, PEJ tube) or light neck wrap (for E-tube) is enough of a barrier. Some animals might require the placement of an Elizabethan collar (E-collar) to keep them from chewing at the tube site.

PROCEDURE FOR USING AND MAINTAINING THE FEEDING TUBE

Cleaning the Tube Site

First, routine cleaning of the skin where the tube enters the body is important. Until the site has healed, checking and cleaning the site and changing the bandage dressing are recommended daily. Once healed, cleaning and dressing changes will be less frequent, typically 2-3 times a week. For cleaning, it is preferable to use sterile gauze moistened with diluted povidone-iodine (Betadine) solution (diluted with tap water to a light tea color) or chlorhexidine solution (light blue or pink, may be provided by your veterinary hospital) for lightly wiping or dabbing the tube entrance site. It is good to carefully remove dried discharge. It may be easier to clean and more comfortable for your pet to first hold a very clean, lukewarm, damp washcloth to the area for several minutes to moisten and soften the dried discharge. In some models of tube, there are sutures (stitches) that hold the tube in place via a flange (crossbar or disk that braces the tube against the skin). If you see that these sutures have come out, or if the tube has moved in or out of the surgical site, schedule a visit with a veterinarian to have this checked as soon as possible. When the cleaning is completed, which usually takes a few minutes, replace the light bandage dressing.

Feeding

Regardless of the type of tube, the approach is similar. It helps to have everything nearby and ready to go before you get started. Have at least two syringes of water (one for before feeding, and one to rinse afterwards) plus the syringe of liquid/slurry food ready to go. If you will be giving medications, have those ready too. Food and water should be room temperature, but don't warm

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E-tube. An esophagostomy tube, or E-tube, allows food to be placed directly into the esophagus, the structure in the body that leads from the mouth to the stomach. Cats and dogs with E-tubes can go home and resume normal activities, even eating and drinking by mouth if they are willing to do so. Becoming self-sufficient is the goal, such that the tube then can be removed.

refrigerated food in the microwave. Instead, either leave it out for a half hour or so before use, or warm in a water bath as if you were preparing a baby bottle. Hot or cold spots in the food will be uncomfortable for your pet.

It is best for your pet to be either lying on his or her belly or sitting upright during feeding. For cats and small dogs, they can rest on your lap during the feeding. They should be comfortable throughout. If you believe that during this process, your pet is in any way distressed, discuss your concerns with your veterinarian.

A plug or cap is in place at the end of the tube to prevent backflow when the tube is not in use. Remove this plug first. In many instances, there is another clamp attached to the tube as well; this clamp will need to be opened immediately before the tube is used but can stay closed while taking syringes on and off the end of the tube. Once the cap/plug is off, attach a syringe containing room temperature tap water and slowly depress the syringe plunger to introduce about 5 mL of water. If the pet starts to gag, cough, or becomes distressed, stop the feeding and call your veterinarian.

Assuming no gagging, coughing, or distress, you can gradually depress the plunger until all the food has gone from the syringe. Next, remove the now empty syringe of water and connect the syringe of food to the feeding tube. Depress the plunger gradually. The amount of time for giving the food should be no faster than the time it would have taken for your pet to eat a meal on his or her own. Feeding too fast can cause an uncomfortable sensation of sudden fullness and could cause vomiting. Approximate guidelines: for a small meal of 15 mL or less, 8-10 minutes; for larger meals of more than 15 mL, 10-20 minutes. Finally, after the meal has been given completely, finish by again giving 5 mL of water to flush the food through the tube. If at any time during this process your pet starts licking his/her lips (demonstrating nausea) or vomiting, stop feeding, and contact your veterinarian for further instructions.

PEG tube. A PEG tube allows food to be placed directly into the stomach, bypassing the mouth and the esophagus. A long tube is used initially, but for animals that require long-term tube feeding it is often replaced with a low-profile tube, as this dog is using. The tube is mostly internal, with only a small button on the outside. Dogs with such tubes can play and act as normal, and if there is a not a medical reason preventing it, they can also eat to the extent that is possible given their illness or disorder.

AFTERWARDS

After flushing the tube with 5 mL of tap water, recap the tube (you can reuse the same cap), clamp the tube shut if a clamp is attached to the tubing, and tuck the tube into the undershirt, dressing, or light wrap out of the way of legs or paws that could scratch at it.

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FREQUENTLY ASKED QUESTIONS

My pet is eating on his/her own. When does this tube come out?
PEG and PEJ tubes (on the side of the body) must stay in for 1 week for a seal to form between the skin and the stomach. Removal after the first week is entirely dependent on whether the causative problem (that was responsible for needing the feeding tube) is resolving and whether your pet's appetite has returned. An E-tube may be removed at any time, depending here as well on appetite and return to improving health.

How will I know if the tube is still in the right place?
It is very difficult to know just from external appearances. If your dog or cat's energy level is deteriorating, if a fever develops, or other signs suggest the tube may be out of place, a recheck should include an x-ray (radiograph), possibly with the administration of contrast (dye) in the tube, to locate the exact position of the tube internally and be sure it is not in a dangerous place such as the peritoneum (lining of the abdominal cavity).

What happens if my pet pulls the tube out prematurely?
It depends on a number of factors. If your pet has had the tube in for a while and is now eating on his or her own and feeling better, your veterinarian may just advice leaving the tube out. The small opening in the body wall from these types of tubes does not need to be stitched closed and will heal on its own. If a stomach (PEG or PEJ) tube is pulled out before the first week, this can be a medical emergency since food could enter the abdominal cavity outside the stomach. An immediate trip to the veterinary hospital or emergency clinic is necessary. If the tube has been in place for longer than a week, or if it is an esophageal tube and not a stomach tube, the worry about a severe complication is much reduced. However, if the tube is still necessary for feeding, an immediate recheck is still necessary. If possible, the veterinarian will want to place the tube through the same hole used by the last tube. However, the hole made by the tube closes quickly, so this needs to be done within just a few hours.

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