

Placing Feeding Tubes in Dogs and Cats

References:

- Fossum TW, Hedland CS, Hulse DA, Johnson AL, Seim HB, Willard MD, Carroll GL. Chapter 11, "Postoperative Care of the Surgical Patient," in *Manual of Small Animal Surgery*.
- Marks SL. Chapter 71, "Enteral and Parenteral Nutritional Support," in Stephen J Ettinger and Edward C. Feldman *Textbook of Veterinary Internal Medicine, 5th Edition*.
- Remillard RL, Armstrong PJ, Davenport DJ. Chapter 12, "Assisted Feeding in Hospitalized Patients: Enteral and Parenteral Nutrition," in Hand Thatcher Remillard Roudebush *Small Animal Clinical Nutrition, 4th Edition*.

Enteral feeding is for patients that can not or will not ingest adequate nutrition, but have adequate GI function for digestion and absorption of food delivered by tube.

I. Nasoesophageal Tube

A. Ideal for feeding for 3-7 days.

1. Advantages:
 - a. Sedation is usually not necessary, unless patient is fractious (placement is easier with swallowing reflex intact).
 - b. Can usually be placed quickly without anesthesia.
 - c. No risk of adverse effects if properly placed.
 - d. No adverse effect if removed by patient (will usually pass the tube if swallowed).
2. Disadvantages
 - a. Not suitable for long term feeding, as they are easily dislodged.
 - b. Must feed a very liquid diet, as tube sizes must be small (blenderized diets clog small tubes).
 - c. May not be able to use NE tube if significant pathology to the nasal passages or head.

B. Tubes used for nasoesophageal feeding:

1. Red rubber, polyurethane or silicone tubes, with or without weighted tip.
2. Polypropylene don't work well—they kink.
3. 3.5 French or 5 French red rubbers work well for cats.
4. 5 French or 8 French infant feeding tubes work well for dogs.

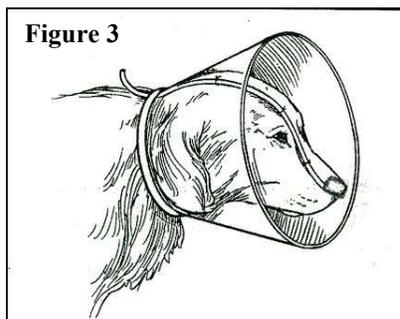
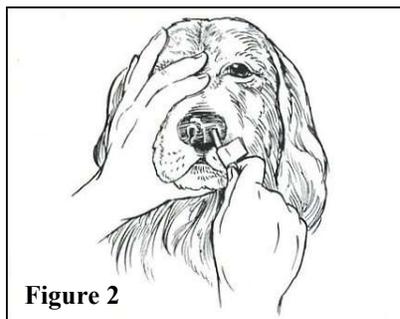
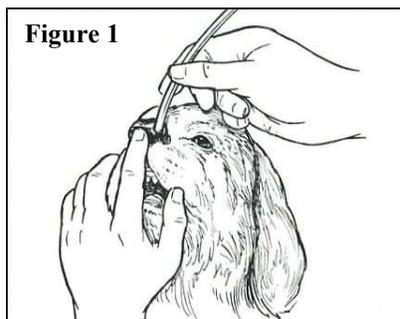
C. Supplies for nasoesophageal tube placement:

1. Topical anesthetic.
2. Lubrication jelly.
3. Feeding tube.
4. Scissors to cut tube.
5. White tape.
6. Suture or tissue glue.
7. Elizabethan collar.

D. Placement instructions for nasoesophageal tube:

1. Tilt the nose upward and place 4-5 drops ophthalmic anesthetic (proparacaine) or lidocaine in each naris, and wait for a few minutes for it to take effect. Repeat.
2. Measure tube:
 - a. Starting with the feeding end of the tube, measure from anchor on dorsal midline to the external nares – mark with a white tape butterfly here.

- b. From tip of the nose to just caudal to the heart base (7th-8th intercostal space) – trim distal end if needed.
- c. You do not want the tube to extend into the stomach, as a tube passing through the gastroesophageal sphincter can cause gastroesophageal reflux and ulceration.
3. Lubricate end of tube with sterile water soluble lube or 2-5% lidocaine jelly.
4. Hold the patient's nose firmly in a normal position (avoid flexion or extension). Direct the tip of the tube medially and ventrally into one of the external nares, until it passes into the ventral meatus of the nasal passage.
5. Lift the nasal planum dorsally and lift the proximal end of the tube, if you are having trouble getting into the ventral meatus (see figure 1 right).
6. Slow passing the tube as your reach the oropharynx, to allow the dog or cat to swallow the tube into the esophagus.
7. Insert the tube until you reach the white tape butterfly which was used to mark the place the tube will exit the external nares (see figure 2 right).
8. Test the tube by injecting 10-15 ml of sterile water or sterile saline. If there is a coughing reflex, remove and reinsert the tube. If you wish, take a lateral cervical radiograph to confirm proper positioning of the tube.
9. Secure the tube at the tape butterfly to the nasal planum just lateral to the external naris, using tissue glue or sutures. Secure the tube with sutures or tissue glue at the dorsal bridge of the nose, and on one or two spots on the dorsal midline of the head (brachycephalic dogs may need fewer anchor spots). Use white tape butterflies at these anchor sites if necessary. On dogs with long hair, it may be necessary to trim hair to secure the tube to the skin at these additional spots. Do not allow the tube to contact the whiskers on cats.
10. An Elizabethan collar is used in most animals with NE tubes to prevent removal. The feeding end of the tube is threaded caudally through the collar (see figure 3 right). Attaching the end of the tube to the collar can help to secure it.
11. NE tubes are easily removed by cutting the sutures to the tape butterfly, and removing the tube.



E. Contraindications to placement of nasoesophageal tube

1. Thrombocytopenia – these dogs are prone to epistaxis with nasal intubation (can be severe).
2. Respiratory compromise.
3. lack of gag reflex (neurologic disease or unconscious)