

Enteral feeding and feeding tubes in dogs and cats

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Critically ill or injured patients often do not get adequate nutrition for a variety of reasons. After 72 hours without food, the body transitions to stressed starvation, which can lead to decreased immune function, delayed wound healing, and abnormal gastrointestinal function. Decreased calorie intake during critical illness and recovery increases the risk of malnutrition, which may lead to increased morbidity, cost of treatment, and complications with recovery. Enteral nutrition is the preferred method of feeding in critically ill or injured patients that have a functional GI tract. At the end of this lecture, you should be able to:

1. Know how to perform a nutritional assessment on ill or injured patients
2. Understand the different enteral feeding tube options, placement, maintenance, and complications
3. Calculate kcal and devise feeding plan for dog and cat

The veterinary clinician may decide that placement of a feeding tube is necessary for the recovery of the patient if they are unable to eat voluntarily. Tube options include nasoesophageal or nasogastric tube, esophagostomy tube, gastrostomy tube, or jejunostomy tube. A feeding tube should be placed after a patient is fully resuscitated and hemodynamically stable and a nutritional assessment has been performed.

Tube type	Length of time used	Advantages	Disadvantages	Complications
NE or NG tube 3.5-10 french silicone or polyurethane tube	Short term (<7 days) in hospital	Ease of placement under sedation Measure gastric residual volume Well tolerated Easily removed at any time	Liquid diet only Can clog	Nasal irritation Mild epistaxis Easy to dislodge Rhinitis Sinusitis Tracheal placement Tube migration
Esophagostomy tube 12-14 french for cats 12-22 french for dogs	Long term (> 7 days)	Canned or liquid diet can be used Administer meds Can be used indefinitely Ease of use and removal	Can clog Dislodge Requires skill and anesthesia to place Requires functional esophagus	Stoma site infection Tube clogs Dislodgement Inappropriate placement (trachea, mediastinum,

				pleural space) Tube migration
Gastrostomy tube 16-22 french mushroom tube	Long term (> 7 days)	Canned or liquid diet Administer medications Used in hospital and at home	Placed either surgically or endoscopically Anesthesia + skill required for placement Must be left in place for at least 7-10 days before removal	Peritonitis with premature removal or leakage Tube clogging Stoma site infection
Jejunostomy tube 5-8 french	Short term in hospital usage only	Liquid diet, CRI only Bypasses stomach and pancreas in pancreatitis patients	Surgical or laparoscopic placement Must be left in place at least 7 days	Peritonitis with early removal or dislodging Clog easily Stoma infection Leakage at stoma site Tube migration

References

Eirmann L, Michel K. "Enteral Nutrition" *Small Animal Critical Care Medicine*, Silverstein DC, Hopper, K. *Small Animal Critical Care Medicine*. 2nd ed. St Louis, missouri: Elsevier; 2015; pp 681-686.