



Gastrointestinal Foreign Bodies

Associated Terms:

Foreign Body, Intestinal Resection and Anastomosis, Enterotomy, Gastrotomy, Intestinal Perforation, Bowel Obstruction, Intestinal Obstruction, Linear Gastrointestinal Foreign Body, GI Foreign Body



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Q&A

Foreign bodies occur when pets consume items that will not readily pass through their gastrointestinal tract. These items may be a pet's or child's toy (Figures 1), strings (Figure 2), leashes, clothing, sticks, or any other item that fails to pass, including human food products like bones or trash. The problems that are caused vary with the:

- duration that the foreign body has been present
- location of the foreign body
- degree of obstruction that is caused
- problems associated with the material of the foreign body



Figure 1. A string wrapped around the base of the tongue of a cat. The string extends into the stomach and small intestines

Some ingested items, like older pennies or lead material, can cause systemic toxicities while others may cause regional damage to the intestinal tract itself due to compression or obstruction.

Gastrointestinal foreign bodies, especially strings, can often lead to perforation of the intestinal tract and spillage of intestinal contents into the abdomen. **This condition quickly leads to inflammation of the abdominal lining (peritonitis) and allows bacterial proliferation and contamination (sepsis),**

which are both life-threatening complications. While some small foreign bodies will pass, many will become lodged along the gastrointestinal tract and cause discomfort and make your pet sick. Some foreign bodies located in the stomach may be retrieved with the use of an endoscope; however, most require surgical abdominal exploration and removal. Occasionally, foreign bodies will become lodged in the esophagus at the base of the heart or at the diaphragm, which may require thoracic (chest) surgery.



Figures 2. Two radiographic views of a dog with an ingested foreign body in its stomach

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Clinical signs can vary significantly with the degree of obstruction, location, duration, and type of foreign body. Commonly noted signs include:

- vomiting
- anorexia (loss of appetite)
- abdominal pain
- dehydration
- diarrhea (with or without presence of blood)

In cases of linear foreign bodies, a string may be observed wrapped around the base of the tongue or coming out of the anus (Figure 1).

Intestinal obstruction, protracted vomiting, and diarrhea can cause significant metabolic changes within the body. Additionally, if the foreign body has perforated the intestinal wall and entered the thoracic or abdominal cavities, profound complications may follow. These may include peritonitis, sepsis, and death. **Many foreign bodies are made of materials that are potentially toxic when absorbed.** Lead and zinc are good examples that when consumed may lead to profound systemic disease if enough is absorbed.

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Your primary care veterinarian will likely recommend initial blood work that includes a complete blood count (CBC), serum chemistry, and a urinalysis. These combined will help to rule out other causes for your pet's symptoms. Abdominal, and occasionally thoracic, radiographs are regularly performed (Figures 2 and 3). Positive contrast radiographs (using barium to highlight the inside of the stomach and intestines) may be performed when routine radiographs fail to show the cause for the clinical signs. Abdominal ultrasound can be very helpful in identifying gastrointestinal foreign bodies.



Figures 3. Two radiographic views of a dog with an ingested foreign body in its stomach

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Surgical intervention is not always required with gastrointestinal foreign bodies. Occasionally, the item ingested is small and smooth enough to pass through the gastrointestinal tract without causing damage or becoming lodged. Additionally, few foreign bodies may become lodged in the upper gastrointestinal tract (mouth, esophagus, and stomach) and may be removed with the use of a flexible endoscope. Frequently, conservative management and endoscopy fail to provide relief and surgical exploration is warranted.

Esophageal foreign bodies require thoracic (chest) surgery to gain access for removal. **Most gastrointestinal foreign bodies become lodged within the stomach or intestines and require a gastrotomy (opening the stomach) or enterotomy (opening the intestine).** Once the item has been removed, the gastrointestinal tract is closed. Many linear foreign bodies and completely obstructed intestines are damaged severely enough that multiple enterotomies may need to be performed. If a section of bowel is irreversibly damaged, an intestinal resection and anastomosis (procedure to remove a segment of the intestines and reattach the healthy ends) will be required. The decision of which procedure to perform is determined by the ACVS board-certified veterinary surgeon when all the intestines and other abdominal organs have been evaluated.

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Many pets have a degree of metabolic illness secondary to the obstruction caused by the foreign body and will need to be treated to return them to normal. Additionally, pets will need to be monitored to ensure that they return to eating and that their clinical signs resolve. Finally, evaluation for presence of

intestinal or stomach leakage will need to be done for 3-5 days postoperatively. Intravenous fluids and antibiotics may be given as needed.

Most uncomplicated gastrointestinal foreign bodies carry an excellent prognosis. Many pets return to eating within 1-2 days and clinical signs resolve. The prognosis worsens if there is an increased duration of time until the patient is seen or the obstruction is detected. The location of the foreign body also may indicate a worse scenario. Linear foreign bodies can carry a good prognosis if they are resolved early in the course of the disease. As these become prolonged, the risk for perforation increases. Perforation, subsequent peritonitis, and sepsis carry a guarded prognosis and will require additional operative and postoperative care.

The leakage of intestinal contents into the abdomen and subsequent sepsis and peritonitis is always a risk during intestinal surgery, although meticulous care and adequate flushing of the abdomen usually prevent these. Dehiscence can occur at the site of bowel surgery, or at the closure of the abdominal wall.

This Animal Health Topic was written by and reviewed by Diplomates of the American College of Veterinary Surgeons. Any opinions stated in this article are not necessarily the official position of the American College of Veterinary Surgeons.

The American College of Veterinary Surgeons recommends contacting an ACVS board-certified veterinary surgeon or your general veterinarian for more information about this topic.

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