



**Veterinary Emergency
+ Referral Center**
of Hawaii

**Ettinger: Textbook of Veterinary Internal
Medicine, 7th Edition**

Megaesophagus
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What is the esophagus?

The esophagus is a long, muscular tube connecting the back of the mouth (pharynx) with the stomach. The esophagus transports swallowed food and water to the stomach by using a squeezing movement behind the food (peristalsis) to propel the material into the stomach within a few seconds of swallowing it. After swallowing, the normal esophagus is empty and resembles a collapsed hose. The opening of the esophagus into the pharynx is in the vicinity of where the windpipe (trachea) also enters the pharynx. The windpipe carries air from the outside into the lungs.

What is megaesophagus?

Megaesophagus refers to a syndrome in which the esophagus is weak and flaccid. It subsequently becomes much larger than normal (hence the term *megaesophagus*). This occurs because the weak esophagus has no tone and does not propel ingested air, food, and water into the stomach normally; rather, these items stay in the esophagus and stretch it out of shape (dilatation). This syndrome is much more common in dogs than in cats and can occur to any age dog.

Why is megaesophagus harmful?

The most devastating side effect of megaesophagus is having food, water, and saliva mistakenly go into the windpipe (i.e., trachea) and lungs (this leakage is called *aspiration*), causing pneumonia (i.e., infection of the lungs). Because the esophagus and the trachea enter the pharynx close to each other, this happens relatively easily. Some dogs have signs of aspiration (i.e., cough, labored breathing, and/or fever) despite the owner never seeing regurgitation. These dogs may regurgitate material into their mouth and then aspirate some of it without it ever being ejected from the mouth.

If only small amounts of material are aspirated, cough will be the primary sign. This cough may be moist or dry. If large amounts are aspirated and reach the lungs, pneumonia occurs, causing fever and labored breathing. Dogs can die from severe aspiration pneumonia. Sometimes nasal discharge occurs when regurgitated material is pushed from the pharynx into the back of the nose. If large amounts of material are aspirated and reach the lungs, the dog may develop an acute, severe pneumonia and die suddenly. Such sudden death may occur anytime, even if the dog has not been regurgitating for the last several weeks or months.

What are the symptoms of megaesophagus?

Many causes of this condition exist, but the consequences are similar regardless of cause. Affected pets usually regurgitate fluid and/or food. Regurgitation is much like vomiting, except that vomiting involves ejecting material from the stomach and intestines, whereas regurgitation

involves emptying material from the esophagus or the back of the mouth. Regurgitation as a result of megaesophagus may occur soon after eating or it may occur hours later. Dogs with this problem may or may not lose weight, depending upon how much food ultimately reaches the stomach. Usually some weight loss occurs.

How is megaesophagus diagnosed?

Megaesophagus is diagnosed by taking radiographs (x-rays) of the chest, often after feeding a contrast agent such as barium. It is important to perform these radiographs because some esophageal diseases mimic megaesophagus but are completely different and require different therapy.

What treatment is needed for megaesophagus?

Because of the potentially devastating side effects of megaesophagus, it is wise to look for an underlying cause. Underlying causes are found 15% to 25% of the time; however, finding such a cause may allow the veterinarian to cure the megaesophagus (which is optimal) instead of just treating the symptoms (which often fails). If an underlying cause cannot be found (termed "*idiopathic megaesophagus*"), then symptomatic therapy consists of trying to help food transverse the diseased esophagus and reach the stomach. If food does not remain in the esophagus, then it will not be regurgitated and aspirated.

Although substantial dog-to-dog variation occurs, veterinarians usually recommend having the dog stand on its hind legs when it eats, so that it is as near vertical to the ground as possible. The dog should remain in this position for 5 to 10 minutes after eating. By doing this, we hope that gravity will help pull food down into the stomach. Gruels are often fed in the hope that they will "slide" down the esophagus easier than dry foods; however, some pets tolerate dry food or canned foods better than gruels. Feeding several small meals a day is usually preferred to feeding one or two large meals. Rarely, drugs such as cisapride will help diminish regurgitation.

Rarely, a tube can be placed through the skin and wall of the abdomen directly into the stomach (i.e., gastrostomy tube) so that the dog may be fed and watered without anything having to go through the esophagus. This feeding technique does not eliminate all aspiration (the dog can still regurgitate the saliva it swallows), but it helps diminish aspiration. Sometimes gastrostomy tubes allow dogs with idiopathic megaesophagus to live a near-normal life, except for their manner of being fed and watered.