

Bloat and Gastric Dilation Volvulus

What is it? Gastric dilation and volvulus (GDV) is an **immediately life-threatening** condition that can cause a dog to die a painful death within hours of its occurrence. However, with fast and appropriate treatment, many dogs can survive and go on to live a healthy life. As your dog's guardian, you can save your dog's life by noticing the signs of bloat and GDV and presenting your dog to a veterinarian immediately.

Bloat is a condition in which the stomach becomes painfully distended by gas or food, and is known as **gastric dilation**. The bloated stomach has a tendency to twist upon itself – this is the “**volvulus**” in gastric dilation and volvulus. Once the stomach has become twisted, there is no way for food and gas to exit the stomach, and the blood supply to the stomach becomes compromised.

This causes one of the major complications that can occur during a GDV, which is **gastric necrosis**, death of part or all of the stomach due to this lack of blood supply.



Your veterinarian will look for the classic “shepherd's hook” appearance to the stomach on radiographs, which indicates a GDV.

Several other important complications can occur. The spleen is attached to the stomach and may rotate with it during a GDV. In this way the blood supply to the spleen can be cut off, necessitating **splenectomy**, removal of the spleen. Changes in the distribution of blood and lack of blood supply to the stomach and spleen can cause **shock**, a life threatening condition in itself. Shock and damage to the spleen and stomach can cause a **heart arrhythmia**, which may occur up to 48 hours after the GDV has been corrected, and may need to be treated if it affects the heart's ability to pump blood to the body.



Large and giant breed dogs are at high risk for gastric dilation volvulus.

Who is at risk? Large and giant breed dogs with deep, narrow chests are most at risk for this condition. Breeds at highest risk include the Great Dane, St Bernard, and Weimaraner, but **any dog can develop a GDV**. Dogs weighing more than 45kg have an approximate risk of 20% for developing bloat at some point in their lifetime.

Factors increasing the risk of bloat include: feeding one meal a day, feeding from an elevated food bowl, exercise before/after meals, and rapid eating, among others.

How do I recognize it? The signs of bloat are: **distended abdomen (but not always!), vomiting, non-productive retching, anxiety, restlessness, and depression.**

What do I do? **Immediate veterinary attention is required** – if your regular veterinarian is not open, call or take your dog to the nearest emergency centre.

How is a GDV treated? Unfortunately a true GDV requires either surgery or euthanasia – temporary deflation of the stomach can assist with stabilizing the patient, but conservative treatment does not work well. If bloat without rotation is present, surgery may still be necessary to empty stomach contents and ensure that rotation does not occur. Your veterinarian will be able to explain the options for treatment in your dog.

On admission to the hospital, treatment for shock including intravenous fluids, pain relief, and other life saving measures can be undertaken. Some dogs may need treatment for arrhythmias or other complications as well.

Surgical treatment for GDV consists of derotating the stomach and tacking it into place so that it cannot rotate again. This procedure is called a **gastropexy**. Part of the stomach may need to be removed if there is damage due to lack of blood supply. The spleen may also be removed, if necessary.

What's the prognosis? The prognosis for GDV can be quite good with early, aggressive treatment. **Without treatment, it is inevitably fatal.** The prognosis for your dog will depend on how quickly they receive treatment, what complications they have (see complications above), and how much organ damage exists. **Prognosis can be as good as 90% for uncomplicated GDVs** that receive prompt surgery. Shock, arrhythmias, gastric necrosis, and a need for splenectomy can all decrease the prognosis to a 60-70% chance for recovery. For bloat alone without volvulus, some patients can be managed with conservative treatment. However, surgery is still typically recommended as the best chance for a good outcome.

Will it happen again? The gastropexy procedure is designed to prevent a GDV from recurring. However, there is still a low risk of recurrence of bloat itself. Fortunately, bloat alone can be a much more manageable disease and is not generally immediately life threatening.
