

Bloat Guide - Review With Your Veterinarian

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1. What is Bloat? gastric dilatation (stomach “blows up”)

What is GDV? Gastric Dilatation + Volvulus (twisting of stomach along with the blowing up) Bloat can occur with or without "volvulus" (twisting). As the stomach swells, it may rotate 90° to 360°, twisting between its fixed attachments at the esophagus (food tube) and at the duodenum (the upper intestine). The twisting stomach traps air, food, and water in the stomach. The bloated stomach obstructs veins in the abdomen, leading to low blood pressure, shock, and damage to internal organs. The combined effect can quickly kill a dog.

The gastric dilatation is one part of the condition and the volvulus or torsion is the second part. In bloat (dilatation), due to a number of different and sometimes unknown reasons, the stomach fills up with air and puts pressure on the other organs and diaphragm. The pressure on the diaphragm makes it difficult for the dog to breathe. The air-filled stomach also compresses large veins in the abdomen, thus preventing blood from returning to the heart. Filled with air, the stomach can easily rotate on itself, thus pinching off its blood supply. Once this rotation (volvulus) occurs and the blood supply is cut off, the stomach begins to die and the entire blood supply is disrupted and the animal's condition begins to deteriorate very rapidly.

Not all dogs that have a gas buildup and resultant dilatation develop the more serious and life threatening volvulus. However, almost all dogs that have a volvulus develop it as a result of a dilatation.

2. Be prepared! Know in advance what you would do if your dog bloated.

- A. Find out if your vet office does GDV surgery
- B. If your regular vet doesn't, know which nearby vet you would use. Keep the phone number handy: _____
- C. Always keep a product with simethicone on hand (e.g., Gas-X, Phazyme) in case your dog has gas. If you can reduce or slow the gas, you've probably bought yourself a little more time to get to a vet if your dog is bloating. Give your dog the gas reducer right away. Talk to your vet about how much to give—in non-professional websites they indicate between 5-10 pills. This is not to be used for normal gassiness.

Bloat is an **extremely serious condition**, and should be considered a life-threatening emergency when it occurs. There are no home remedies for bloat, therefore dog owners must **contact their veterinarians immediately** if they suspect that their dog has bloat. Dogs can die of bloat within several hours. Even with treatment, as many as 25-33% of dogs with GDV die.

3. What Kind of Things Make a Dog More Likely to Bloat?

- Breed—including German Shepherds, Great Danes, Bassett Hounds
- Genetics—including depth and width of chest, *especially* having a first-degree relative who has bloated
- Dogs who have treated/untreated Exocrine Pancreatic Insufficiency (**EPI**) are considered more prone to bloat, *gas is associated with incomplete digestion*
- Age—7 and older
- Gender—males are twice as likely
- Eating habits—dogs fed 1x/day are twice as likely to develop GDV as those fed twice a day. It appears that dogs who eat rapidly or exercise soon after a meal may also be at increased risk.
- Temperament: Dogs that tend to be more nervous, anxious, or fearful appear to be at an increased risk of developing bloat.

What Are Signs and Symptoms? Remember, not all of these can or will happen at the same time—these are things to be looking for:

- Abdominal distention (swollen belly) makes it obvious—this does not always happen, or happen right away
- Nonproductive vomiting (animal appears to be vomiting, but nothing comes up) and retching. Sometimes white foamy liquid or mucous will come out.
 - This seems to be one of the most common symptoms & has been referred to as **the "hallmark symptom"**
 - Some reports say that it can sound like a repeated cough
- Restlessness and/or anxiety, whining
- *Not acting like themselves*
- *Asking to go outside in the middle of the night. If this is combined with frequent attempts to vomit, and if your dog doesn't typically ask to go outside in the middle of the night, bloat is a very real possibility.*
- Abdominal pain and/or discomfort
- "Hunched up" or "roached up" appearance (also a sign of pancreatitis—another medical emergency)
- Lack of normal gurgling and digestive sounds in the stomach
 - Many dog owners report this after putting their ear to their dog's stomach*
 - If your dog shows any bloat symptoms, you may want to try this immediately*
- Pale or off-color gums: *Dark red in early stages, white or blue in later stages*
- Rapid shallow breathing and/or panting
- A lot of drooling may indicate severe pain
- Digging bedding
- Licking bedding
- Unable to get comfortable
- Drum like thumping noise when you hit their sides
- Coughing
- Foamy mucous around the lips, or vomiting foamy mucous
- Pacing
- Unproductive attempts to defecate
- Licking the air
- Seeking a hiding place
- Looking at their side or other evidence of abdominal pain or discomfort
- May refuse to lie down or even sit down
- May stand spread-legged
- May curl up in a ball or go into a praying or crouched position
- May attempt to eat small stones and twigs
- Drinking excessively
- Heavy or rapid panting
- Shallow breathing
- Cold mouth membranes
- Apparent weakness; unable to stand or has a spread-legged stance *especially in advanced stage*
- Accelerated heartbeat: *heart rate increases as bloating progresses*
- Weak pulse
- Collapse

If the dog's condition continues to deteriorate, especially if volvulus has occurred, the dog may go into shock and become pale, have a weak pulse, a rapid heart rate, and eventually collapse.

A dog with gastric dilatation without volvulus can show all of these signs, but the more severe signs are likely to occur in dogs with both dilatation and volvulus.

Treatment/Surgery:

When the dog is presented to the hospital his condition is assessed. Blood samples are generally taken and tested to help determine the dog's status. Usually the animal is in shock, or predisposed to it, so intravenous catheters are placed and fluids are administered. Antibiotics and pain relievers may be given.

The air in the stomach is removed either by passing a stomach tube or inserting a large needle into the stomach and releasing the gas. After the animal is stabilized, x-rays are taken to help determine whether or not a volvulus is present.

Some dogs with GDV develop a bleeding disorder called disseminated intravascular coagulation (DIC), in which small clots start to develop within the dog's blood vessels. To prevent or treat this condition, heparin, an anticoagulant, may be given.

The heart rate and rhythm are closely monitored. Some dogs with GDV develop heart arrhythmias, and this is a common cause of death in dogs with GDV. Dogs that already have a heart disease or are prone to heart arrhythmias are generally treated with appropriate medications.

Once the dog is stabilized, abdominal surgery is usually indicated to accomplish three things:

- Assess the health of the stomach and surrounding organs. If areas of the stomach or spleen have been irreversibly damaged, they are removed. In such a case, the chances for recovery are very poor, and euthanasia may be an alternative.
- Properly reposition the stomach
- Suture the stomach in a way to prevent it from twisting again (a procedure called gastropexy). If gastropexy is **not** performed, 75-80% of dogs will develop GDV again.

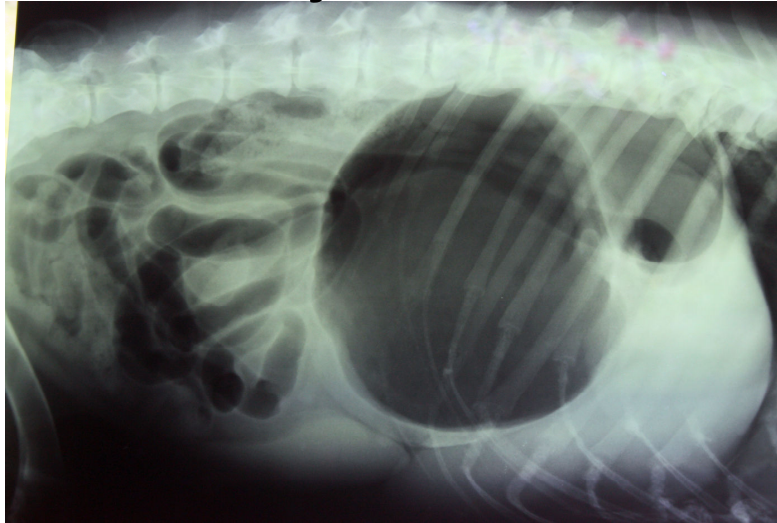
After surgery, the dog is closely monitored for several days for signs of infection, heart abnormalities, DIC, stomach ulceration or perforation, and damage to the pancreas or liver. Antibiotics and additional medications may need to be given. Bloat is a very serious and life threatening condition.

Causes/Possible Prevention:

There is no one particular activity that leads to the development of GDV. It appears that it occurs as a combination of events. Studies of the stomach gas that occurs in dilatation have shown that it is similar to the composition of normal room air suggesting that the dilatation occurs as a result of swallowing air. All dogs, and people for that matter, swallow air, but normally we eructate (burp) and release this air and it is not a problem. For some reason that scientists have not yet determined, these dogs that develop bloat do not release this swallowed gas. There are currently several studies looking into what happens physiologically in these dogs that develop GDV.

- Owners of susceptible breeds should be aware of the early signs of bloat and contact their veterinarian as soon as possible if GDV is suspected.
- Owners of susceptible breeds should develop a good working relationship with a local veterinarian in case emergency care is needed.
- Large dogs should be fed two or three times daily, rather than once a day.
- Water should be available at all times, but should be limited immediately after feeding.
- Vigorous exercise, excitement, and stress should be avoided one hour before and two hours after meals.
- Diet changes should be made gradually over a period of three to five days.
- Susceptible dogs should be fed individually and, if possible in a quiet location.
- Some studies suggest that dogs who are susceptible to bloat should not be fed with elevated feeders; other studies have not found this to be true. It is recommended, however, that dogs at increased risk be fed at floor level.
- Some studies have associated food particle size, fat content, moistening of foods containing citric acid, and other factors with bloat. At this time, no cause-and-result relationships between these factors and bloat have been verified.
- Dogs that have survived bloat are at an increased risk for future episodes; therefore prevention in the form of preventive surgery or medical management should be discussed with the veterinarian.

Bloat X-Ray - Ouch! From 15 yo GDV survivor



Deep Chested? From GSD.COM



This dog is deep chested - you can see the chest extends below the elbow.



This dog is not deep chested - you can see that the chest does not extend beyond the elbow.



Definite bloat case from GSRNE.COM

Information in this handout complied from:

<http://www.peteducation.com/article.cfm?c=2+1571&aid=402>
<http://www.globalspan.net/bloat.htm> with many links at the bottom