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**Dog Tips**

# Is Your Dog at Risk for Bloat? These Mistakes Can Be Deadly

Especially if you're the pet parent of a large or giant breed dog, be aware, your dog may be on this list of breeds at highest risk for bloat and gastric dilatation volvulus (GDV), a life-threatening emergency in dogs. This alarming study reveals factors that can put your pet at even higher risk.

**Analysis by Dr. Karen Shaw Becker**
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## STORY AT-A-GLANCE

- Bloat is a condition in dogs in which the stomach expands as a result of trapped gas, air, and/or fluid; bloat often progresses to a life-threatening disorder called gastric dilatation volvulus (GDV) in which the stomach twists around on itself
- Potential risk factors for bloat and GDV include a dog's breed, age, size, diet, eating habits, digestive health, and exercise
- Without immediate veterinary care GDV ruptures the stomach, resulting in peritonitis, a fatal abdominal infection; the time lapse between presentation of symptoms and emergency surgery is the most important factor in saving the lives of dogs with GDV
- There are several preventive steps you can take if your dog is at high risk of GDV involving, among other things, what, how fast, and how often he eats; high risk breeds with a near relative with GDV may benefit from preventive gastropexy surgery

The condition known as bloat in dogs is exactly what it sounds like and also occurs in humans, i.e., the stomach expands beyond (often well beyond) its normal size due to trapped gas, air, and in some cases, fluid. In people, feeling bloated is usually the result of overindulgence and nothing to worry about, but in dogs, a bloated tummy can quickly become a life-threatening situation.

If your dog has simple bloat, also called gastric dilatation, the stomach is distended with gas and air but remains in position. It can be painful because the swelling puts pressure on blood vessels in the abdomen.

However, in a worst-case scenario, the situation progresses to gastric dilatation volvulus (GDV), in which the bloated stomach twists around on itself, squeezing off the blood supply to the stomach and spleen, and creating the potential for significant damage to other internal organs.

> *"Think of a balloon being twisted in half, like when a clown makes an animal figure," writes veterinarian Dr. Shea Cook. "The enlarged stomach presses on the major blood vessels that carry blood back to the heart, stopping normal circulation and sending the dog into shock.*

> *Making matters worse, the dog's stomach tissue is literally dying because it is stretched tightly and blood cannot circulate through it. Intense pain is associated with this disease, causing the heart to race at such a high rate that heart failure will result."*[1]

Gastric dilatation with volvulus is a life-threatening emergency in dogs. Without treatment, it can lead to death in a matter of hours.

## Symptoms of Bloat and GDV

Many of the early signs of GDV can be easy to miss. Your dog may seem anxious. She may stand and stretch, or nip at or guard her abdomen. Panting and drooling are also common. If your dog has simple bloat, she should be able to relieve the pressure by belching. But if the bloat has caused a volvulus, she won't be able to expel the gas and air because both the entry and exit to the stomach are pinched shut. Signs your dog's bloat has progressed to GDV include:

- Markedly distended abdomen filled with air
- Unproductive belching, retching, and/or vomiting
- Noticeable abdominal pain that interferes with her movements
- Restlessness

Dogs with GDV go downhill very rapidly and display shallow, rapid breathing and pale gums.

## Risk Factors for Gastric Dilatation Volvulus

GDV is most often seen in older, large and giant breed deep-chested (as opposed to barrel-chested) dogs. It may be a partially inherited trait, since many GDV dogs have relatives that also have the condition. However, although genetics may play a role, bloat can affect any dog. Breeds at highest risk include:

- Great Dane
- Doberman Pinscher
- Irish Setter
- Newfoundland
- Basset Hound
- Weimaraner
- German Shorthaired Pointer
- Standard Poodle
- Saint Bernard
- Old English Sheepdog
- Gordon Setter
- German Shepherd

A 2017 epidemiological study conducted by a team of U.K. and Australian veterinary researchers looked at the records of over 77,000 dogs brought to emergency veterinary clinics in the U.K. over an 18-month period. Of that population, 492 had GDV.[2]

The study revealed that mixed breeds were far less likely to develop bloat than purebred dogs, and breeds at highest risk were the Great Dane, Akita, Dogue de Bordeaux, Irish Setter, and Weimaraner. Purebred dogs were over 5 times more likely to develop GDV than mixed breeds.

In addition, a heavier body weight was also strongly linked to GDV. Dogs weighing over 88 pounds had almost 150 times the chance of developing bloat as dogs under 22 pounds. The odds also increased as dogs aged. Other studies suggest elevated food dishes increase a dog's risk, as does fast eating. Dogs who gobble their meals and swallow air in the process seem to be at higher risk for GDV.

Other dietary habits considered to be risk factors include eating large amounts at each meal, eating just one meal a day, exercising shortly after a meal, and drinking large quantities of water right after eating. Post-meal stressful situations, as well as a generally fearful or aggressive temperament may also play a role.

Dogs fed primarily kibble are at significantly increased risk for GDV,[3] as are dogs who swallow indigestible or slow-to-digest foreign bodies, usually as a result of indiscriminate eating.[4] In my 25 years of veterinary practice, I have never had a dog develop bloat while eating a commercially prepared, nutritionally complete raw food diet, which tells me there’s a nutritional component involved, in addition to genetics and other environmental factors.

Other suspected risk factors include increased gastrin concentration (gastrin is a hormone that controls release of acid in the stomach); decreased stomach motility and delayed gastric emptying (meaning food stays in the stomach longer than normal); and removal of the spleen.

In my experience, lack of adequate hydrochloric acid production is a significant problem with pets fed carb-based, ultraprocessed diets that result in gastroesophageal reflux (GERD) and a host of other GI symptoms. Without adequate stomach acid production, food stays in the stomach too long, increasing the likelihood of gas production and bloat.

## Why GDV Can Be Fatal

GDV can quickly become a serious systemic issue because the bloating of your dog's stomach puts pressure on blood vessels, hindering their ability to pump properly. Pressure on the diaphragm makes breathing difficult, and when the stomach twists on itself, blood circulation is further inhibited.

Toxins are released into the bloodstream and blood flow back to the heart is compromised. This can put your dog in a state of shock in as little as 20 minutes to an hour after the volvulus develops.

Since there’s a good chance you won't be able to tell whether your pet has simple bloat or bloating with volvulus, you should get him to your veterinarian's office or the nearest emergency animal hospital right away.

If possible, administer homeopathic Belladonna, Nux Vomica, or Carbo Veg (depending on your dog's specific symptoms) on the way to the vet to try to mitigate rapid progression of the emergency.

Without immediate veterinary care, your dog's stomach will ultimately rupture and cause peritonitis, a fatal abdominal infection. The most important factor in saving GDV patients is the time that elapses between presentation of symptoms and surgery. I can't stress strongly enough the importance of getting your dog immediate veterinary care if you suspect bloat or GDV.

## Diagnosing and Treating GDV

GDV is diagnosed with x-rays. Your dog will first be stabilized with intravenous (IV) fluids and oxygen, and an attempt will be made to move the accumulated gas and fluid out of the stomach. Once your dog is stabilized, he'll undergo anesthesia and surgery to untwist the stomach and tack it to the inside of the abdominal wall in a procedure called a gastropexy.

The gastropexy should be performed as soon as possible, because GDVs recur at a rate of nearly 100% in dogs who don't receive the surgery. The recurrence rate after gastropexy is less than 5%, and while the stomach can still dilate (bloat), it is unlikely to rotate.[5]

According to the U.K. study, of the GDV dogs who made it to the clinic alive, about half their owners opted for surgery to correct the problem. Of the dogs who received surgery, 79% survived to discharge.

During the surgery, the stomach will be examined for damaged areas that may need to be removed as the result of poor blood circulation. Sometimes the spleen is also torqued and must be untwisted. Occasionally, the spleen may need to be removed if it has been significantly damaged.

Antimicrobials are usually given to address bacteria that leak into the bloodstream from the damaged intestine. There can also be blood pH and electrolyte disturbances that must be corrected. In addition, if irregularities in the heart rate are occurring they must be carefully managed, and the kidneys may also need to be monitored.

Your dog will not be able to exercise for the first couple of weeks after surgery, and should be fed a bland diet in small meals along with frequent small amounts of water. Acupuncture may be beneficial in managing pain and supporting the return of normal contractions of the stomach and intestine. Laser therapy may also be helpful to speed healing and reduce pain around the incision site.

I would also recommend a high-quality probiotic supplement to reseed the digestive tract with friendly bacteria, and nutritional supplements and herbs appropriate to support other organs such as the kidneys. Transition to a low-carb, minimally processed human-grade diet.

## How to Help Prevent GDV in Your Dog

If your dog is at high risk for GDV:

- Feed a nutritionally balanced, meat-based fresh food diet with no grains or other refined, high-glycemic, fermentable carbohydrates (eliminate corn, wheat, rice and other starchy flours and meals).
- Feed multiple smaller meals a day within your dog's eating window vs. one large meal, especially if your dog is a gulper (you can still practice intermittent fasting with your dog if you offer both meals 6-8 hours apart).

- Reduce the amount of air your dog swallows at meal times by slowing the speed at which he eats. Offer food from a special slow-feeding bowl like the Brake-Fast, or spread food out on a baking sheet, muffin tin, or a lick mat.
- Make sure the food you're feeding is “clean” (contains no preservatives, dyes, genetically modified (GM) ingredients, or citric acid), and always add supplemental digestive enzymes to assist in digestion and assimilation of food
- Don't vigorously exercise your dog for an hour after he eats, and don’t allow him to drink large amounts of water during that time. Never restrict water prior to meals.
- Be very careful not to allow your dog to have recreational bones or chews, toys, or other foreign objects that are difficult or impossible to digest or encourage excessive gulping or swallowing of air.
- Minimize stress on your pet. Make sure she’s well exercised (though not right after meals, as I've discussed). Most large breed dogs need lots of daily physical activity to maintain muscle tone and range of motion, decrease cortisol (stress hormone) levels, and relieve boredom.
- You'll also want to limit the amount of chemicals your pet is exposed to orally, topically, and in the environment.

Some veterinarians recommend gastropexy as a preventive measure in high-risk dogs who have not yet experienced an episode of bloat. The procedure is usually performed at the same time the pet is sterilized, but can also be performed at an earlier or later time using a laparoscopic procedure. Finding a qualified surgeon is important.

My first recommendation would be to try to prevent the likelihood of GDV by feeding a species-appropriate (low carb) fresh food diet and making other lifestyle choices that reduce risks. However, if your dog is a breed prone to the condition and has a near relative (parent, sibling, offspring) who has had a GDV, gastropexy may be an added layer of protection worth looking into.

## Sources and References


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[5] Institute of Canine Biology, The Purdue Bloat Study