

Hemorrhagic Gastroenteritis

By Dr. Karen Becker

Hi, this is Dr. Karen Becker. Hemorrhagic gastroenteritis, or HGE, is a very serious condition that can affect males and females of all breeds and ages. However, it's most often seen in 2- to 4-year-old toy and small breed dogs, especially the poodle, miniature schnauzer, dachshunds, Yorkshire terriers, as well as the Pekingese, Cavalier King Charles Spaniel, Shetland Sheepdog and medium-sized poodles as well. Toy and small breed poodles are equally affected. Interestingly, Dogs described as high-strung, hyperactive or stressed actually seem to have a higher incidence of HGE as well.

HGE isn't thought to be contagious from dog to dog. However, dogs living together have been reported to develop the condition at the same time, which is suspicious. Also, there are outbreaks that have been reported in pockets of the country or areas around the country, which is also suspicious.

In dogs with HGE, the lining of the intestinal tract becomes really acutely, which means suddenly, very leaky. Actually, even when there's no inflammation present, there's a massive amount of fluid that enters into the small intestine. This leakiness allows the fluids, proteins and red blood cells to seep out of the vessels and then through the intestinal wall and into the lumen or the opening of the intestine.

The dog's body responds with what we call a splenic contraction. The spleen serves as basically a blood bank. It's a holding tank for red blood cells. When the body senses that there's instantaneous blood loss, the spleen kind of squeezes and releases a ton more red blood cells, thankfully, into the circulation.

Possible Causes of Hemorrhagic Gastroenteritis

The cause of HGE is actually a mystery. Veterinarians don't know exactly why this condition occurs. Theories do include indiscriminate eating and immune-mediated disease. The cases that I saw last year – I saw two – both of those cases were after vaccines, actually. Toxin exposure, pancreatitis, stress, anxiety, hyperactivity and an allergic reaction to food or an inhalant allergy have all been proposed. Internal parasites and acute bacterial infections within the gastrointestinal (GI) tract have also been kind of suspected as potential underlying causes.

A small study of 10 dogs with HGE found that mucosal lesions were actually in the intestines, but not in the stomachs of affected dogs. All 10 of these dogs had Clostridium infections. Clostridium is a type of infection that can happen within the GI tract. In all 10 of these dogs, those infections were only found in the small intestine, not in the stomach. The study authors actually recommended that we rename this syndrome "acute hemorrhagic diarrhea syndrome," because they found no evidence of gastritis or inflammation of the stomach itself.

It has been assumed that the stomach is involved in HGE because vomiting is like the most common symptom. However, that wasn't the case with this study. In addition, the small and large intestines showed necrosis rather than inflammation.

To confuse things even more, in some areas of the country, the condition seems to occur seasonally, in the spring and in the fall. That was certainly my experience last year – two cases in the spring. There have also been outbreaks regionally. In spring, in certain areas of the country, we see a lot more HGE than other places. However, all testing related to those cases has turned up nothing useful in terms of nailing down a root cause of why it's occurring.

Hemorrhagic Gastroenteritis Symptoms

Most cases of HGE are acute, which means your dog is fine when you leave in the morning and you can come home to a kitchen full of just bright red blood and a very sick dog. It's actually a really scary syndrome to experience. The symptoms come on very suddenly, without warning. You can have a totally healthy dog and then a very sick dog in a matter of about four hours.

The primary symptoms of hemorrhagic gastroenteritis are either dark or bright red bloody diarrhea that actually resembles kind of raspberry jam, really gelatinous bright red or dark cherry-colored goo, a lot of goo coming from your dog's rectum, along with sudden and profound vomiting that starts out as mucus or bile, but then eventually becomes bloody. Some dogs may also have decreased appetite. Obviously, they feel terrible. Most dogs appear to have a very painful abdomen, as you would suspect. Most dogs become acutely lethargic and also sometimes run a fever.

HGE can be fatal. Immediate veterinary care is essential. Strangely, dogs are not usually dehydrated when they're first examined. However, within a very short period of time, usually dehydration develops because of the sudden fluid loss. That can also prompt a change in blood pressure and an elevated red blood cell count.

Sometimes, we can see secondary issues with clotting, and that can be a big problem, as well as shock and acute kidney failure. Obviously, veterinary care is indicated.

Diagnosis, Treatment and Holistic Recommendations

A diagnosis of HGE is typically based on a dog's symptoms, which are of course sudden onset of vomiting and diarrhea that is bloody, along with an elevated packed-cell volume of greater than 60 percent in most cases, which is seen as the red count goes higher, and a normal to low blood protein levels.

A positive culture for *Clostridium perfringens* is also helpful. Your veterinarian may want to run a full diarrhea panel, which would be my suggestion. X-rays are not helpful in cases of diagnosing HGE, but absolutely can be helpful in diagnosing other potential conditions, like if your dog ate a foreign body or something else that cause GI symptoms.

Diagnostic tests to rule out other issues, such as parvo, ingestion of rat poison, intestinal parasites, Addison's disease and acute foreign body problems are sometimes necessary, because you don't know why your dog suddenly has these symptoms. As recommended, I suggest a diarrhea panel as well, which will help identify if there is an infectious component to these symptoms.

Diagnosis is often a process of elimination of other causes of the bloody stools and gastrointestinal distress.

Treatment for HGE is primarily supportive, which means you just provide basic support to get the animal through the crisis. But it must be started immediately and aggressively to give your dog the very best chance for survival. Intravenous (IV) fluids will be given to prevent shock. Antimicrobials are often given to combat the acute bacterial infection. Dogs with vomiting also get anti-nausea medications. On rare occasions, blood transfusions may be required if the dog has lost a tremendous amount of blood.

During these times, many veterinarians, including myself, use a great Chinese herbal remedy called Yunnan Baiyao. In the middle of the Yunnan Baiyao packet, there's an emergency little red pill that we use regularly for this condition. Many veterinarians also use high potency homeopathic remedies to rapidly help stop the bleeding. I recommend both.

Once a dog's condition improves and he's no longer vomiting, water by mouth and small bland meals can be instituted. IV fluids will be tapered off over time to make sure that the animal can maintain his hydration. Oral medications are also discontinued. In most cases, HGE runs its course in a matter of a few days, given immediate treatment and appropriate supportive care.

About 10 percent of dogs who have one episode of HGE tend to have more in the future. While preventing HGE is difficult because we still don't know what causes it, it's important to ensure that your dog's immune system remains really strong and resilient. Hemorrhagic gastroenteritis is potentially life-threatening because it progresses so rapidly. Most importantly, if you recognize these symptoms as maybe being HGE, acting on them and going to your veterinarian immediately could certainly save your dog's life.

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