



1333 Plaza Blvd, Suite E, Central Point, OR 97502 \* [www.mountainviewvet.net](http://www.mountainviewvet.net)

## **Hemorrhagic gastroenteritis**

*Hemorrhagic gastroenteritis, HGE*

### **Affected Animals:**

Dogs of all ages and breeds can be affected by hemorrhagic gastroenteritis. Young adult dogs of toy and miniature breeds, especially schnauzers and poodles, may be affected more frequently.

### **Overview:**

There are many causes for bloody diarrhea and vomiting in dogs. Hemorrhagic gastroenteritis, or HGE, refers to a specific syndrome usually seen in young adult dogs of the toy and miniature breeds. In HGE, fever is usually not present, and the main laboratory abnormality is a marked elevation of the hematocrit (concentration of blood cells) due to fluid shifts and intestinal fluid loss. There is no diagnostic test that confirms the presence of HGE. Its diagnosis is made mainly on clinical grounds.

Just as there is no unique diagnostic test for HGE, there is no established cause for the illness. Treatment is similar as that for other causes of vomiting and bloody diarrhea in dogs. However, relatively large amounts of fluid are usually needed to replace the fluid lost into the intestinal tract, and to reverse shock, if present. Antibiotics are also given because bacteria may play a role in causing HGE. Although the signs are sudden and severe, and some dogs do not survive, most animals with HGE recover fully with prompt treatment. Recurrences are possible in an individual dog, but they are not common. Prompt veterinary attention is vital for any dog with severe gastrointestinal signs and depression, whether due to HGE or other causes.

### **Clinical Signs:**

The clinical signs of hemorrhagic gastroenteritis include vomiting, bloody diarrhea, depression, and collapse, or shock.

### **Symptoms:**

See Clinical Signs.

### **Description:**

Canine hemorrhagic gastroenteritis, or HGE, is a syndrome characterized by the sudden onset of vomiting, bloody diarrhea, depression, and an elevated hematocrit on bloodwork. The etiology, or cause, of HGE is not known. Changes in the mucosa, or lining tissue, of the intestine result in fluid shifts from the vascular system and changes in fluid secretion into the intestinal tract. These changes appear to cause the symptoms of HGE. Animals can become extremely ill in a very short period of time. Small and toy breed dogs from two to four years of age are affected most commonly. There is no specific diagnostic test

for HGE, but the occurrence of severe bloody diarrhea in a dog with an elevated hematocrit, a normal white blood cell count, and no fever, strongly suggests its presence.

Treatment requires prompt and aggressive fluid administration, and shock-level doses are usually needed at first. Food and water are withheld until the vomiting and diarrhea resolve. Steroids are given to animals that are in shock, and dogs with severe blood loss may require blood transfusion. Antibiotics are also given as part of the supportive treatment for HGE. Most dogs recover with appropriate treatment, although some may have additional bouts of the same signs after the initial episode resolves.

**Diagnosis:**

The diagnosis of hemorrhagic gastroenteritis usually rests on the presence of severe diarrhea in a dog with an elevated hematocrit. The elevated hematocrit results from fluid shifts out of the blood vessels, and excessive fluid loss through the intestinal tract. Additional bloodwork and x-rays are helpful for excluding other causes of bloody diarrhea, as is testing of the feces for the presence of parvovirus.

**Prognosis:**

With prompt and aggressive treatment, most dogs with HGE recover completely. Occasionally, some dogs will have recurrent episodes.

**Transmission or Cause:**

The cause of hemorrhagic gastroenteritis is unknown. A bacterium called *Clostridium perfringens* has been isolated from cultures of intestinal contents in dogs with HGE, but its exact role in the syndrome has not been identified.

**Treatment:**

The main aspect of treatment for HGE is intravenous fluid replacement. Large doses of fluids are usually required for initial therapy. Fluids are continued for one to two days, as long as the diarrhea persists. Antibiotics are also used because of the potential role of bacteria in the development of HGE. Steroids may be administered if the affected dog is in shock. Blood transfusions may be needed if blood loss is severe. Food and water are withheld until vomiting and diarrhea subside. These treatments are similar to those for almost any cause of acute, severe diarrhea in dogs. HGE symptoms should improve within 24 to 48 hours. If the affected dog fails to improve after 48 hours, other causes of the symptoms should be considered.

**Prevention:**

Since the cause of HGE is not completely understood, at present no known preventive measures exist.