Diarrhea in Dogs

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What is diarrhea?
Diarrhea is the rapid movement of ingested material through the intestine, resulting in one or more of the following: Increased frequency of bowel movements, loose stools, or increased amount of stool.

If my dog has diarrhea, when should I call my veterinarian?
If your dog has diarrhea, call your veterinarian. Your veterinarian will ask you a series of questions to determine how severe the diarrhea is. It will be helpful for your veterinarian to know when the diarrhea started, how many bowel movements your dog has had, what they look like, and if your dog is uncomfortable. It is especially important that you call your veterinarian immediately if your dog:

- Has blood in the diarrhea or the stools are black or tarry
- You suspect your dog may have eaten something toxic or poisonous
- Your dog has a fever or is depressed
- Your dog's gums are pale or yellow
- Your dog is a puppy or has not received all his vaccinations
- Your dog appears to be in pain
- Your dog is also vomiting

Do not give your dog any medications, including over-the-counter human medications unless advised by your veterinarian to do so.

How is the cause of diarrhea diagnosed?
There are many causes of diarrhea (See Table 2. Causes, Diagnosis and Treatment of Diarrhea in Dogs). It is important to determine the cause so the appropriate treatment can be given. Your veterinarian will combine information from you, the physical exam, and possibly laboratory and other diagnostic tests to determine the cause of the diarrhea.

Localization of symptoms - Since there are so many causes of diarrhea, it first helps to determine which part of the intestine is most likely involved. By localizing the diarrhea to the small or large intestine, the number of possible causes can be narrowed down. To do this, your veterinarian will need information related to what particular symptoms are occurring, as shown in Table 1.

Table 1. Symptoms of diarrhea due to a small intestine disease versus a large intestine disease

Symptom	Small Intestine Diarrhea	Large Intestine Diarrhea
Volume of stool	Increased	Normal or slightly increased or decreased
Frequency of bowel movements	Normal to increased	Usually very increased
Straining	Uncommon	Common
Blood present	Uncommon; digested blood may result in black, tarry stools	Common; fresh red blood is seen
Mucous present	No	Large amount common
Weight loss	Common	Uncommon
Vomiting	Possible	Uncommon
Increased gas	Possible	Uncommon

Onset of symptoms - How suddenly the symptoms appeared is also a good clue in determining the cause of the diarrhea. If the symptoms appeared suddenly, the condition is called "acute". If the symptoms remain over a long period of time (weeks), the diarrhea is called "chronic". If the symptoms appear, go away, and then come back again over several weeks, the diarrhea is considered "intermittent."

Medical history - Your veterinarian will ask about your dog's medical history including vaccinations, what type of wormer the dog has received and how often, contact with other dogs, diet, any access to garbage or toxins, and any medications. The more information you can offer, the easier it will be to make a diagnosis.

Physical examination - Your veterinarian will do a complete physical exam including taking your dog's temperature, checking the heart and respiration, looking in the mouth, palpating the abdomen, checking for dehydration, and performing a rectal exam.

Laboratory and diagnostic tests - In almost all cases of diarrhea, your veterinarian will recommend a fecal flotation. This is a test to check for parasites such as worms or Giardia. If a bacterial infection is suspected, a fecal culture and sensitivity are performed. In cases of certain viral diseases, such as parvovirus, other tests on the feces may aid in the diagnosis.

If your dog is showing signs of illness, a complete blood count and chemistry panel are often recommended. Special blood tests may also be conducted if certain diseases are suspected.

Radiographs (x-rays) are appropriate if a tumor, foreign body, or anatomical problem is suspected. Other diagnostic imaging such as a barium study or ultrasound may also be helpful. Examinations using an endoscope or colonoscopy may be indicated.

For some diseases, the only way to make an accurate diagnosis is to obtain a biopsy and have it examined microscopically.

How is diarrhea treated?
Because there are so many causes of diarrhea, the treatment will vary (See Table 2. Causes, Diagnosis and Treatment of Diarrhea in Dogs).

In many cases of diarrhea in dogs, it is recommended to withhold food for at least 24 hours, and provide small amounts of water frequently. Then, a bland diet such as boiled hamburger and rice is offered in small amounts. If the diarrhea does not recur, the dog is slowly switched back to his normal diet or a special diet over the course of several days.

For some cases of diarrhea, it may be necessary to modify the diet permanently. Special foods may need to be given as a way to avoid certain ingredients, add fiber to the diet, decrease the fat intake, or increase digestibility.

If intestinal worms are present, the appropriate wormer will be prescribed. Few wormers kill every kind of intestinal worm, so it is very important that the appropriate wormer be selected. In most cases it is necessary to repeat the wormer one or more times over several weeks or months. It is also important to try to

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remove the worm eggs from the environment. The fecal flotation test looks for worm eggs, and if no eggs are being produced, the test could be negative even though adult worms or larvae could be present. For this reason, in some cases, even if the fecal flotation test is negative, a wormer may still be prescribed.

If dehydration is present, it is usually necessary to give the animal intravenous or subcutaneous fluids. Oral fluids are often inadequate since they pass through the animal too quickly to be sufficiently absorbed.

Antibiotics are given if the diarrhea is caused by bacteria. They may also be given if the intestine has been damaged (eg., blood in the stool would indicate an injured intestine) and there is a chance that the injury could allow bacteria from the intestine into the blood stream, possibly causing serious disease (septicemia).

In some cases, medications may be given to decrease motility, i.e., slow down the rate at which the intestine moves ingested material through. These drugs should not be given if the dog could have ingested a toxin or may have a bacterial infection, so it is always important to have an accurate diagnosis before use of these drugs.

Table 2. Causes, Diagnosis and Treatment of Diarrhea in Dogs

Cause	Example	Dogs Most at Risk	Symptoms	Diagnosis	Treatment
Diet change	Changing dog food brand or feeding a high fat meal	Those switching from a consistent diet	Usually no other signs of being ill	History and physical exam; tests (e.g., fecal flotation) to rule out other causes	Withhold food as needed then switch to bland diet and then slowly back to normal diet
Food intolerance or sensitivity	Sensitivity to or inability to digest or absorb certain foods such as milk or gluten	Gluten hypersensitivity: Irish setters and soft coated Wheaton terriers	Sudden onset of diarrhea, sometimes with gas	Response to removing ingredient from diet and then adding it again (food trial)	Withhold food as needed then switch to diet without the offending ingredient
Intestinal parasites	Roundworms	Puppies	Diarrhea, weight loss, poor growth	Fecal flotation exam	Multiple treatments with appropriate wormer; decontaminate environment; supportive care
	Hookworms	Puppies	Diarrhea, vomiting, weakness, pale gums, dehydration, anemia, swollen abdomen, black and tarry stools	Fecal flotation exam	Multiple treatments with appropriate wormer; decontaminate environment; supportive care
	Whipworms		Chronic diarrhea with blood and mucus; intermittent abdominal pain	Fecal flotation exam	Multiple treatments with appropriate wormer; decontaminate environment
	Coccidia	Puppies and those who are immunosuppressed and kept in unsanitary conditions	Diarrhea with mucus and sometimes blood	Fecal flotation exam	Sulfa antibiotics
	Giardia	Usually young animals or those who are immunosuppressed	Mild to severe soft diarrhea with mucus and a bad odor; weight loss, abdominal pain and vomiting; often intermittent	ELISA test on feces; fecal flotation exam or microscopic exam of feces; difficult to diagnose - often need multiple samples over several days	Metronidazole, albendazole or febantel; bathing and sanitation to remove Giardia from coat and environment. Reinfection commonly occurs.

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Garbage ingestion		Those left unattended or unsupervised	Diarrhea, vomiting	History and physical exam	Withhold food then switch to bland diet and then slowly back to normal diet
Bacterial infection	*Salmonella, E. coli, Clostridia, Campylobacter*	Young kenneled dogs or those who are immunosuppressed	Mild to severe bloody diarrhea with loss of appetite, depression, fever and vomiting	Fecal culture and sensitivity; microscopic exam of feces	Antibiotics; intravenous fluids and supportive care in more serious conditions
Viral infections	Parvovirus	Young dogs who have not received full series of parvo vaccinations	Loss of appetite, fever, depression, vomiting, diarrhea, dehydration, abdominal pain	History; physical exam; fecal test for presence of parvovirus; white blood cell count	Intravenous fluids, antibiotics to prevent secondary bacterial infection; withhold food and water as needed
	Distemper	Young dogs who have not received full series of distemper vaccinations	Loss of appetite, fever, depression, cough, vomiting, diarrhea; later see neurological signs	History and physical exam; tests (eg., fecal flotation) to rule out other causes	Intravenous fluids if dehydrated; antibiotics to prevent sedondary bacterial infections. Prognosis is poor.
	Coronavirus	More severe in very young dogs, especially those with other intestinal diseases; more of a problem in animals shelters or where there are large numbers of stressed dogs	Diarrhea, poor appetite, lethargy, sometimes vomiting	Virus isolation or electron microscopy of biospsy	Intravenous fluids if dehydrated; antibiotics to prevent secondary bacterial infections
Toxins	Heavy metals such as arsenic, lead, zinc	Those left unattended or unsupervised	Loss of appetite, depression, vomiting, dehydration, abdominal pain	History and physical exam; tests (eg., fecal flotation) to rule out other causes; testing of blood, feces or vomit for toxin	Depends on toxin
Idiopathic Hemorrhagic Gastroenteritis		Small breed dogs	Sudden onset of bloody vomiting and diarrhea, depression, abdominal pain, black and tarry stools, shock	History; physical exam; complete blood count tests (eg., fecal flotation) to rule out other causes	Intravenous fluids, antibiotics to prevent secondary bacterial infection, withhold food and water

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Small intestinal bacterial overgrowth (SIBO); also called antibiotic resistant diarrhea		German shepherds, dogs with other intestinal problems	Intermittent watery diarrhea, poor growth or weight loss, increased gas, sometimes vomiting	History; physical exam; intestinal biopsy; tests (eg., fecal flotation) to rule out other causes; ultrasound; blood tests (eg., serum folate and cobalamin, bile acids)	Antibiotics (at least 4-6 weeks); modify diet
Lymphangiectasia (dilation of lymphatic vessels)	Primary: Congenital abnormalities; secondary: Congestive heart failure, cancer or inflammatory bowel disease	Primary: Soft-coated Wheaten terriers, Basenjis, Norwegian Lundehunds. Yorkshire terriers	Chronic, intermittent diarrhea, severe weight loss or poor growth, swollen abdomen or limbs due to edema	Exploratory surgery or endoscopy and biopsy	Highly digestible low fat diet and vitamin B12 injections; glucocorticoids; treat any underlying disease. Prognosis is poor, as there is no cure.
Tumors	Lymphoma, adenocarcinoma	Middle-age or older	Chronic diarrhea, weight loss, poor appetite; may see vomiting and dark, tarry stools	History, physical exam, intestinal biopsy	Chemotherapy or surgery depending upon the type tumor
Rectal polyps (benign)		Middle-age or older	Straining, mucus and blood in stool	History; physical exam; rectal exam; biopsy	Surgical removal
Exocrine pancreatic insufficiency		Dogs with a history of pancreatitis; young German Shepherds and rough coated Collies	Yellowish or gray feces with greasy appearance, increased gas, increased appetite, weight loss	Serum trypsin-like immunoreactivity (a blood test)	Pancreatic enyzyme replacement therapy; antibiotics to prevent bacterial overgrowth; cobalamin; sometimes diet modification
Idiopathic inflammatory bowel disease	Granulomatous enteritis, eosinophilic gastroenterocolitis, or lymphocytic/ plasmacytic enteritis (LPE)	Middle-age; LPE in German Shepherds and Basenjis	Chronic vomiting and diarrhea possibly with blood and/or mucus; sometimes straining, mild weight loss, and/or black and tarry stools	History; physical exam; intestinal biopsy; tests (eg., fecal flotation) to rule out other causes	Modify diet, wormers and antibiotics to treat or prevent hidden infections; probiotics; anti-inflammatory drugs; immunosuppressing drugs if no response to other treatment

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Histoplasma enteritis or colitis		Those living in the central US along the Mississippi, Ohio, and Missouri Rivers	Loss of appetite, mild fever, depression, severe weight loss, vomiting, blood in stool, straining; may also have respiratory signs	Endoscopy and biopsy	Itraconazole, ketoconazole or amphotericin B
Intestinal obstruction	Foreign body, intussusception		Diarrhea, vomiting, loss of appetite; as progresses see depression possible abdominal pain	History; physical exam; x-rays; barium series; ultrasound; exploratory surgery	Surgery
Irritable bowel syndrome		Anxious dogs and those under stress	Diarrhea with mucus, blood, and increased straining	History; physical exam; intestinal biopsy; tests (eg., fecal flotation) to rule out other causes	Highly digestible diet with increased soluble fiber; motility medications; decrease anxiety; anti-anxiety medications
Histiocytic ulcerative colitis		Young Boxers	Diarrhea with mucus, blood, and increased straining	History; physical exam; intestinal biopsy; tests (e.g., fecal flotation) to rule out other causes	Long-term antibiotics. Prognosis is good if treated early.
Cause	**Example**	**Dogs Most at Risk**	**Symptoms**	**Diagnosis**	**Treatment**

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