# **ABOUT THE DIAGNOSIS**

Chronic diarrhea is defined as passing softer stools than normal for 3 weeks or longer. It is a common and often frustrating problem in both dogs and cats that can be caused by diseases of the small intestine, large intestine, or by diseases of organs outside the gastrointestinal (GI) tract. Treatment is usually dictated by the underlying cause; however, it can be difficult to obtain a diagnosis. Lots of testing, or even treatment by trial and process of elimination, may be necessary.

Chronic diarrhea can affect dogs and cats of all breeds and ages, but different disorders are more likely in some animals than others (for example, older animals are more likely to have cancer while younger animals are more likely to have infections). Causes of chronic diarrhea can be divided into diseases **within** the GI tract and diseases **outside** the GI tract. Diseases within the GI tract include infectious diseases, partial obstructions, dietary indiscretion, inflammatory bowel diseases, and cancerous processes.

Diseases within the GI tract can be further divided into diseases that primarily affect the small intestine, the large intestine, or both segments of the bowel. In general, small intestinal disease results in passing large, watery bowel movements a few times a day. Animals with small intestinal disease may also vomit, lose weight, and/or have excess gas production. The stool may be black in color if there is digested blood within the feces. Animals with disease of the large intestine (including the colon and rectum) often strain to pass small amounts of loose stool very often, usually more than 5 times daily. If there is blood in the stool, it is red in color. The stool may be slimy with mucus.

Many causes of diarrhea are infectious in nature. Some of these, such as parvovirus in dogs, cause a sudden onset of diarrhea. Other kinds of infections can cause chronic, lingering diarrhea. These infections include bacteria (e.g., *Salmonella*), protozoa (e.g., *Giardia*), fungi (e.g., histoplasmosis), or parasites (e.g., whipworms). Pets can also have intestinal dysbiosis; a condition in which the "good bacteria" that are supposed to be present within the GI tract are replaced by "bad bacteria".

Some causes of diarrhea have a genetic (inherited) basis. These include protein loosing enteropathies (lundehund, basenji, and soft-coated Wheaten terrier) and sensitivities to gluten (Irish setter, shar-pei), among others.

Inflammatory bowel disease (IBD) occurs commonly in both dogs and cats. IBD can be separated into different categories including: food responsive, antibiotic responsive, and steroid responsive diarrhea. Regardless of the cause, the walls of the GI tract become inflamed, something that requires a biopsy to determine. Protein-losing enteropathy (PLE) can occur alone or with IBD and can be a life-threatening disorder.

Cancer of the intestine is another potential cause of chronic diarrhea. The cancer can be either a single tumor (for example, adenocarcinoma) or it may be more diffuse (for example, lymphoma of the intestine). Intestinal biopsies are necessary to diagnose these kinds of disease.

Before invasive tests such as a biopsy are considered, it is important to first try to "rule out" causes of diarrhea that are not directly related to the GI tract. For example, kidney disease, liver disease, pancreatic disease, or endocrine diseases can all cause chronic diarrhea.

*Diagnosis:* The diagnosis as to a specific cause of chronic diarrhea begins by considering the animal's breed, and age, the clinical

history, physical examination findings, and stool tests (fecal exams). In most cases, blood tests will be performed to look for disease outside of the GI tract, such as hyperthyroidism in cats or kidney or liver disease in either species. Special blood tests might also be suggested (for instance, to measure pancreatic enzyme function or vitamin B concentrations). Imaging studies including abdominal x-rays and ultrasound exam can also provide vital information both about the GI tract (e.g., a mass in the intestine) and about the other abdominal organs (e.g., structural kidney changes to suggest kidney disease). From there, the next diagnostic step is often to obtain biopsies of the intestine. Biopsies can be taken either by passing an endoscope through the mouth and/or rectum into the intestines, or at surgery. Usually, the diagnostic testing takes place in a step-by-step fashion that will vary depending on just what is found along the way, and how sick the pet is. If the pet is basically well other than having diarrhea, trial treatment is often offered before moving on to more invasive or expensive tests.

# TREATMENT

Treatment for chronic diarrhea depends on the cause. Of course, if a specific cause of diarrhea is identified it should be treated directly. If the pet is very ill with vomiting, weight loss, depression, or reduced appetite, diagnostic testing should continue until a cause of the illness is discovered. Luckily in many cases, the pet will seem well other than having frequent soft stools.

For pets that seem well other than having diarrhea and when no obvious cause for diarrhea is found through initial testing, trial therapies are often attempted. In many if not most cases, a trial of deworming is usually the next step since parasites can cause infection even if they are not seen on fecal exam. Probiotics, or supplemental "good bacteria", are another very safe option for treatment of pets that seem healthy other than diarrhea. Similarly, the addition of fiber to the diet of pets with large bowel diarrhea is safe and sometimes quite helpful. In many cases, treatment will also include changes in the diet, or a "diet trial". In such a trial, a special hypoallergenic food (or a food lacking a specific ingredient) is fed exclusively for at least 2 weeks. During such a trial it is absolutely crucial that NO other foods be allowed - not even a bite as a treat because a single bite can ruin the entire trial. If there is no response to the diet trial, an antibiotic trial is often employed. Again, this is part of the commonly used "trial and error" approach that is most helpful for animals that are in good shape other than diarrhea.

Failing such trials, or for pets that become ill, more invasive tests are often required. Such tests, and especially intestinal biopsies, can reveal a diagnosis that might be treatable with drugs such as corticosteroids or chemotherapy agents.

### Do's

- Have your pet's stool tested for parasites on a yearly basis and maintain suggested deworming schedules.
- Clean up fecal waste on a daily basis.
- Feed a high quality commercial pet food appropriate for the life stage of the pet.
- Seek veterinary care if a pet's loose stool persists for more than a week.
- Be prepared to answer questions regarding symptoms:
- When did the problem start, and how has it changed with time?
- How many bowel movements occur in a day?

- Is there blood, mucus, or other abnormality in the stool? What color is the stool?
- Does the pet strain to defecate?
- Is there any vomiting, or other signs of illness such as inactivity?
- What and how much does the pet eat? Have there been any changes in appetite?
- Stick to diet trials rigidly, with no exceptions.
- Give medication(s) prescribed for your pet exactly as directed.
- Realize that both diagnostic tests and treatments for chronic diarrhea are usually tried in a stepwise fashion, and it may take time to identify a specific diagnosis, or the treatment that is best for your pet.

#### DON'Ts

- Do not adjust medications without discussing the adjustment with your veterinarian beforehand.
- Do not feed other diets, treats, or human food to your pet during a strict diet trial.

### WHEN TO CALL YOUR VETERINARIAN

- When/if you are unable to give medications to your pet.
- If your pet loses/continues to lose weight or refuses to eat
- If clinical signs worsen, or new signs develop

# FREQUENTLY ASKED QUESTIONS

Why do we have to run so many tests – can't we just treat the diarrhea?

Diarrhea is not actually a disease, but instead is a clinical sign/ "symptom" of disease. Drugs that simply slow down the intestines 1) don't work very well in pets, and 2) don't do anything to treat the disease that is causing the diarrhea in the first place. This sometimes can be considered for acute (brief, self-resolving diarrhea) but with chronic diarrhea, the concern is that the underlying disease should not be allowed to continue and to worsen. It is important that we at least look for the most common and most serious causes for the diarrhea. If your pet is healthy other than having loose stools, trial treatments (e.g., deworming, probiotics, diet trials) are a reasonable first option once the basic fecal and blood tests have been performed.

My pet lives only indoors. Why do we need to do fecal tests? Although indoor pets are less likely than outdoor pets to have parasites, they do get them on occasion. Most dogs go outside at least on a leash or in a yard, and even these brief forays can expose them to parasite eggs on the ground. For both dogs and cats, there are also parasites that can stay in the tissues for long periods of time before they cause a problem. Testing the stool for parasites is simple, safe, and inexpensive – it is very well worth the small investment.

### Should I try a grain-free diet?

Diet trials are often an important part of finding a cause for, and treatment of, chronic diarrhea. That said, dogs and cats are more likely to react adversely to the meat component of the diet than to the grain. Diet trials often begin with a very, very strict hypoallergenic diet made of proteins that have been reduced in size to be so small that the body is unlikely to react. If the trial works, then you can move on to finding just what it was in the previous diet that caused the problem. That might be a grain, or it might be a meat protein.

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