

COLITIS IN PETS

Diseases of the colon, or large intestine, are common in dogs and cats. When the problem includes inflammation of the lining of the colon it is called colitis. There are many causes of colitis, including intestinal parasites, eating foreign objects (especially rough things like sticks or bark), toxins (spoiled food, chemicals), stress, bacterial and viral infections, immune system disorders such as inflammatory bowel disease (IBD) or food allergy, and cancer. It's a long list and may require some detective work to diagnose the cause. Some causes only last a few days but others are chronic or recurrent and must be managed for the rest of the pet's life.

Usually colitis causes diarrhea. There are several clues that tell us the diarrhea is caused by a problem in the large intestine versus the small intestine. If blood or excessive, slimy mucous is present in the stool that means colitis. Bowel movements tend to be small and frequent when the colon is inflamed, often with a lot of straining and discomfort each time. Most people seeing a pet straining because of discomfort mistakenly believe the pet is constipated when in reality the lining of the intestine is just raw and swollen. Cats and dogs are much more prone to colitis than humans and tend to have more blood in their stool, which is always a frequent worry of clients when they see it. Seeing some blood in the pet's stool is concerning but not usually too worrisome. Small intestinal diarrhea with no blood actually is usually much more serious than colitis because it causes more fluid and electrolyte loss and thus dehydration and illness. The amount of blood lost in the stool with colitis is usually very small – except from hookworms and whipworms which can actually cause fatal intestinal hemorrhaging.

Cats frequently have colitis without diarrhea and are also more prone to constipation, which can cause inflammation as hard stools struggle to pass through the intestines. If you see blood on the stool and the stool is too hard your cat may need treatment or a change of diet, even if the stools aren't loose.

Small intestinal diarrhea is more likely to cause larger amounts of more watery diarrhea at a time but with less frequency and no straining. It is uncommon to have both small and large intestinal diarrhea going on at the same time. Usually it's one or the other and we need to identify which one in order to diagnose and treat properly. This means we will be asking you questions about what the stool looked like, as well as what your pet has been doing and eating. Once we have an idea of what is going on we can narrow down the possibilities and start looking for the most likely cause.

If a cause for the colitis is not apparent from the history we usually do stool testing next. There are several tests that can be done to look for different infectious or parasitic causes and doing all of them gets costly. We try to do the test first that we think will discover the

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most likely cause but it sometimes takes us a few tries if the first test is negative. In dogs, we usually start with a fecal cytology. This is a Gram stained slide of a smear of poop, and it lets us look at the number and kind of bacteria present in the intestinal tract. There are three specific bacteria that are easy to identify under the microscope and are frequent causes of colitis. They are *Clostridium*, *Campylobacter* and *Corynebacterium*. Each requires a different antibiotic to control so it's important to know which one the dog has.

If we don't see any of these three specific infections we may still see something useful with this test. A normal stool is about 80% bacteria and the rest is fiber and food waste. A Gram stain divides bacteria into two basic groups, Gram positive and Gram negative, based on what color they turn when stained. There should be relatively the same numbers of Gram positive and Gram negative bacteria on the slide. If we see predominantly one or the other either a particular type is overgrowing and taking over or something has wiped out the ones we see fewer of. Sometimes the gut bacteria have died off almost completely, leaving them few and far between on the slide. All three of these situations are treated with antibiotics to kill off the bad bacteria, and probiotics to give the pet some good, healthy bacteria instead.

Metronidazole is the most frequently used antibiotic for colitis. It is very narrow spectrum, meaning it kills several types of bad bacteria while leaving most of the good ones alone. It also has anti-inflammatory effects in addition to killing bacteria, so it can help the colon to heal faster. If we find *Campylobacter* or *Corynebacterium* different antibiotics are used instead.

Metronidazole can be given long term if needed for pets with chronic colitis. If a pet doesn't tolerate metronidazole we can substitute something else. It usually takes 10-14 days of medication to completely clear a typical infection and sometimes longer. We generally recheck a fecal cytology before you run out of pills, to make sure the infection is completely gone and we are not stopping the medication too soon.

Metronidazole tastes very bitter. Dogs will usually take it hidden in a treat but cats are tough to medicate with it, as it often makes them foam and spit and then they won't put up with taking the medication at all. We usually use capsules instead of tablets for cats so they don't taste it as much. We can get it in flavored liquid form but it still tastes bitter. There is a particular form of metronidazole that is less bitter, called metronidazole benzoate, that we can special order. It is more expensive because it is not a readily available generic human drug.

We have several different probiotics that we use for different things but the most common one is FortiFlora, made by Purina. It comes in a granule that is sprinkled on the food or mixed in with canned food. It tastes good and most animals like it. Pets that frequently get stress colitis can start on it before the stress occurs, such as a week before they go to the boarding kennel, and continue to get it until the stress is gone. This makes a diarrhea flare-up less likely. Pets with IBD or other chronic intestinal conditions may be on probiotics long term.

If the fecal cytology test does not give us an answer as to the cause of a pet's colitis the next tests we do are usually to look for parasites. Intestinal worms, especially tapeworms, hookworms and whipworms, are frequent causes of colitis. We look for eggs shed by these worms in the stool by spinning a mixture of stool and sugar solution in a centrifuge. It's called a fecal flotation. The eggs rise to the top of the tube and are then looked for

under the microscope. If we find them we will deworm the pet. Some types are contagious and require deworming other pets in the household as well as the sick one. Tapeworms are picked up by eating a flea or a rodent that is a carrier, not directly from stools of other pets, so for tapeworms only the pet with the colitis needs to be treated.

Whipworms are difficult to find. They don't shed as many eggs as the other intestinal worms do. It takes an average of three standard stool tests to find and diagnose whipworms. As of March 2014 we have a new antigen test for whipworms that should make diagnosing them much easier. Our main outside laboratory, Idexx, now offers a panel of stool tests that includes the standard fecal parasite test plus whipworm antigen testing.

Whipworms are the most deadly of the intestinal parasites and they are also the most expensive type of parasite to treat for. It takes three rounds of medication to kill them and two rechecks afterwards to ensure they are gone. We strongly recommend that Sentinel be the heartworm preventative your dog takes because it is the only one that protects against whipworms. Cats rarely get whipworms.

Some dewormers have been around for a long time and the parasites have become more resistant to them over time. These older products are usually less expensive but they may not work to get rid of the problem. We have stopped carrying pyrantel pamoate (Strongid) because 20-25% of the time it doesn't work well. Newer medications can be expensive, especially for larger dogs or multiple pet households. Giving heartworm preventatives regularly all year round can save money as well as protecting your pet.

Giardia is a protozoal parasite, not a worm that sheds eggs. A different test is needed to look for them. About 1/3 of puppies and kittens have Giardia and many cats and dogs either carry them around at low levels all the time – and can flare up with active infection when they are stressed by something else – or they can pick up the infection from your yard or wherever the pet spends time. Giardia survives for a long time in water or damp places and is frequently acquired from drinking from contaminated streams or lakes. (It causes “camper’s diarrhea” in humans). Cats are less likely than dogs to have a bacterial infection of the colon, such as Clostridium, so the Giardia test is usually the first test we do for a cat with colitis.

If your cat or dog has not had a fecal flotation stool test in the recent past we usually do both a fecal flotation and a cytology for dogs, and a fecal flotation and a Giardia SNAP test in cats. Usually we find our answer with one or more of these tests. If not, and if the colitis is acute or sudden, we usually label it “non-specific cause” and treat with metronidazole. Some species of bacteria, especially E. coli, are indistinguishable from normal bacteria under the microscope. If we see white blood cells as well as bacteria on our stained slide there is probably some type of bacterial infection or Giardia causing it. Usually the metronidazole works and the pet is doing better in a few days.

Another medication, called sulfasalazine, can be used to reduce the inflammation in the colon. The more blood or mucous is in the stool, the more likely we are to dispense sulfasalazine in addition to antibiotics. Usually sulfasalazine is used for 1-2 weeks, which is how long it takes for a damaged intestinal lining to heal. It is also used long term for chronic colitis caused by IBD. Cats are more sensitive to its side effects than dogs so it is used more cautiously in cats and usually not for as long.

Immodium-AD or the generic loperamide made for people can be used in dogs for both small and large bowel diarrhea. It helps a lot with gurgly, gassy upset digestive systems. It reduces the diarrhea by normalizing how the intestine contracts, slowing the time it takes for the ingesta to go through the intestinal tract. This gives the colon more time to reabsorb water from the stool. Once the intestine is functioning more normally loperamide can cause constipation, so we usually have you give it three times a day until either the stool is normal or no stool has been produced for 24 hours.

Chronic colitis or colitis that doesn't respond to our usual treatments may require further diagnostic testing to look for causes that are not as common. For acute colitis we usually recommend a bland diet for a few days but some pets need a special diet long term to keep a problem under control. We will follow up with you to see if your pet is feeling better. Please let us know if you have any questions or concerns along the way.