

## Giardia in Cats

### What is Giardia?

*Giardiasis* is an intestinal infection of man and animals caused by a protozoan parasite *Giardia intestinalis* (also known as *Giardia lamblia*). *Giardia* is a simple one-celled parasitic species; it is not a "worm", bacteria or virus. The parasite occurs worldwide and is a common cause of "Traveler's Diarrhea" in people. Outdoor enthusiasts who inadvertently consume contaminated water may develop "beaver fever", which is another name for giardiasis in people. Other examples of protozoan parasites that can cause enteric (intestinal) disease are Coccidia, Cryptosporidia and Toxoplasma.

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The Giardia organism has two forms. A fragile, feeding form exists in the gut of infected animals. A hardy cystic form is shed in feces and can survive several months in the environment, particularly in water and damp environments.

Giardiasis can be an important cause of diarrhea in animals and man. However, many cats are infected without developing clinical signs or the diarrhea is treated as 'non-specific'. Giardia infections in cats are undoubtedly more common than recognized or diagnosed.



**Giardia: 3000 x actual size  
(after Kofold and Christiansen)**

### How are cats infected with Giardia?

A cat becomes infected with *Giardia* after swallowing the cyst stage of the parasite. Once inside the cat's intestine, the cyst goes through transformation to the *trophozoite* or feeding form of the organism and attaches to the intestinal wall to feed. If sufficient numbers are present, clinical signs of damage to the intestinal wall will develop. Trophozoites reproduce by dividing, and some transform into the cystic form. Eventually the cat passes cysts in its stool. These cysts are immediately able to infect another animal. Giardiasis can be transmitted by eating or sniffing the cysts from contaminated ground, or by drinking contaminated water.

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Disease is relatively rare in *healthy* adult cats. The likelihood of developing disease increases when large numbers of cysts are present in the environment from fecal contamination. It is more common in kittens and debilitated adult cats and is a common occurrence in densely populated groups of cats, such as in a cattery, pet store, or animal shelter. Kittens have been shown to shed more *Giardia* cysts in their feces than older cats.

## What are the clinical signs of Giardiasis?

These microscopic parasites attach themselves to the intestinal wall and the damage causes an acute (sudden-onset) foul-smelling diarrhea. The stool may range from soft to watery, often has a greenish tinge to it, and occasionally contains blood. Infected cats tend to have excess mucus in the feces. Vomiting may occur in some cases. The signs may persist for several weeks and gradual weight loss may become apparent. The diarrhea may be intermittent. Most cats do not have a fever but may be less active. The disease is not usually life threatening but can be more serious in kittens or older cats or in cats with an immune system that has been damaged by Feline Immunodeficiency Virus (FIV) or Feline Leukemia Virus (FeLV) infections or other serious illness.

## How is Giardia diagnosed?

A routine fecal flotation test may fail to detect these tiny cysts, which are shed inconsistently in the feces, and which often require a special zinc sulfate flotation solution for detection. Occasionally, the parasites may be seen on a direct smear of the feces. If your veterinarian suspects giardiasis, a sample of stool may be analyzed for the presence of *Giardia* specific antigens (cell proteins). Many cases are presumptively diagnosed on the basis of medical history and clinical signs suggestive of giardiasis.

## What is the treatment for giardiasis?

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Metronidazole is the drug most commonly used to kill *Giardia*. This antibiotic is very bitter, so is manufactured in a coated tablet form. In order to get the correct dose for cats, the tablet must be split, thus exposing the bitter contents. To make it easier to administer the medication, veterinary compounding pharmacies will prepare this medication in flavored formulas that mask the bitterness. The medication is given orally for five to seven days.

Another antiparasitic drug, fenbendazole, is suggested as a potentially useful treatment, especially when used in conjunction with metronidazole. This combination is usually administered to cats with refractory diarrhea (diarrhea that has not responded to treatment). Supportive treatment with other drugs may be needed as supplemental therapy if dehydration or severe diarrhea is present.

## What is the prognosis for Giardiasis?

The prognosis is good in most cases. Debilitated or geriatric animals and those with incompetent immune systems are at increased risk for complications, including death.

## Can my cat give a Giardia infection to me or my family?

Giardiasis is the most common intestinal parasitic infection of man and can potentially be passed from cats to humans. In the past, it was assumed that cats and dogs, along with wildlife, were an important source of infection for humans. However, human-to-human transmission is also important and contaminated municipal water supplies are responsible for many outbreaks.

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If your cat is diagnosed with giardiasis, environmental disinfection and good personal hygiene are important to prevent accidental spread to humans. In particular, people with immunodeficiency, such as AIDS or cancer, or who are undergoing chemotherapy, should use extreme care, especially when handling feces or litter or after administering medications.

For environmental disinfection, you can use chlorine bleach at 1:32 or 1:16 dilutions, or 1–2 cups in a gallon of water (60–120 mls/L). However, be sure that the affected surfaces and premises can be safely treated with bleach. . Lysol® and quaternary ammonium compounds (Parvosol®, etc.) are also reported to be effective in killing the cysts. *Giardia* cysts are susceptible to drying so try to keep your environment as dry as possible. For best results, thoroughly clean the pet's living and sleeping areas and then allow the areas to dry out for several days before reintroducing pets.

*This client information sheet is based on material written by: Ernest Ward, DVM*

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