

Giardia

A *giardia* infection is caused by a microscopic protozoan organism or parasite. *Giardia* organisms infect the intestines of both animals and humans, causing varying degrees of digestive problems, especially diarrhea. These organisms are found all over the world and can infect mammals, birds, reptiles, and amphibians.

How does an infection occur?

Giardia has two main stages of development: *Giardia* cysts and *Giardia* trophozoites; both are too small to be seen with the naked eye and require microscopic identification. The stage of *Giardia* that causes illness is the cyst. Cysts are passed in the stool of infected animals and humans and can contaminate the environment. Typically most animals or people come in contact with these cysts through ingesting contaminated water or feces.



Giardia cyst



Giardia trophozoite

It takes about 1 to 2 weeks for an animal to begin passing (shedding) cysts in the stool after first infected. The protective shell of the cyst allows the *Giardia* organism to survive in the environment for long periods of time, which explains its widespread existence in nature.

Giardia infections occurs primarily in puppies and kittens, animals with weakened immune systems and animals that live in crowded environments such as animal shelters, breeding facilities, kennels and catteries. Still, infection can potentially occur in healthy pets in home environments with access to the outdoors.

How is Giardia diagnosed?

Several tests are available to screen for giardiasis in pets, but in some cases the diagnosis can be difficult to make because *Giardia* cysts are usually shed only intermittently. Therefore, your veterinarian may need to perform more than one type of test or repeat a particular test to confirm giardiasis.

- The animal's fecal (stool) sample can be checked directly for *Giardia* trophozoites under the microscope (direct smear)
- Your pet's stool may be analyzed for giardia proteins through an in clinic test or an outside laboratory.

What signs does Giardia cause?

Pets most commonly will develop diarrhea and occasionally vomiting. The diarrhea can be variable from very mild to severe. If the condition is not properly treated, the diarrhea can continue for a long period of time (i.e., become chronic) and lead to the improper processing and digestion of nutrients, decreased appetite, and weight loss. None of these signs, however, are specific to giardiasis. Many other intestinal conditions can cause these same symptoms, which explains the need for *Giardia* testing.

What is the treatment for Giardia infection?

1. Pet:

- *Giardia* infection is fairly easily treated with one of several available drugs.
- Reinfection can occur because the cysts can survive in the environment for weeks and can be picked up by the same dog or cat who passed them. Therefore, it is important to follow up with your veterinarian.
- Pets infected with *Giardia* can be a source of environmental contamination and may possibly transmit the infection to people; therefore, veterinarians may recommend treatment of infected dogs and cats even when these animals are not showing any overt symptoms of illness.
- Bathe pets if there is soiling (fecal contamination) of the hair coat. It may also be helpful to trim the hairs around the anal area to prevent or reduce feces on the hair coat.
- If a pet is having severe diarrhea, hospitalization may be required to administer fluid therapy and prevent dehydration.

2. Environment:

- Wear gloves and wash hands after handling the feces of infected pets, and avoid contact with material that can carry *Giardia* to you. For example, when a pet has diarrhea don't touch your face after touching the pet; wash your hands first. Likewise, don't let a pet who has diarrhea lick your face or hands, because their mouths are often loaded with the germs (like *Giardia*) that are causing the diarrhea. Any suspicion of human *Giardia* infection should be discussed with your family doctor.
- Thorough cleaning of the immediate environment is important to reduce or eliminate the numbers of cysts. Diluted bleach may be used at 1:16 (one part bleach and 16 parts water).
- *Giardia* cysts are sensitive to heat (steam and boiling water), so it's recommended to sterilize food and water bowls in boiling water and wash bedding in the hot water cycle.
- *Giardia* cysts are also susceptible to drying. Therefore, allow areas that are cleaned to dry thoroughly. For cats, also allow the litter pan to dry completely before adding more litter; disposable litter pan liners may also be helpful since they can be completely discarded.
- Remove the pet's feces from the premises, to be discarded as soon as possible to minimize contamination and reinfection.

- Do not allow a pet with *Giardia* to be around other animals or people, especially children and individuals with depressed immune systems (e.g., persons undergoing chemotherapy, HIV-positive individuals, etc.).