

# GIARDIA IN DOGS

## **What is Giardia?**

*Giardia* is sometimes confused with “worms” because they invade the gastrointestinal tract and can cause diarrhea. *Giardia* is a one-celled parasitic species classified as a *protozoa*.

Most dogs that are infected with *Giardia* do not have diarrhea or any other signs of illness. When the eggs (cysts) are found in the stool of a dog without diarrhea, they are generally considered a transient, insignificant finding. However, in puppies and debilitated adult dogs, they may cause severe, watery diarrhea that may be fatal.

## **How did my dog get Giardia?**

*Giardia* is shed through feces. A dog becomes infected with *Giardia* when it swallows the cyst stage of the parasite. Once inside the dog's intestine, the cyst goes through several stages of maturation. Eventually, the dog passes infective cysts in the stool. These cysts lie in the environment and can infect other dogs. *Giardia* may also be transmitted through drinking infected water.

## **How is giardiasis diagnosed?**

Giardiasis or infection with *Giardia spp.* is diagnosed by performing a microscopic examination of a stool sample. The cysts are quite small and usually require a special floatation medium for detection, so they are not normally found on routine fecal examinations. Occasionally, the parasites may be seen on a direct smear of the feces.

ELISA DNA Tests are available for detection of antigens (cell proteins) of *Giardia* in the blood or feces. These tests are more accurate than the stool exam, and are now available as part of our routine fecal screening. After infection and treatment, these ELISA tests can stay positive for quite some time. This often does NOT imply ongoing active infection unless cysts are concurrently seen in the stool.

## **How is giardiasis treated?**

There is no drug labelled for the treatment of *Giardia*, however, 2 common drugs often work well.

- Metronidazole, an antibiotic. It is normally given twice daily for five to seven days to treat giardiasis.
- Fenbendazole (Panacur), a dewormer. It is normally given once a day for five consecutive days.

Not all cases of Giardiasis will resolve with one treatment. This can be due to 4 reasons:

1-drug failure: again, no drug is licensed to treat *Giardia* so sometimes the 2 we use don't work

2-re-infection: *Giardia* is so contagious that puppies and dogs often re-infect themselves by re-ingesting the *Giardia* cysts out of the environment or off their own fur.



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

3-weak immune system: as much as the medications help in the fight against Giardia, the animal's own immune system has to help fight it off too. This is harder for young, old, or debilitated patients

4-we rarely see an animal where Giardia becomes part of their normal gastrointestinal flora for life, so they never clear the organism no matter how often you treat. This is not harmful to the dog itself, but can be a source of infection to others if the animal is shedding the cysts in their stool.

Due to the risk of re-infection, thorough cleansing and hygiene are important to reduce the number of cysts in the environment and on the animal's fur. We recommend wiping paws and bum several times a day (esp. after going out to have a bowel movement), and bathing from the neck down every other day during treatment.

We recommend a repeat stool sample 3-5 days after finishing treatment with either Metronidazole or Fenbendazole to ensure that Giardia cysts are no longer seen in the stool, implying that infection has been successfully treated. If cysts are still present, your veterinarian will advise you on whether further treatment is warranted at that time and what options may be.

### ***Can humans become infected with Giardia?***

*Giardia* can rarely cause diarrhea in humans. If your dog is diagnosed with giardiasis, environmental disinfection is important. The use of diluted chlorine bleach at 1:32 or 1:16 dilutions (one cup in a gallon of water or 500 ml in 4 liters of water) is effective in killing the cysts. *Giardia* cysts are very susceptible to drying. We recommend thoroughly cleaning the pet's living and sleeping areas and then allowing the areas to dry out for several days before reintroducing pets.