

Tiny Giardia can make Fido mighty sick

Small organism can be big trouble

Fido has diarrhea, is listless, and has lost weight...

The symptoms are typical of several diseases, but if Fido has had contact with dirty (or potentially contaminated) water or with dogs showing similar signs, Giardiasis should at least be suspected.

Giardia are protozoans, tiny, one-celled parasitic life forms with the potential to cause serious illness. Some dogs are carriers who show no symptoms, but others get sick and need treatment.

Like many disease organisms, Giardia mature in stages. Unlike many others, no time elapses between infestation with the dormant phase and activation of the disease. The cysts (the inactive form) are found in contaminated water and feces. Once ingested by the dog, the cysts open and discharge the mobile form known as the trophozoite, a pear-shaped critter with whip-like flagella that propel it through the intestine. If the dog is healthy, the trophozoites may live in the lower digestive tract for years. If the dog has an immature or overburdened immune system, the trophozoites continue to multiply by dividing and can cause the debilitating disease.

The life cycle of Giardia is still somewhat of a mystery. Scientists do know that the trophozoites encyst at some point, and that the cysts are passed into the environment when the dog defecates, but the exact timing and mechanism are not yet known. It is also unclear whether the protozoans are a single species or several species, each with a specific host. Suffice to say, however, that Giardia is an equal opportunity disease that infects several species of animals, including humans. Thus the presence of cysts in the environment can trigger an outbreak in people as well as pets. Cysts can remain viable for several weeks or months in cold, wet environments, so areas littered with feces should be avoided and piles should be removed from backyards.

In the mid 1990s, a guide dog school in England was hit by a severe outbreak of diarrhea. Dr. Maggie Fisher, a veterinarian with an interest in parasitology, helped devise a treatment and disinfection strategy to prevent recurrence. Fisher described the diagnosis and treatment of the disease as follows.

Symptoms: Large populations of Giardia can interfere with the absorption of food and produce feces that are soft, light-colored, and greasy. Mucus from the large intestine may also indicate that the large intestine is irritated even though the colony of active protozoa remains in the small intestine. Blood tests appear normal with the possible exception of an increase in a type of white blood cells and mild anemia.

Diagnosis: Since diarrhea is a common symptom of intestinal infection, causes such as Salmonella and Campylobacter are generally ruled out before testing for Giardia is done. Direct microscopic inspection of feces is necessary to determine the presence of the protozoan. Examination of soft feces may reveal the active trophozoites, and cysts may be found in firm excrement. The number of cysts can vary from day to day, so best chances of detecting this form of Giardia lies in collecting samples over three days for a fecal flotation test or conducting individual tests every two or three days until at least three tests have been done. A quicker test does exist, but it is more expensive and requires an experienced technician to run.

Treatment: There are several options of treatment, some with two- or three-day protocols and others needing seven-to-10 days to complete the job. Flagyl (Metronidazole) is an old stand-by treatment for bacterial infestations that cause diarrhea and is about 60-70 percent effective in curing giardiasis. However, Flagyl has potentially serious side-effects in some animals, including vomiting, anorexia, liver toxicity, and some neurological signs, and it cannot be used in pregnant dogs. In a recent study, Panacur (Fenbendazole), which is approved for use in treating dogs with roundworm, hookworm, and whipworm, has been shown to be effective in treating canine giardiasis. Panacur is safe to use in puppies at least six weeks of age.

In large kennels, mass treatment of all dogs is preferable, and the kennel and exercise areas should be thoroughly disinfected. Kennel runs should be steam-cleaned and left to dry for several days before dogs are reintroduced. Lysol, ammonia, and bleach are effective decontamination agents.

Because Giardia crosses species and can infect people, sanitation is important when caring for dogs. Kennel workers and pet owners alike should be sure to wash hands after cleaning dog runs or removing feces from yards, and babies and toddlers should be kept away from dogs that have diarrhea. When traveling with Fido, owners should prevent him from drinking potentially infected water in streams, ponds, or swamps and, if possible, avoid public areas polluted with feces.

References

1. *Giardia in Dogs* by Maggie Fisher, BVetMed, MRCVS; at [Vet On-Line](http://www.priory.com/vet.htm), (<http://www.priory.com/vet.htm>) a service of Priory Lodge Education Limited.
2. Treatment information is a blend of information from Dr. Fisher and from “*Giardia*,” an article by Dr. Holly Frisby, Drs. Foster and Smith Veterinary Services Department, (<http://www.drsfostersmith.com>).