

GIARDIA IN DOGS AND CATS

Giardiasis is an intestinal infection caused by a protozoan organism called *Giardia intestinalis*. It is a water-borne parasite, which means it survives in lakes, streams, ponds, puddles, wet grass and damp soil. Many healthy adult pets with no diarrhea will have small numbers of *Giardia* in their intestinal tracts. We generally only test and treat for it in adult pets if the dog or cat has signs of illness. Because of their immature immune systems, *Giardia* is more likely to cause serious illness in young pets. When we find *Giardia* in a puppy or kitten we will treat for it even if the pet doesn't currently have diarrhea.

Infection is very common in puppies and kittens, affecting about 1/3rd of them. It is especially common, too, in kennels and breeding facilities, because the organisms survive a long time in damp concrete runs or yards. A pet becomes infected with *Giardia* by swallowing the cyst stage of the parasite. Licking or smelling the stools of other pets or drinking contaminated water easily spreads them. The cyst goes through several stages of maturation in the intestines before it can reproduce. It will then be shed in the stool and be infective to other pets.

Many pets do not seem to be bothered by the *Giardia* in their intestines, but others become ill. The immune system can cope with a small number of these parasites but in large numbers or with stress on the immune system or gastrointestinal system symptoms may develop. Examples of triggers would be staying in a kennel, changing pet foods, or having another parasite or infection. Elderly or debilitated animals and young puppies and kittens are the most likely to show symptoms.

Symptoms include vomiting, diarrhea, belching and flatulence. There may be blood or mucous in the stool. Signs may be acute (come on suddenly) or the pet may have milder but persistent symptoms such as on and off diarrhea or occasional nausea. *Giardia* symptoms often wax and wane, flaring up repeatedly. If a pet has recurrent infection with *Giardia* we start looking for an underlying cause, such as food allergy or inflammatory bowel disease. A normal pet with a healthy intestinal tract should not be having recurrent diarrhea from *Giardia*.

During flare-ups pets are especially contagious to other animals, which is a concern when pets are boarding or going to the dog park. Keep your dog home if it has diarrhea and be careful to pick up as much stool as you can from your yard, to decrease the chances of reinfection later on.

Sometimes *Giardia* may be seen on a routine fecal flotation test looking for intestinal parasites. We are finding *Giardia* more frequently on routine fecal testing since we and our outside laboratory use a centrifuge for fecal testing. This is a better method of testing than what most veterinary hospitals currently do. More often, though, infection may be missed, as *Giardia* are passed only intermittently in the stools and they die quickly outside the body unless kept moist. If we suspect a pet may have it, we rely on a special *Giardia* antigen stool test that is specific for *Giardia* and is 95% accurate. We run this test, in addition to the regular parasite check, on all puppies and kittens, and on many pets with diarrhea.

Metronidazole (Flagyl) used to be commonly used to treat for *Giardia* but sometimes, depending on the strain of *Giardia*, the parasites are resistant to this antibiotic. Benzimidazole dewormers such as Panacur are more effective and commonly used, though we are seeing more and more *Giardia* infections resistant to Panacur, too – about one in five *Giardia* infections won't clear completely with Panacur alone. Some patients need both metronidazole and Panacur together to cure the symptoms. If there are multiple pets in the household, testing or treatment may be recommended for all of them. Repeat testing is needed to ensure that the infection clears and that the pet is not being reinfected from its environment.

The environment may need to be treated to prevent reinfection. One cup of chlorine bleach in a gallon of water is an effective disinfectant for *Giardia* cysts. If your dog has a kennel or an outdoor concrete or gravel run you should disinfect it, and cat litter pans should also be treated with bleach solution. Be sure to let the bleach sit for a few minutes to completely kill the *Giardia* cysts. Bleach is caustic and can be harmful to pets so rinse thoroughly after using it.

Giardia cysts can cling to a pet's fur and reinfest the pet when it licks itself. Bathing the

dog or cat during the Giardia treatment period will decrease the risk of reinfection. Probiotics such as FortiFlora improve the effectiveness of metronidazole and Panacur so we usually recommend you give a probiotic along with medication. Extra fiber in the diet may help with recurrent cases.

Giardiasis is the most common intestinal parasite of man, as well as being common in pets. However, current research suggests that most people do not acquire the parasite from their pet, as people and pets tend to have different strains of the disease. In some cities without adequate water treatment, *Giardia* may be acquired from drinking water. Never the less, take precautions if your pet has been diagnosed with Giardiasis - wash your hands, keep the yard free of stools and clean litter boxes often, using bleach and then rinsing well. Small children, the elderly, and people with AIDS or other immune system-compromising diseases should use extreme care.



Giardia species exist as motile trophozoites and nonmotile cysts. Both forms are transmitted by ingestion and are passed intermittently in the host's feces.

Giardia

Diagnostic Plan

- History
- Physical examination
- Stool analysis
- Analysis of intestinal scrapings collected during endoscopy

Therapeutic Plan

- Drugs to kill the parasite

Dietary Plan

- A diet based on individual patient evaluation including body condition and other organ system involvement or disease

Caring People Helping Pets



2082 Cheyenne Court, Grafton, WI 53024 • phone: 262-375-0130 • fax: 262-375-4196 • www.bestfriendsvet.com



Giardia & Pets, from the Centers for Disease Control & Prevention

<https://www.cdc.gov/parasites/giardia/prevention-control-pets.html>

If my pet has a *Giardia* infection, how do I clean and disinfect my house?

Giardia is hard to completely eliminate from the environment, but there are things you can do to decrease the risk of your pets' reinfection and of human infection.

- **Hard surfaces** (for example: cement and tile floors, crates, tables, trash cans, etc.)
 - **Cleaning**
 - Wear gloves.
 - Remove feces and discard in a plastic bag.
 - Clean and scrub surfaces using soap. Rinse surface thoroughly until no obvious visible contamination is present.
 - **Disinfection**
 - Wear gloves.
 - Disinfect according to manufacturer guidelines using **one** of the following:
 - Quaternary ammonium compound products (QATS) ⁴, which are found in some household cleaning products; the active ingredient may be listed as alkyl dimethyl ammonium chloride.
 - Bleach mixed with water (3/4 cup of bleach to 1 gallon of water) ⁸
 - Follow product instructions, ensuring the product stays in contact with the surface for the recommended amount of time.
 - Rinse with clean water.
- **Carpet / Upholstered Furniture**
 - **Cleaning**
 - Wear gloves.
 - If feces are on a carpet or upholstered furniture, remove them with absorbent material (for example, double layered paper towels).
 - Place and discard the feces in a plastic bag.
 - Clean the contaminated area with regular detergent or carpet cleaning agent.
 - Allow carpet or upholstered furniture to fully dry.
 - **Disinfection**
 - Wear gloves.
 - Steam clean the area at 158°F for 5 minutes or 212°F for 1 minute.

- Quaternary ammonium compound products (QATS) are found in some carpet cleaning products and can also be used after cleaning to disinfect. Read the product labels for specifications, and follow all instructions.
- **Other items (toys, clothing, pet bed, etc.)**
 - Household items should be cleaned and disinfected daily while a dog or cat is being treated for *Giardia* infection.
 - **Dishwasher**
 - Dishwasher-safe toys and water and food bowls can be disinfected in a dishwasher that has a dry cycle or a final rinse that exceeds **one** of the following:
 - 113°F for 20 minutes
 - 122°F for 5 minutes
 - 162°F for 1 minute
 - If a dishwasher is not available, submerge dishwasher-safe items in boiling water for at least 1 minute (at elevations above 6,500 feet, boil for 3 minutes).
 - **Washer and Dryer**
 - Clothing, some pet items (for example, bedding and cloth toys) and linens (sheets and towels) can be washed in the washing machine and then heat-dried on the highest heat setting for 30 minutes.
 - If a clothes dryer is not available, allow clothes to thoroughly air dry under direct sunlight.

How do I reduce the amount of *Giardia* in my yard or outdoor environment?

Giardia is hard to completely eliminate from the environment, but there are things you can do to help decrease the risk of pet reinfection and of human infection. Please remember that despite your best efforts to clean the environment, *Giardia* can persist in outdoor spaces and pet reinfection is possible ⁴.

- Wear gloves when handling feces.
- Remove feces promptly ⁴ and put them in a plastic bag.
- Limit access to common outdoor spaces, where possible, if pets have diarrhea or are being treated for *Giardia*.
- Eliminate any source of standing water (for example, puddles, containers with water, and fountains that are not in use).
- **Do not** attempt to use bleach or QATS in your soil or grass area, as they will be ineffective.
- **Do not** allow any new animals, especially young ones, to enter the yard or other outdoor space until advised by your veterinarian.

How long does *Giardia* survive in the environment?

- **In the soil** ^{8,9}
 - In cold temperatures (around 4°C/39.2°F), *Giardia* can survive for approximately 7 weeks (49 days).
 - At room temperature (around 25°C/77°F), *Giardia* can survive for approximately 1 week (7 days).

- **Dry vs. moist surface or environment**
 - In a dry, warm environment that experiences direct sunlight, *Giardia* can survive for only a few days ^{8,9}.
 - In a moist, cool environment, *Giardia* can survive for up to several weeks.
- **Water** ¹⁰
 - In water temperatures below 10°C/50°F (for example, lake water or puddle water during the winter, refrigerated water), *Giardia* can survive for 1–3 months.
 - In water temperatures above 10°C/50°F (for example, river water during the fall, tap water, and puddles during the summer), *Giardia* can survive for less time than in colder temperatures. For example, in water above 37°C/98.6°F, *Giardia* can survive less than 4 days.

How often and for how long should I clean and disinfect my home after my dog or cat is diagnosed with *Giardia* infection?

- Clean and disinfect potentially contaminated items (toys, water bowls and food bowls, pet bedding, floors, dog crates, linens, towels, litter box, etc.) regularly for as long as your pet is sick.
- If your pet is taking medication, clean and disinfect frequently (daily if possible) until a few days after the last dose of medication is given.
- *Giardia* survival depends on many factors, so we recommend that you consult your veterinarian for further advice.