

Coccidia

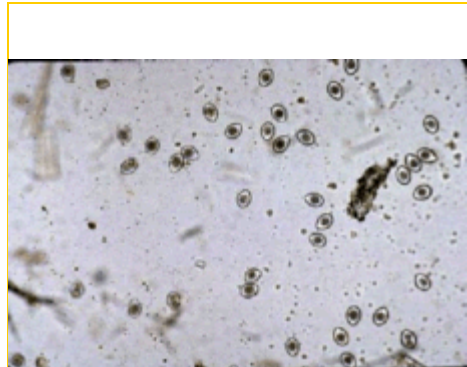
What are Coccidia?

Coccidia are single-celled organisms that infect the intestine. They are microscopic parasites. *They are detectable on routine fecal tests* in the same way that worms are, but *Coccidia are not worms and are not susceptible to deworming medications.* They are also not visible to the naked eye.

Coccidia infection may cause a watery diarrhea that is sometimes bloody; it can be a life-threatening problem, especially to a young or small pet.

Where do Coccidia come from?

Oocysts (pronounced o'o-sists), like those shown to the right, are passed in stool. In the outside world, the oocysts begin to mature or sporulate. After they have adequately matured, they are infective to any host (dog or cat) that accidentally swallows them.



There are many different species of coccidia but for dogs and cats, the most common infections are with coccidia of the genus Isospora (pictured here). The information presented here pertains to Isospora species.

To be more precise, *Coccidia come from fecal-contaminated ground. They are swallowed when a pet grooms/licks the dirt off. In some cases, sporulated oocysts are swallowed by mice and then the host is infected after eating the mouse.* Coccidia infection is especially common in young animals housed in groups, such as shelters, rescue areas, kennels, etc. This is a common parasite and is not necessarily a sign of poor husbandry.

What Happens Inside the Host?

The sporulated oocyst breaks open and releases eight sporozoites. Each of these sporozoites finds an intestinal cell and begins to reproduce inside it. It is important to note how *thousands of intestinal cells can become infected and destroyed as a result of accidentally swallowing a single oocyst.*

As the intestinal cells are destroyed in larger and larger numbers, intestinal function is disrupted and a bloody, watery diarrhea results. The fluid loss can be dangerously dehydrating to a young or small pet.

How are Coccidia Detected?

A routine fecal test is a good idea for any new puppy or kitten whether there are signs of diarrhea or not as youngsters are commonly parasitized. This sort of test is also a

good idea for any patient with diarrhea and is recommended at least once a year for healthy dogs and cats as a screening test. Small numbers of coccidia can be hard to detect, so just because a fecal sample tests negative, this doesn't mean the pet isn't infected.

Sometimes several fecal tests are performed, especially in a young pet with a refractory diarrhea (one that won't go away); parasites may not be evident until later in the course of the condition.

How is Coccidia Treated?

The most common medicines used against coccidia are called coccidiostats. They inhibit coccidial reproduction. In dogs and cats, sulfa-based antibiotics are the most commonly used coccidiostats. The use of sulfa drugs in pregnancy can cause birth defects. Sulfa drug use can also lead to false positive test results for urine glucose.

There is a medication called toltrazuril that is able to curtail a coccidial infection in much less time, and has been used in thousands of shelter puppies and kittens with no adverse effects. This product is available only as a paste for horses, though, and must be diluted down to create an appropriate small animal formula by a compounding pharmacy. This medication is specially ordered by your veterinarian for dogs and cats for "off-label" use.

Can People or other Pets Become Infected?

While there are species of coccidia that can infect people ([*Toxoplasma*](#) and [*Cryptosporidium*](#), for example), **the Isospora species of dogs and cats are not infective to people.** Other pets may become infected from exposure to infected fecal matter but it is important to note that *this is usually an infection of the young* (i.e. the immature immune system tends to let the coccidia infection reach large numbers whereas the mature immune system probably will not.)

How do we know the infection has been eliminated?

A follow-up stool test is performed usually a month after treatment, but it is advisable to have another sample tested 6 months later and annually at a minimum. 📄