



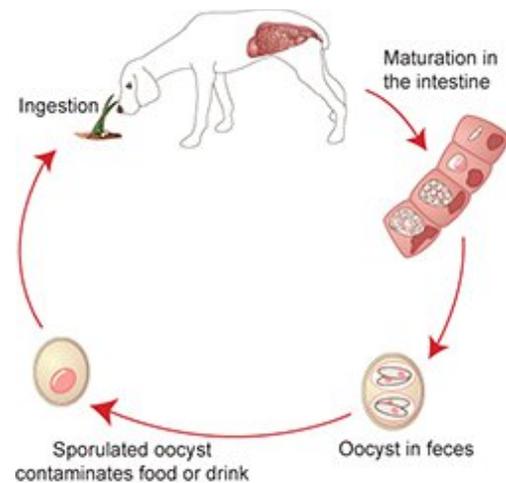
Coccidiosis in Dogs

Coccidiosis is an intestinal tract infection caused by one-celled organisms (protozoa) called *coccidia*. Coccidiosis typically refers to gastrointestinal infections with *Isospora* species of coccidia. Coccidia are sub-classified into a number of genera, and each genus has a number of species.

At least four different genera of coccidia can infect dogs: *Isospora canis*, *I. ohioensis*, *I. neorivolta*, and *I. burrowsi*; cats are definitive hosts for *Isospora felis* and *I. rivolta*. These microscopic parasites spend part of their life cycle in the lining cells of the intestine. Most infections in dogs are not associated with any detectable clinical signs. These infections are called *sub-clinical infections*. The species *Isospora canis* causes most clinical infections in dogs. *Cryptosporidium parvum* is another coccidian parasite that may cause diarrhea in some puppies.

How did my dog become infected with coccidia?

An infected dog passes *oocysts* (immature coccidia) in the feces. These oocysts are very resistant to a wide variety of environmental conditions and can survive for some time on the ground. Under the right conditions of temperature and humidity, these oocysts "sporulate" or become infective. If a susceptible dog ingests the sporulated oocysts, the oocysts will release "sporozoites" that invade the intestinal lining cells and set up a cycle of infection in neighboring cells. Dogs may also be indirectly infected by eating a mouse that is infected with coccidia.



What kinds of problems are caused by coccidiosis?

Most dogs that are infected with coccidia do not have diarrhea or other clinical signs. When the coccidial oocysts 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, coccidiosis may cause severe, watery diarrhea, dehydration, abdominal distress, and vomiting. In severe cases, death may occur.

How is coccidiosis diagnosed?

Coccidiosis is diagnosed by performing a microscopic examination of a stool sample. Since the oocysts are much smaller than the eggs of intestinal worms, a careful fecal evaluation must be made using fecal zinc sulfate solution. Infection with some of the less common coccidial parasites may be diagnosed with a blood test.

How is the coccidial infection treated?

Most cases of coccidiosis are self-limiting and require little medical intervention. The most common drug used to eliminate coccidia is a sulfa-type antibiotic, sulfadimethoxine. It is usually given for five to twenty days. In severe infections, it may be necessary to repeat the treatment. Other drugs may be required if diarrhea and dehydration occur. If the sulfa-type drug is not effective, other treatments are available. Re-infection of susceptible dogs is common so environmental disinfection is important. The oocysts are very resistant to environmental conditions and disinfectants. The use of diluted chlorine bleach [one cup (250 ml) of bleach mixed in one gallon (3.8 L) of water] is effective if the surfaces and premises can be safely treated with it. Be sure to test clean a small area of any affected materials since bleach can damage many surfaces. Steam cleaning may also be used to destroy oocysts. Be sure to remove any feces as quickly as possible from the environment to prevent re-infection.

Are the coccidial parasites of my dog infectious to humans?

The most common coccidia found in dogs do not have any affect on humans. However, less common types of coccidia are potentially infectious to humans. One parasite, called *Cryptosporidium*, may be carried by dogs or cats and may be transmitted to people. This parasite has also been found in the public water supply of some major cites. It poses a health risk for immunosuppressed humans such as AIDS patients, those taking immune suppressing drugs, cancer patients, or the elderly.

Good hygiene and proper disposal of dog feces are important in minimizing risk of transmission of all canine parasites to humans or to other animals.