



## **WHAT ARE COCCIDIA?**

Coccidia are protozoa, single celled organisms that infect the intestine. They are microscopic parasites detectable on routine fecal tests in the same way that worms are but coccidia are not worms and they are not visible to the naked eye. Coccidia infection can cause a watery diarrhea which is sometimes bloody and can even be a life-threatening problem, especially to a debilitated, young or small pet.

## **WHERE DO COCCIDIA COME FROM?**

Coccidia come from fecal-contaminated ground. Oocysts are passed in the stool. In the outside world, the oocysts begin to mature or “sporulate.” After they have adequately matured, they become infective to any host (dog or cat) that accidentally swallows them. They are swallowed when a pet grooms/licks the dirt off itself. In some cases, sporulated oocysts are swallowed by mice and the host is infected when it eats the mouse. Coccidia infection is especially common in young animals housed in groups (in shelters, rescue areas, kennels, etc.) This is a common parasite and is not necessarily a sign of poor husbandry.

## **WHAT HAPPENS INSIDE YOUR PET?**

The sporulated oocyst breaks open and releases eight sporozoites. These sporozoites each finds an intestinal cell and begins to reproduce inside it. Ultimately, the cell is so full of what are called “merozoites” that it bursts releasing the merozoites which seek out their own intestinal cells and the process begins again. 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 very 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. It should be noted that small numbers of coccidia can be hard to detect so just because a fecal sample tests negative, this does not mean that the pet is not infected. Sometimes several fecal tests are performed, especially in a young pet with a refractory diarrhea; parasites may not be evident until later in the course of the condition.

## **HOW IS COCCIDIOSIS TREATED?**

We do not have any medicine that will kill coccidia; only the patient’s immune system can do that. But we can give medicines called “coccidiostats” which can inhibit coccidial reproduction. Once the numbers stop expanding, it is easier for the patient’s immune system to “catch up”

and wipe the infection out. This also means, though, that the time it takes to clear the infection depends on how many coccidia organisms there are to start with and how strong the patient's immune system is. A typical treatment course lasts about a week or two but can last longer.

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.

### **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 that we see most often 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 where the mature immune system probably will not.) In most cases, the infected new puppy or kitten does not infect the resident adult animal.