

Coccidiosis

Alternate Names: Eimeriosis in cattle, Cocci.

Species Affected: many species of birds, mammals, and reptiles.

What causes coccidiosis? Protozoan parasites of the genera *Eimeria* and *Isospora*. Although many species exist, most coccidias are host-specific, meaning that they only infect one species of animal (e.g. coccidias from cattle don't affect poultry and vice versa). *Eimeria* and *Isospora* can survive in manure for up to one year.

How is coccidiosis transmitted? Coccidia parasites live inside the cells that line the intestines and are passed through manure. Animals get infected by ingesting coccidias from contaminated water, feed, and environment. Stressful situations such as weaning or transportation increase shedding of coccidias. Most livestock become infected with coccidias early in life.

What are the clinical signs of coccidiosis? Coccidias invade the intestines and clinical signs are more common in young animals. Coccidiosis ranges from a self-limiting infection with no signs of disease to severe diarrhea, dehydration, and death.

- Cattle, sheep, goats, and pigs between 1 month and 1 year of age present poor growth, diarrhea often stained with blood, dehydration, and straining to pass stools (tenesmus).
- Poultry – Coccidiosis is an important disease of poultry. *Eimeria* parasites cause diarrhea, decreased appetite, weight loss, reduced egg production, and in severe cases increased mortality.
- Rabbits – Weanling rabbits or rabbits housed in unsanitary conditions are more susceptible to coccidiosis. In addition to the intestines, coccidias also affect the liver impairing normal metabolism and leading to fluid

accumulation in the chest and abdomen, loss of appetite, diarrhea, stunting, and jaundice (yellow coloration of the skin).

- Horses, cats and dogs show less severe clinical signs than production animal species.

What are the consequences of coccidiosis? Direct mortality due to coccidiosis is generally low and it's related to poor husbandry. The widespread presence of coccidias and subclinical infections are an economic burden to producers due to decreased weight gain and poor general performance (e.g. low egg production). In poultry, damage to the intestines due to coccidiosis predisposes birds to necrotic enteritis and severe intestinal disease.

How is coccidiosis detected? Based on clinical signs, laboratory testing, and analysis of intestinal tissue samples. Parasitology tests include the fecal flotation method in which samples of manure are processed and observed under the microscope to detect the parasite. Fecal flotation should be combined with examination of intestinal tissue to confirm coccidiosis.

How can coccidiosis be prevented? No vaccine against coccidiosis exists for mammals, though multiple vaccines are available for poultry. Hygiene and good husbandry practices such as providing high quality colostrum to newborn animals, clean bedding, cleaning transport trailers, avoiding overcrowding, and decreasing stress reduce widespread contamination of the environment.

How can coccidiosis be treated? If reinfection does not occur, the lifecycles and infections with *Eimeria* and *Isospora* are self-limiting. However, it may take weeks for the illness to resolve. Good husbandry and isolation of sick animals reduces the spread of infection. Supportive therapy of sick animals is needed to overcome illness, especially in young animals at higher risk for secondary infections. This includes providing a warm and dry environment, clean bedding and when necessary, fluid therapy to treat dehydration (in individual animals fluids are given by injection directly into a vein, the abdomen or under the skin). Medication including coccidiostats may help slow or interrupt the coccidia lifecycle, shortening the duration of illness.

Is coccidiosis zoonotic (transmitted from animals to humans)? No – *Eimeria* and *Isospora* are host-specific parasites.

References:

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