

Neospora caninum



Neospora caninum is a microscopic parasite that is found in many different animals and can sometimes cause disease.

Species Potentially Affected in Colorado

- Wild and domestic canids including: domestic dog, fox, coyote, and wolf
- Wild and domestic ruminants including: deer, elk, cattle, and sheep

What to Look For

- Most infected canids show no signs of illness. Some animals, particularly puppies, can show signs of hind leg paralysis or muscle weakness.
- Infected ruminants can have abortions or stillbirths



N. caninum antibodies have been detected in Colorado coyotes

Cause and Transmission

Neospora caninum parasites are protozoans. They live in the intestines of dogs and dog relatives (canids) where they produce oocysts that are released in the feces. Ruminants become infected by oocysts when eating or drinking in areas contaminated with infected feces. The parasite can form into cysts in ruminant tissues (like the muscle and brain) waiting to be eaten by a canid to complete its life cycle. In pregnant ruminants, *N. caninum* can cross the placenta to infect unborn young.

How Does CPW Test for *Neospora caninum* in wildlife?

There are two main ways we test for *N. caninum* in wild canids: we use a microscope to look for oocysts in canid feces and we test blood samples for antibodies to the parasite. In ruminants, we primarily monitor for *N. caninum* through microscopic examination of tissues from wild ruminants submitted for necropsy at our wildlife health laboratory.

Public Health Considerations

Neospora caninum is not directly associated with disease in humans; however, there is some uncertainty on whether this parasite could infect humans. Domestic dogs can become infected from eating infected ruminant carcasses. Domestic ruminants, including sheep and cattle, can become infected by grazing in areas where infected domestic or wild canids have defecated. Proper cooking of meat is always recommended. Always wear gloves and wash hands when handling wildlife, and never consume an animal that appears sick or was found dead.

Additional Information

Gondim, L. F. P., McAllister, M. M., Mateus-Pinilla, N. E., Pitt, W. C., Mech, L. D., & Nelson, M. E. (2004). Transmission of *Neospora caninum* between wild and domestic animals. *Journal of Parasitology*, 90(6), 1361-1365.