

Hydatid Disease



- Hydatid cysts are large, fluid-filled cysts containing immature tapeworms. Hydatid cysts form in moose, elk, and humans that ingest infected canid feces.

Species Affected in Colorado

- Moose
- Elk
- Other species less commonly

What to Look For

- Large, fluid-filled cysts that contain “hydatid sand” in lungs or liver.
- May be confused with common cysticercosis that does not affect people (see cysticercosis fact sheet).



Lung from an elk with hydatid disease.
Photo credit: Alberta Fish and Wildlife

Cause and Transmission

Adult *Echinococcus canadensis* (previously called *Echinococcus granulosus*) tapeworms live in the intestines of canids (wolves, domestic dogs, and coyotes). The adult worms produce eggs that are shed in the feces of infected canids. Canid feces with tapeworm eggs may be eaten by moose and elk while grazing. In moose and elk, the tapeworm eggs hatch, and immature worms (larvae) migrate out of the intestine to form hydatid cysts, typically in the lungs and liver. Hunters may recognize these hydatid cysts as containing hundreds of tiny white grains, also called “hydatid sand”. When these larvae-filled cysts are eaten by canid predators, the worm is able to develop into an adult in the canid intestine and complete its life cycle. *Echinococcus canadensis* is not commonly found in Colorado, but in 2017 a hydatid cyst was identified in a Colorado moose, and in 2020 *Echinococcus canadensis* eggs were identified in feces from gray wolves that arrived in Colorado through natural movements.

Public Health Concerns

Humans may contract hydatid cyst disease from ingesting tapeworm eggs present in infected canid feces. Cysts in harvested elk and moose are **not** infectious to people but can infect domestic dogs. Infected dogs can then shed eggs (which are infectious to humans) in their feces. To prevent disease in dogs, do not allow dogs to consume uncooked meat or organs of wild game, and consult your veterinarian for regular deworming of pets. Hunters and trappers are advised to wear gloves and wash hands whenever handling animals or carcasses. The risk of hydatid cyst disease in domestic livestock is low if exposed to the parasite species commonly found in moose and elk.

References

CDC website on Echinococcosis: <https://www.cdc.gov/parasites/echinococcosis/>

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