

# Echinococcosis

## Hydatid Disease

### What is echinococcosis and what causes it?

Echinococcosis (EE-kl-no-kah-KOH-sis) is a parasitic disease that can affect animals and humans and is caused by several species of tiny tapeworms called *Echinococcus* (EE-kl-no-kah-KUS). The parasites can be found worldwide. Only two species have been reported to occur in the United States, primarily in the western states and most commonly in rural sheep-raising areas.

### What animals get echinococcosis?

*Echinococcus* tapeworms have a complex life cycle which involves both a definitive host (species necessary for the life cycle of the worm) and an intermediate host. Carnivores, such as foxes, coyotes, wolves, dogs, and cats, are definitive hosts. Intermediate hosts include a large number of domestic and wild animals such as sheep, cattle, pigs, horses, and reindeer.

### How can my animal get echinococcosis?

Intestinal infection occurs when an animal ingests (**oral**) tapeworm cysts in the tissues of an intermediate host. Intermediate hosts become infected after ingesting *Echinococcus* eggs passed in the feces of the definitive hosts. The eggs can survive for several months in the environment (e.g., pastures, gardens) especially in warm, moist conditions.

### How does echinococcosis affect my animal?

Infected carnivores (e.g., dogs, cats) usually show no signs of disease. Intermediate hosts can show

a range of symptoms depending on the severity of infection. There may be no sign of infection or non-specific clues such as nausea, vomiting, intermittent diarrhea, and weight loss. The parasites can also cause fluid or masses in the abdomen, enlargement of the liver and abdomen, and difficulty with breathing.

### Can I get echinococcosis?

Yes. Humans can be infected by accidentally ingesting (**oral**) the eggs of the tapeworms. This can occur by eating foods (e.g., unwashed fruits or vegetables) contaminated by the feces of infected carnivores or by handling dogs or cats infected with the tapeworms.

In humans, signs of disease can take months to years to appear. Infection involves the development of cysts (tumor-like lesions) caused by the growth of the immature (larval) tapeworms. Cysts can vary in size and location in the body; they most commonly involve the liver but can spread to other organs. Signs of disease can include abdominal pain or discomfort, weakness, and weight loss.

### Who should I contact, if I suspect echinococcosis?

#### In Animals –

Contact your veterinarian.

#### In Humans –

Contact your physician.

### How can I protect my animal from echinococcosis?

To prevent infection in dogs and cats, do not feed or allow dogs or cats to eat infected intermediate hosts, particularly the internal organs. Regular examination and treatment of dogs that are routinely exposed to livestock (e.g. sheep dogs) can decrease echinococcosis in these domestic animals.

### How can I protect myself from echinococcosis?

Avoid contact with wild canines, such as foxes, coyotes, unless you are wearing gloves. Do not keep wild animals as pets; keep wild animals away from your home and out of gardens. Wash all fruits or vegetables thoroughly before eating them, particularly those picked in the wild or directly off the ground. Always wash your hands with warm water and soap after handling pets.

### For More Information

CFSPH Technical Fact Sheets. Echinococcosis at <http://www.cfsph.iastate.edu/DiseaseInfo/default.htm>

CDC website. Echinococcosis at <http://www.cdc.gov/ncidod/dpd/parasites/alveolarechinococcosis>



**Echinococcosis**  
is caused by  
a parasitic tapeworm,  
that develops in cysts  
within the body  
of infected species.

Photos from .