

Hydatids

(*Echinococcus granulosus*)

factsheet

Key messages

- Hydatids can have economic impacts at slaughter through condemnation of offal.
- Sheep (and to a lesser extent other livestock) act as an intermediate host to hydatid tapeworms during their cystic stage.
- Dogs infected with adult hydatid tapeworms excrete eggs, which can be ingested by sheep.
- Eggs can be swallowed during grazing and hatch inside sheep where the immature larvae form cysts in the organs of infected animals.
- The organs affected by hydatid cysts are usually the liver, heart and lungs.

What are hydatids?

Hydatids are the cystic stage of the *Echinococcus granulosus* tapeworm. The tiny tapeworm is only 3mm–6mm long and lives in the intestines of dogs and, to a lesser extent, foxes and dingoes.

The cysts form in the organs of intermediate host animals — sheep are the most commonly-infested livestock animal, but hydatids also infect goats, cattle, pigs and humans (see Figure 1).

Economic impacts

Where cysts are present, lungs, livers and hearts will be condemned during slaughter.

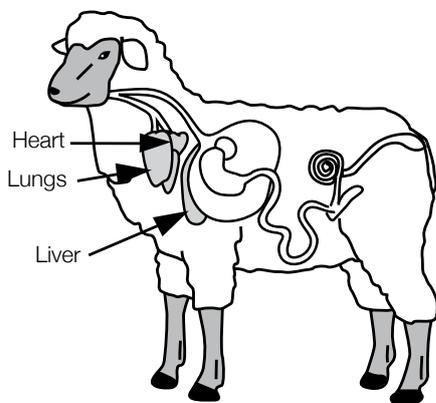


Figure 1: Cysts are usually located in the heart, lungs or liver of infected animals.

Health impacts

Hydatid cysts can be fatal in humans if the cyst ruptures and causes allergic shock. Cysts cause damage by exerting pressure on the organ it is in and can stop the affected organ from working properly. Cysts can form in any organ, bones and muscles. Liver and lungs are common sites for cysts, but they can also develop in the brain (they can reach the size of a football in the abdomen).

Parasite life cycle

The adult tapeworm lives in the intestines of dogs. Tapeworm eggs pass out of the dog in the faeces and contaminate the pasture and ground.

The eggs are resistant to heat and cold damage for about six months and can blow around in the dust or be carried by water and insects. Intermediate host animals are infected by eating the eggs while grazing infested pasture.

The eggs hatch in the intestine of the intermediate host (for example, sheep). The larval stages burrow through the wall of the intestine and travel via the blood to the heart, liver and lungs. Here they form cysts, which may grow to the size of a golfball.

Tiny buds form within the cysts, containing new hydatid tapeworm 'heads'. Eventually, each cyst contains hundreds of new immature hydatid tapeworms.

Dogs become infected with tapeworms by eating offal (sheep hearts, lungs and livers) that contain hydatid cysts.

Humans are an accidental host of hydatids and are usually infected by handling dogs that have tiny tapeworm eggs stuck on their fur, or allowing dogs to lick their face.

Diagnosis

There are usually no outward signs of infection in sheep — cysts are found after slaughter or death.

Humans may show a bewildering range of signs, depending on which organ the cysts are growing in. They are diagnosed by X-rays, ultrasounds or at surgery.

Dogs can be purged to demonstrate infection, but this must be done by a veterinary surgeon or DPIPW officers, who will take appropriate precautions.

Treatment and prevention

Dogs owners should worm their animals every 30 days with a drug called praziquantel to kill any existing hydatid tapeworms.

There is no treatment for cysts in sheep or other animals. If infected, humans may need to have cysts surgically removed.

Always feed dogs manufactured pet food — never feed offal to dogs (cooked or otherwise).

Prevent dogs from wandering and scavenging carcasses and dispose of livestock carcasses by burial or burning.

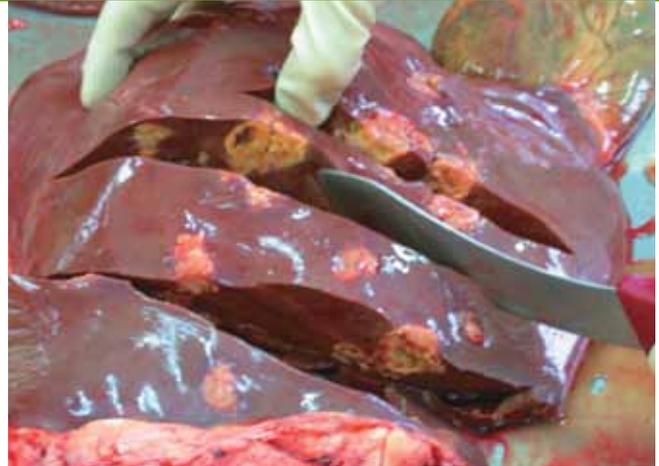
Clean up and dispose of dog droppings and try to prevent dogs from toileting in vegetable gardens.

Ensure all dogs entering the property have been treated with a tapeworm-killing drug in the past month. This should include dogs belonging to friends, contractors, casual staff or tenants.

Always wash hands after playing, bushwalking, handling dogs and before eating or smoking.

Educate children, particularly in sheep production areas, about the dangers of hydatid tapeworm infection in their dogs. 🐾

Note: The control measures for hydatids tapeworms will also control the tapeworm responsible for sheep measles (*Taenia ovis*), bladder worm or false hydatids (*Taenia hydatigena*). The life cycle of each of these parasites is similar — so one convenient control measure will take care of all three parasites. More comprehensive information about hydatids is available at www.dpiw.tas.gov.au/inter.nsf/WebPages/CART-6SA36R?open



Offal infestation: Internal organs contain hydatid cysts, which contain immature tapeworms, which can be ingested by dogs, if they eat contaminated liver, heart or lungs — continuing the parasite life cycle.

What constitutes offal?

Offal includes any internal organ of livestock (including sheep, cattle, pigs and goats) — liver, heart, lungs, all of the digestive tract and the kidneys.

Not acceptable

Do not feed dogs any of the offal items listed above.

When farm livestock die, the optimal action is to promptly bury or burn carcasses to ensure dogs have no access to offal. If livestock are being slaughtered on farm for meat, bury or burn the offal promptly.

Acceptable

Farmers and dog owners can feed muscle meat and bones from sheep, cattle, pigs and goats to their dogs. This meat will not cause dogs to become infested with hydatid tapeworms.

However, feeding sheep muscle meat can cause dogs to get *Taenia ovis* tapeworms unless the meat is initially frozen for at least 21 days.

These tapeworms are not hydatids but will perpetuate the sheep measles cycle on the property. Worm all dogs, both working and pet dogs, regularly.

For further information:

Contact your local DPIPW Animal Health officer or local veterinary practitioner; or phone DPIPW toll free helpline on 1300 368 550.

FOR ANY SIGNS OF UNUSUAL OR SERIOUS ANIMAL DISEASE, RING THE DISEASE WATCH HOTLINE: 1800 675 888.

Acknowledgements:

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