Hydatid Tapeworm and Wildlife

Every living organism has parasites and wildlife, pets and people are no exception. Parasites are small organisms that live in or on another organism, known as the host, which provides the parasite with food and shelter. Some parasites, including the hydatid tapeworm (*Echinococcus granulosus)*, are zoonotic, which means they can be transmitted from animals to humans and vice versa.

Increasing interactions between wildlife, pets, and people are occurring due to urban expansion and land clearing. These interactions can spread zoonotic parasites. The impact of parasites transmitted to wildlife by people is an emerging threat to wildlife that is not well understood, yet is likely to increase in the future.

While many people enjoy interacting with wildlife, we may be inadvertently affecting the health of unique native animals by spreading parasites such as the hydatid tapeworm.

What is *Echinococcus granulosus*?

Echinococcus granulosus is a tapeworm parasite, the larval form of which causes hydatid disease in people, but also infects a very wide range of other mammals. Hydatid disease causes large parasite cysts to develop in internal organs, mainly in the liver and lungs, and occasionally the brain. As the cysts grow they may cause pain, exercise intolerance, weakness and sudden death if ruptured.

Echinococcus granulosus Profile

The adult hydatid tapeworm is small, ranging from 3mm - 6mm in length, and lives in the intestines of carnivorous animals, such as dogs or dingoes. The tapeworm develops into larval cysts in hosts such as sheep, cattle, goats, pigs, horses, kangaroos, wallabies or occasionally humans.

Photo: Centers for Disease Control and Prevention

How is the *Echinococcus* tapeworm spread?

The hydatid tapeworm *Echinococcus granulosus* was brought to Australia when sheep were introduced by European settlers. Animals digest the tapeworm eggs when eating pasture, or in the case of people, by contact with infected dogs.

Dogs become infected when they eat the organs of infected livestock or wild animals, particularly the liver and lung, which contain the larval, hydatid cysts. The cysts then develop into adult tapeworms.

In the Perth Hills it is likely that the parasite was introduced with dogs used for pig and kangaroo hunting, as the adult tapeworm has been found in hunters' dogs. Domestic dogs can become infected by scavenging the carcasses of dead kangaroos and pigs. People can be infected by the accidental consumption of soil, water, or food that has been contaminated by the faeces of an infected dog or infected eggs on the dog's coat.

Is this a problem for wildlife?

Although hydatid disease is rare in people in Western Australia, in state forest bordering Perth a high frequency has been found in kangaroos, with 29% (n=21) of animals infected, and feral pigs, with 46% (n=24) of animals infected. Cysts may seriously impair the ability of marsupials, particularly small species of wallabies, to breathe, exposing them to the risk of predation. This is a serious conservation issue, particularly for species that live in isolated populations.

Did you know:

- *Echinococcus* eggs can stay viable in the soil for up to a year.
- Infected dogs will have some *Echinococcus* eggs sticking to their fur.
- *Echinococcus* is found almost worldwide.

Find out more:

Healthy Wildlife Information Sheet: *Case Study: Hydatid Disease in Kangaroos in the Perth Hills* available from www.healthywildlife.com.au

http://www.cdc.gov/parasites/echinococcosis/gen_info/ce-faqs.html

About Healthy Wildlife

The 'Healthy Wildlife Healthy Lives' – A One Health project aims to educate the public about people's interaction with wildlife in urban areas, particularly how people and domestic animals spread diseases to wildlife, such as birds, quenda (bandicoots), native fish, bobtails and kangaroos. The project informs people about how to avoid harm to wildlife, create positive interactions with wildlife and protect and conserve the environment. The aim is to keep wildlife healthy for a healthier world.

The project is a partnership between Eastern Metropolitan Regional Council and Murdoch University, supported by Lotterywest.

VISIT: www.healthywildlife.com.au