

Echinococcus multilocularis

Echinococcus multilocularis or fox tapeworm is closely related to *E. granulosus* (dog tapeworm). The parasite occurs in the northern hemisphere, often in regions with a cold climate such as Alaska, the Alps, Siberia, north-west China and central Turkey. The eggs of the parasite are cold-resistant.

Transmission by sleigh dogs is known. Treatment of these draught animals with praziquantel reduces the transmission to humans. In the wild there is a cycle between canines (including fox, wolf, etc.) and various rodents, including mice. Domestic dogs and cats may also become infected. Humans become infected accidentally by faecal-oral transmission, e.g. by eating contaminated berries, or drinking water contaminated with fox faeces. After infection with eggs the larvae develop, resulting in alveolar hydatidosis of the liver and other organs. The cysts may calcify, but usually continue to grow slowly and constantly and are similar to a malignant growth. Metastasis may occur. There may be growth through to the diaphragm and into the inferior vena cava. Treatment is difficult and involves liver surgery and/or long-term therapy with antihelmintics (even life-long in inoperable cases).

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