



Tapeworm Infection in Dogs

The most common tapeworm of dogs (and cats) is called *Dipylidium caninum*. This parasite attaches to the small intestinal wall by hook-like mouthparts. Adult tapeworms may reach 8 inches (20 cm) in length. The adult worm is actually made up of many small segments about 1/8 inch (3 mm) long. As the tail end of the worm matures, the terminal segments break off and pass into the stool. Occasionally, the mobile segments can be seen crawling near the anus or on the surface of a fresh bowel movement. These segments look like grains of rice and contain tapeworm eggs; the eggs are released into the environment when the segment dries. The dried segments are small (about 1/16", or 2 mm), hard and golden in color. These dried segments can sometimes be seen stuck to the hair around the dog's anus.

Means of Infection

First, tapeworm eggs must be swallowed by flea larvae (an immature stage of the flea). Contact between flea larvae and tapeworm eggs is thought to occur most frequently in contaminated bedding or carpet. The life cycle of the tapeworm cannot be completed unless the flea swallows tapeworm larvae.

Next, the dog chews or licks its skin as a flea bites; the flea is then swallowed. As the flea is digested within the dog's intestine, the tapeworm hatches and anchors itself to the intestinal lining.

Clinical Signs

Tapeworms are not highly pathogenic (harmful) to your dog. They may cause debilitation and weight loss when they occur in large numbers. Sometimes, the dog will scoot or drag its anus across the ground or carpet because the segments are irritating to the skin in this area. The adult worm is generally not seen, but the white segments that break away from the tapeworm and pass outside the body rarely fail to get an owner's attention!

Occasionally, a tapeworm will release its attachment in the intestines and move into the stomach. This irritates the stomach, causing the dog to vomit the worm. When this happens, a worm several inches in length will be seen.

Diagnosis

Tapeworm infection is usually diagnosed when the white, mobile segments are seen crawling on your dog or in the stool. Tapeworms are not usually detected by the routine fecal examination performed by the veterinarian. Because of this, veterinarians depend on the owner to notify them of possible tapeworm infection in the dog.

Treatment

Treatment is simple and, fortunately, very effective. A drug that kills tapeworms is given, either orally or by injection. It causes the tapeworm to dissolve within the intestines. Since the worm is usually digested before it passes, it is not visible in your dog's stool. These drugs should not cause vomiting, diarrhea, or any other adverse side effects.

Control of fleas is very important in the management and prevention of tapeworm infection. Flea control involves treatment of your dog, the indoor environment and the outdoor environment where the dog resides. If the dog lives in a flea-infested environment, reinfection with tapeworms may occur in as little as two weeks. Because the

medication that treats tapeworm infection is so effective, return of the tapeworms is almost always due to reinfection from the environment.

Pinworms

Tapeworms and pinworms look very similar. However, contrary to popular belief, pinworms do not infect dogs or cats. Any worm segments seen associated with dogs are due to tapeworms. Children who get pinworms do not get them from dogs or cats.

Contagion to Humans

It is possible for humans to become infected with tapeworms, although infection is not common or likely because humans are not the natural host of the dog's tapeworms. A flea must be ingested for humans to become infected with the most common tapeworm of dogs. Most reported cases have involved children, individuals whose immune system is not fully functioning. The most effective way to prevent human infection is through aggressive, thorough flea control. The risk for infection with this tapeworm in humans is quite small but does exist.

One less common group of tapeworms, called *Echinococcus*, is of particular concern as a threat to human health. These tapeworms cause very serious disease when humans become infected. This parasite is harder to diagnose than the tapeworm caused by fleas because the segments are small and not readily seen. Hunters and trappers in the north central United States and south central Canada may be at risk for infection by this worm if strict hygiene is not observed. Foxes and coyotes (and the wild rodents upon which they prey) are important in the life cycle of this parasite. Dogs and cats may also become infected if they eat rodents carrying the parasite. When eggs of *Echinococcus* are passed in the feces of the dog and cat, humans are at risk for infection. Free-roaming cats and dogs may need to be periodically treated with tapeworm medication. Rodent control and good hygiene are important in preventing the spread of this disease to humans. As with the more common tapeworm, infection with *Echinococcus* is infrequent but possible.

What can be done to control tapeworm infection in dogs and to prevent human infection?

1. Effective flea control is important.
2. Prompt deworming should be given when parasites are detected; periodic deworming may be appropriate for pets at high risk for reinfection.
3. All pet feces should be disposed of promptly, especially in yards, playgrounds, and public parks.
4. Strict hygiene is important, especially for children. Do not allow children to play in potentially contaminated environments.