

## **FELINE TAPEWORM INFECTION**

Tapeworms are intestinal parasites of the cat (and dog). Because they are classified as *cestodes*, they belong to a different family than the hookworms and roundworms (called *nematodes*). Several types of tapeworms are known to infect cats; *Dipylidium caninum* is by far the most common.

The tapeworm uses its hook-like mouthparts for anchoring to the wall of the small intestine. Eventually, adult tapeworms may reach several inches in length. As the adult matures, individual segments (proglottids) break off from the main body of the tapeworm and pass into the cat's feces.

### ***What cats are likely to get tapeworms?***

Fleas are the intermediate host for the tapeworm. In other words, the tapeworm is unable to complete its life cycle without the presence of fleas in the environment. Regardless of whether the owner may have seen fleas, the cat *must* have ingested a flea in order to have tapeworms. Consequently, tapeworms are more common in environments which are heavily infested with fleas. Lice are also reported as intermediate hosts for tapeworms but they are relatively uncommon parasites of cats.

### ***How do cats get tapeworms?***

First, tapeworm eggs must be ingested by flea larvae (an immature stage of the flea). Contact between flea larvae and tapeworm eggs is facilitated by contaminated bedding or carpet. Adult fleas do not participate in this part of the tapeworm lifecycle.

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

### ***What are the clinical signs?***

Tapeworms are not particularly harmful to the cat and few clinical signs are attributed to their presence. Usually, the cat is presented because of the owner's reaction to the presence of the crawling proglottids. Rarely, tapeworms may cause debilitation or weight loss if they are present in large numbers. Also, a cat will occasionally scoot or drag its anus across the ground or carpet due to the anal irritation caused by the proglottids. However, this behavior is much more common in dogs than cats.

Occasionally, a tapeworm will release its attachment in the intestines and migrate to the stomach. When this happens, the cat may vomit an adult tapeworm several inches in length.

### ***How are tapeworms diagnosed?***

Most commonly, owners recognize that the cat has tapeworms and bring this to the attention of the veterinarian. When terminal segments of the tapeworm break off and pass into the cat's stool, they can be seen crawling on the surface of the feces. These proglottid segments look like grains of cooked white rice. Less commonly, they are seen crawling around the cat's anus. Each of these proglottid capsules contains up to 20 tapeworm eggs.

When these proglottids are released into the environment, they dehydrate and harden; they become quite small and take on a golden hue. Eventually, they break open and release their contents (eggs). Be aware that tapeworms are not readily diagnosed with routine fecal examinations. Because of this, you should notify your veterinarian when tapeworm segments are found in your cat's stool.

### ***What treatment is used?***

Available treatments are safe and effective. The deworming medication (called an *anthelmintic*) may be given as a tablet or an injection. After treatment, the tapeworm dies and is usually digested within the intestine, so worm segments don't usually pass into the stool. Side-effects, such as vomiting and diarrhea, are rarely reported with the newer medications.

Control of fleas is the cornerstone of preventing tapeworm infection. With the new and exciting flea control products which have become available, this is now much easier than in years past. Depending on the type of product you use and the presence of other pets in your home, your veterinarian will help you decide whether you also need to treat your house and yard for fleas. With some of the newer products, environmental control of fleas may not be needed. Circumstances vary, however, so be sure to talk to your veterinarian.

If the cat lives in a flea-infested environment, tapeworm infection can become re-established within a few weeks. This is very rarely due to treatment failure; in most cases, reappearance of tapeworms represents reinfection of the cat. Additional recommendations include:

1. Prompt treatment when tapeworms are detected.
2. Appropriate disposal of all pet feces, especially in public parks, yard, or playgrounds.
3. Strict hygiene practices for children after playing outdoors.

### ***What is the prognosis?***

New medications are safe and effective. The prognosis for successful treatment is good.

### ***Are tapeworms from my cat a danger to me or my family?***

Humans can become infected with tapeworms, although infection is rare because it is established by ingestion of a flea. Most reported cases have involved children. The risk for human infection with *Dipylidium caninum* is quite small but does exist.

Another less common group of tapeworms, called *Echinococcus*, is of increasing concern as a threat to human health. These tapeworms cause serious, potentially fatal, disease when humans become infected. Infection with this parasite is harder to diagnose than *Dipylidium* because the segments are small and not readily seen. Trappers and hunters in the north central United States and south central Canada may be at increased risk for infection with this worm when strict hygiene is not practiced. 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 yet possible.

***My child has pinworms. Did they come from my cat?***

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