Cat Worms – Types of Worms to Infect Cats

At a glance

Heartworm  Tapeworm  Hookworm  Roundworm  Other worms  Treatment

Cat worms at a glance:

- **About:** Parasitic worms can infect cats, the most common are tapeworm, hookworm, roundworm and heartworm.
- **Transmission:** This varies from worm to worm but can include from fleas, hunting and contaminated environment.
- **Diagnosis:** Most worms can be diagnosed by the presence of eggs in the feces. A blood test is used to detect heartworm larvae in the blood.
- **Treatment:** Anti-worming medications are used to treat most worms. Heartworm treatment can be dangerous, and in most cases supportive care is given.

Parasitic worms are one of the most common types of parasite to infect cats. Even indoor cats can get worms, highlighting the importance of a strict worming regime.

Worms can take up residence in many parts of the body. The three most common worms are intestinal worms, which either feed on the stomach contents or on your cat’s blood which can cause malnutrition and/or anemia. Parasitic worms can also infect the heart, lungs, bladder, kidneys, and eyes. We look at the most common parasitic worms below.

**Heartworm:**

Caused by Dirofilaria immitis, heartworms are a potentially fatal parasitic worm living in the pulmonary arteries, lungs, and hearts of cats. Heartworms are nematodes, a type of roundworm, they are several inches long, thin and white.

Heartworms are a common parasite in dogs, although cats do become infected and may develop the disease. While cats are more resistant to heartworm infestations than dogs, cats, in particular, are extremely vulnerable to heartworm and even a small number can lead to death.

In an infected animal, the adult heartworms produce their young, known as microfilaria, which swims around the bloodstream. Microfilaria requires an intermediate host in the form of the mosquito. The mosquito bites an
infected dog and takes up some of these microfilaria circulating in the dog’s blood. Once inside the mosquito, they undergo further maturation, which takes 10 – 14 days, at which time they become infective larvae. The mosquito injects infective larvae into the cat when it feeds.

**Symptoms:**
- Coughing
- Wheezing
- Diffilarvaebreathing
- Anorexia
- Vomiting
- Lethargy
- Weight loss
- Some cats show no signs at all, but die suddenly

**Diagnosis**

Diagnosis of heartworms in cats is often difficult and not always 100% reliable. There are several tests which your veterinarian may perform, including;

**Antibody test:** Detects antibodies made by the cat, to adult heartworm antigen. This may give false positive results if the cat has had a prior heartworm infection which has cleared up. Also, it is possible for the cat to have had microfilaria in the blood and removed this without them developing into adult worms.

**Antigen test:** Detects the presence of heartworm antigen in the blood. This relies on the cat carrying infection with an adult female heartworm, so it is possible for a false negative result if the cat is carrying male only, or immature heartworms.

**Echocardiogram (ultrasound reading of the heart):** To detect the presence of heartworms.

**Radiography:** May detect enlarged pulmonary arteries possibly with ill-defined margins and an enlarged right-hand side of the heart and lung changes.

**Microfilarial Tests:** This tests for the presence of microfilaria in the blood. Less than 20% of cats will have microfilaria in the blood. This may be due to several reasons. As cats often only have one or two heartworms, they may male only or female only, which would rule out mating of worms producing microfilaria. Also, the cat’s immune system may be attacking and destroying any microfilaria present. Therefore a negative blood test will not rule out the presence of heartworms.

**Tapeworm:**

Tapeworms are a highly specialised intestinal parasite known as Cestodes. They need two hosts, the intermediate host which passes the cysticercoid around and the final host (your pet), where it develops into an adult tapeworm and lays its eggs. Dipylidium caninum is the most common tapeworm in cats followed by Taenia taeniaeformis. Tapeworms are hermaphroditic, which means they contain both ovaries and testes and are capable of reproducing on their own.

**Dipyldium caninum:**

The most common tapeworm found in cats. The cat flea is the intermediate host of dipyldium caninum. Eggs pass out of the body in the feces and eaten by flea larvae. Once inside the flea larvae, the egg hatches and
becomes (cysticercoid). The flea larvae develop into an adult flea, which goes about its business of parasitising your pet and sucking blood. Your cat (or dog) then ingests the flea during grooming.

Once inside the stomach, the flea is broken down and the tapeworm is released. It hooks onto the small intestinal wall and develops into an adult tapeworm. Once it reaches maturity (in around 2 – 3 weeks) egg-filled segments break off and leave the body via the anus. These segments have the appearance of rice grains. These segments are motile (capable of movement). Once these segments have dried out they have the appearance of sesame seeds.

**Taenia taeniaeformis:**

Probably the second most common tapeworm in cats. Cats become infected with taenia taeniaeformis via eating rodents containing the larval tapeworm.

**Symptoms:**

The presence of rice like segments (proglottids) around your cat’s anus and in the environment is a sign your pet has tapeworm.

**Diagnosis:**

Your veterinarian may perform a microscopic study of the pet’s faeces to check for the presence of tapeworm segments and or eggs.

**Roundworm:**

There are two species which affect cats, Toxocara cati, and Toxascaris leonina. Toxocara cati is more common in cats. They feed upon the intestinal contents, competing with the host for food. Roundworms are around 3 – 5 inches long and spaghetti-like in appearance.

**Transmission:**

There are three modes of transmission, all of which occur when the cat consumes the infective eggs. Larvae from a previous infection can encyst in the tissues.

- Transmammary transmission (Toxocara cati): When a cat is infected with roundworm, some larvae migrate to other tissues in the body. Larvae are re-activated during pregnancy where they migrate to the mammary glands and pass into the kitten via the milk.
- Hunting: Rodents can act as intermediate hosts to roundworm and when a cat kills and consumes its prey.
- Environmental: Cats ingest roundworm eggs containing infective larvae from the environment such as soil, or when they come into contact with the faeces of an infected cat.

**Symptoms:**

- Poor coat condition
- Diarrhea
- Vomiting
- Pot-bellied appearance
- Severe cases can lead to pneumonia and intestinal and bowel blockage
Hookworm:

Hookworms are a common intestinal parasitic worm found in dogs and cats. They are less common in cats than they are in dogs.

Hookworms live in the intestine of the host it infects. Hookworms have teeth like mouth parts which they use to attach themselves to the intestinal wall and feed off the host's blood.

Transmission:

There are several ways cats can become infected with hookworms and it is important to understand the life cycle of hookworms, which will be explained below.

- **In Utero:** In dogs, worm eggs can be passed on from mother to her unborn kittens via the placenta. It hasn't been established if this is the case with feline hookworms yet.
- **Via the mother's milk:** Again, in dogs, it is possible for hookworm infection to be passed to her puppies via the breast milk. When a dog becomes infected with hookworms most of them migrate to the small intestine. However, some enter other tissues of the body, becoming dormant for years. When the animal becomes pregnant, they migrate to the mammary glands and are passed through the milk. It hasn't been established if this is the case with feline hookworms yet.
- **Via the skin:** Hookworm eggs are passed in the cat's stool. Depending on conditions, within 2 – 5 days these eggs hatch into larvae (immature worms), which are present in the moist environment of soil, and vegetation. When a cat comes into contact with an environment infected with hookworm larvae, it either becomes infected via ingestion of the larvae, or they enter the body by burrowing into the skin.
- **Via ingestion:** Hookworm larvae can contaminate food and water which the cat consumes.

Symptoms:

When they suck blood from their host, they release an anticoagulant (a substance which prevents the blood from clotting). This results in black or bloody stools.

- Anaemia (weakness, pale gums)
- Dull coat
- In kittens, stunted growth

Other worms:

There are several other worms which infect cats but little information is available on them at present. I will endeavour to list these in more detail in the future. These worms include:

*Lungworm, Thread Worm, Stomach worms, Bladder worms.*

Treatment:

Fortunately, there are many products on the market to treat the more common types of worms such as tapeworm, roundworm, and hookworm. The most common treatments are oral tablets or topical products which are applied to the back of the neck once a month. Your veterinarian is the best person to speak to in regards to which product will suit your cat best.

Heartworm treatment:

There is no approved method to treat heartworm in cats. The treatments which are available are themselves...
dangerous. A single dead worm can be fatal in cats as it can break away and cause a blockage of the pulmonary artery (pulmonary embolism).

If there are no clinical symptoms your vet may decide not to treat the cat and wait for it to clear the parasite in its own time. As stated earlier, heartworms live for around 2-3 years in cats. Your veterinarian will monitor your cat every 6-12 months for signs of complications.

If the cat is displaying symptoms of heartworm disease supportive therapy may be recommended. Prednisone can be given to the cat to reduce the inflammation and reaction to the worm.

Cats with severe symptoms may require additional supportive therapy such as a bronchodilator to open the airways, oxygen therapy, and intravenous fluids.

Cats with clinical signs who do not respond to supportive care may need adulticide treatment. Caparsolate is a medication which kills the adult worms. Treatment carries a risk however, as a dead worm can result in a pulmonary embolism. Around 1/3rd of cats receiving treatment will face life-threatening complications as a result of the dying worms. Confinement will be necessary for a few weeks after treatment.

In some cats, surgical removal has been necessary.

**Can I catch worms from my cat?**

**Tapeworm:**

Yes and no. You cannot catch tapeworm directly from your cat, but if your cat has fleas, it is possible to catch tapeworm by accidentally swallowing a flea carrying the tapeworm cysticercoid.

**Hookworms:**

You can, although they can’t develop into the adult form as they do in cats. The infective larvae are found in the soil or sandy areas such as beaches or children’s sandpits are able to penetrate the skin and they migrate, causing a red, itchy skin eruption, known as cutaneous larva migrans, creeping eruption or ground itch. The hookworm larvae cannot complete their life cycle in people and die in the epidermis.

**Roundworms:**

Toxocariasis is a disease caused by infection from roundworm eggs. Most infections are from T. canis, however T. cati has also been identified. In humans, roundworms can’t go past “stage 2” (larval stage). As with infection in rodents, the larvae migrate to various tissues in the body (causing a disease called visceral larva migrans or toxocariasis) including the lungs, brain, eyes and liver.

There are two forms of toxocariasis:

- Ocular larva migrans (OLM) results from the larvae entering the eye, causing an inflammatory response, which leads to damage to the eye, in severe cases, it can result in blindness.
- Visceral larva migrans (VLM): The larvae migrate to the various organs and cause an (inflammatory immune response) which leads to damage to the organs.
- The larvae can remain alive for many months, causing damage by migrating through tissues.