

Most internal parasites are worms and single-celled organisms that can exist in the intestines of dogs or cats. The most common worms are roundworms, hookworms, whipworms and tapeworms. Common single-cell parasites are coccidia and Giardia.

What are roundworms and how are they spread?

Roundworms are the most common intestinal parasite in dogs and cats in the world. Animals with roundworms pass the infection to other animals when the worm eggs develop into larvae and are present in the animal's feces (droppings). Your pet can pick up the infection by eating infected soil, licking contaminated fur or paws, or by drinking contaminated water.

Infected female dogs may pass the infection to their puppies before birth or afterwards when they are nursing. Infected female cats cannot infect their kittens before birth, but can pass on the infection through their milk when kittens are nursing.

What are the health risks to pets and people?

Puppies and kittens are the most prone to roundworm infection. Because roundworms live in the small intestine, they steal the nutrients from the food pets eat, which can lead to malnutrition and intestinal problems. As the larvae move through a pet's body, young animals may develop serious respiratory problems such as pneumonia.

Roundworm infections are zoonotic (pronounced zoe-oh-NOT-ick) diseases, meaning that they are animal diseases that can be transmitted to humans. While direct contact with infected dogs and cats increases a person's risk for roundworm infection, most infections come from accidentally eating the worm larvae or from larvae that enter through the skin. For example, children are at risk for infection if they play in areas that may contain infected feces, (such as dirt piles and sandboxes), where they pick up the larvae on their hands.

Left untreated, roundworms in people can cause serious health problems when the larvae enter organs and other tissues, resulting in lung, brain, or liver damage. If the roundworm larva enters the eyes, permanent, partial blindness can result.

What are hookworms and how are they spread?

Hookworms are the second most common intestinal parasites found in dogs, but they are less commonly found in cats. Your pet can become infected when larvae penetrate the animal's skin or the lining of the mouth. An infected female dog can pass the infection to her puppies through her milk, but this does not occur in cats.

What are the health risks to pets and people?

Hookworms are dangerous parasites because they actually bite into the intestinal lining of an animal and suck blood. As with roundworms, puppies and kittens are at high risk of infection and developing severe disease. Left untreated, hookworm infections can result in potentially life-threatening blood loss, weakness, and malnutrition.

Like roundworms, hookworm infections are zoonotic, and infections usually occur by accidentally eating the larvae or by the larvae entering through the skin. In humans, hookworm infections cause health problems when the larvae penetrate the skin. The larvae produce severe itching and tunnel-like, red areas as they move through the skin and, if accidentally eaten, can cause intestinal problems.

What are whipworms and how are they spread?

These worms get their name from their whip-like shape. Animals with whipworms pass the infection along to other animals when the worm eggs develop into larvae and are passed in their feces (droppings). Your pet can pick up the infection by eating infected soil or licking their contaminated fur or paws.

What are the health risks to pets and people?

Like hookworms, whipworms bury their heads in the lining of an animal's intestine and suck blood, but they are generally less harmful and usually do not cause health problems. Occasionally, severe infections can develop and lead to diarrhea, weight loss, and blood loss. Whipworm larvae rarely infect humans when they are accidentally eaten.

What are tapeworms and how are they spread?

Tapeworms got their name because they are thin and flat, like strips of tape. Unlike the smooth-bodied roundworms, hookworms, and whipworms, tapeworms' bodies are actually made up of joined segments. Dogs and cats become infected with tapeworms when they eat infected fleas or lice. They can also get certain types of tapeworms by eating infected rodents.

What are the health risks to pets and people?

Tapeworms live in the small intestine and steal the nutrients from the food your dog or cat eats. An infection is usually diagnosed when the eggs sacs are seen under the pet's tail or on its stool. These sacs look like flattened grains of rice. While there are several dewormers available that are effective against tapeworms, keeping your pet free of fleas is the best preventative. Rarely are tapeworms a risk to people.

How can I prevent/treat worm infections?

Healthy pets may not show outward signs of a worm infection. However, if you notice a change in your pet's appetite or coat, diarrhea, or excessive coughing, see your veterinarian. In most cases, a simple fecal test can detect the presence of worm eggs or adults and, if present, your veterinarian will recommend a deworming program. A good way to prevent most worm infections is by using one of several monthly heartworm preventatives available from your veterinarian.

Nursing female dogs and cats and their litters are also major sources for the spread of infective eggs and larvae. If you have a new puppy or kitten, or a pregnant pet, consult with your veterinarian about a deworming program that will reduce your family's risk of infection.



Worm infections in humans can be easily prevented by practicing good hygiene and sanitation. Children should be discouraged from eating dirt and should not be allowed to play in areas that are soiled with pet feces. Sandboxes should be covered when not in use. Adults and children should always wash their hands after handling soil and after contact with pets. Shoes should be worn when outside to protect feet from larvae present in the environment,

and raw vegetables should be thoroughly washed because they may contain parasites from infected soil.

Dog droppings should be immediately picked up from public areas and from your yard to reduce the chances of contaminating the soil. Keeping cats indoors is an effective way to limit their risk of exposure to roundworms.

Other internal parasites

Coccidia

Coccidia (cok-SID-ee-ah) are single-celled parasites and are not visible to the naked eye. Your pet can become infected by eating infected soil or licking contaminated paws or fur. Once swallowed, the parasites damage the lining of the intestine and your pet cannot absorb nutrients from its food. Bloody, watery diarrhea may result, and the animal may become dehydrated because it loses more water in its stool than it can replace by drinking. Young pets are most often infected because their immune systems may not yet be strong enough to fight off the parasite. *Coccidia* can be very contagious among young puppies and kittens, so households with multiple pets should be especially careful to practice good hygiene and sanitation.

A routine fecal test by a veterinarian will detect the presence of *coccidia*. Treatment with medications will prevent the parasite from multiplying and allow time for your pet's immune system to kill the parasites.

Giardia

Giardia (gee-AR-dee-ah) is also a single-celled parasite that, if swallowed, damages the lining of the intestine and reduces the absorption of nutrients from the food your pet eats. While most *Giardia* infections do not cause illness, severe infections can lead to diarrhea.

Giardia is harder to diagnose than other intestinal parasites, and several stool samples may have to be tested before it is found. If necessary, your veterinarian will recommend treatment with medications to eliminate the infection. Because it is highly contagious among animals, good hygiene and sanitation are important when there are multiple pets in the household.

IMPORTANT POINTS ABOUT INTERNAL PARASITES

- See your veterinarian if your pet has diarrhea, weight loss, increased scooting, a dull coat, or if you see worms under its tail, in its bedding, or on its stool.
- Prompt treatment of internal parasites lessens your pet's discomfort, decreases the chances of intestinal damage, and decreases the chance that your pet will infect humans or other animals.
- Good hygiene and sanitation reduce the chances that your pet will infect people or animals. You can help prevent the spread of infection by always cleaning up your pet's droppings immediately.



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