

Intestinal Parasites: Hookworms and Roundworms

Humans have enjoyed the companionship of their four-footed friends for centuries. Pets bring unconditional love, but they can sometimes be accompanied by a zoonotic parasite. A number of scientific studies have found that direct contact with pets can put people at risk for the transmission of zoonotic parasites.

What is a zoonotic parasite?

A parasite is an animal that lives upon or within another living organism at whose expense it obtains nutrients and shelter. Zoonotic parasites can be transmitted from pets to humans.

What are roundworms and hookworms?

Roundworms and hookworms are zoonotic parasites that commonly inhabit the intestines of cats and dogs. While most common in kittens and puppies, infection can occur in dogs and cats of all ages. The mouthparts of hookworms are modified into cutting plates that attach to the host's small intestine allowing them to feed on the host's blood. Roundworms feed in a similar fashion. Roundworms and hookworms can cause mild to extreme illness in pets and in some cases death.

Who in the family is at risk?

All human family members are potentially at risk from zoonotic parasites. The presence of dogs in the household, especially puppies, results in a greater risk factor due to their soiling habits. Cats can also transmit zoonotic diseases, but due to their tendency to defecate and bury it, exposure is less likely. Children run a higher risk of coming in contact with a zoonotic disease due to their play habits, attraction to pets, and pica (dirt eating).

Sources for infection?

Scientific studies have shown that infective eggs can be found on the hair of pets that humans can then ingest. Contaminated environments such as parks, playgrounds, and sandlots that are frequented by pets and other animals can also expose humans to zoonotic parasites. Pets can ingest the eggs or larvae directly, through coprophagia (eating of fecal waste), or by eating rodents or other animals. Mother pets can pass parasites onto their puppies/kittens while they are still in the womb and they will be born with the parasitic infection. Pets should be treated for parasites prior to breeding to protect their young from developing the infection.

How does infection occur?

When a human ingests infective eggs through the soil or through direct contact with pets, the eggs hatch and release larvae that migrate throughout the body, a condition known as visceral larva migrans. A variety of organs can be infected causing neurological problems, tissue damage, and/or stomach pains. Migration of the parasite into the eye (ocular larva migrans) can cause blindness. Hookworms can also infect humans by directly penetrating the skin where they then undergo a longer migration that can leave painful track marks on the surface of the skin.

How do I know if my pet is infected?

Most pets will show no sign of infection, which is why it is so important for your veterinarian to perform fecal exams and administer dewormers to your pets. Some pets, especially kittens or puppies, do become noticeably ill and symptoms can include:

- Vomiting
- Severe weight loss
- Loss of appetite
- Swollen stomach
- Severe anemia
- Even death



What can you do to protect the entire family?

- Systematically deworming dogs and cats is the main defense for preventing roundworms and hookworms in humans
- Schedule physical exams and fecal exams as recommended by your veterinarian
- Quickly clean up after your pets to remove potentially infective eggs from your environment before weather, insects, or active migration of the larvae allows them to spread
- Discourage and prevent children from eating soil
- Cover sand boxes when not in use, and avoid possibly contaminated areas
- Practice good hygiene for both your family and pets

Deworming schedule recommended by the Center for Disease Control (CDC):

Puppies: First at 4 weeks, then every 4 weeks until 20 weeks, and then every 6 months or as needed.

Kittens: First at 6 weeks, then every 4 weeks until 20 weeks, and then every 6 months or as needed.

Adult pets: Bi-annual fecal exams and bi-annual deworming medicine. Additional fecal exams and/or deworming as recommended by your veterinarian.



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