

Heartworm & Intestinal Parasites



Heartworm disease

Heartworm is a parasitic disease that can affect any dog regardless of age, sex or habitat. It is found in virtually all parts of the United States and many parts of Canada. Heartworm is spread by mosquitoes, and tends to have a higher incidence in areas heavily populated by mosquitoes. Dogs are considered the most common host for heartworms, however heartworms may also infect more than thirty species of animals (including coyotes, foxes, wolves, domestic cats, ferrets) and even humans, though transmission from animal to human (zoonotic infection) is extremely rare.

What are heartworms?

Heartworms are parasites that live in the blood of a dog's heart and adjacent blood vessels. They can grow from four to twelve inches in length, reach maturation one year after infection and live for approximately five to seven years. Adult heartworms living in the heart produce offspring, known as microfilariae, which circulate in the animal's blood. When a female mosquito bites an infected animal, it sucks out the blood containing the microfilariae. When the mosquito bites another pet, the infected larvae are transmitted. In many cases the infected dog will not show symptoms in the early stages.



Heartworm is the most serious common parasite for dogs because it stresses the dog's heart by restricting blood flow and also damages other internal organs. The heart may enlarge and become weakened due to an increased workload, and congestive heart failure may occur. Left untreated, the disease can be fatal to dogs.

Blood screening tests can verify the presence of heartworms. Radiographs and x-rays are used to detect the disease in its later stages. Prompt detection prevents needless suffering.

Heartworm treatment and prevention

The good news is that most dogs with heartworm can be successfully treated, usually with drugs (adulticide, microfilaricide) that kill adult heartworms and their offspring. But prevention is the best cure – it's safer, less expensive, and better for your pet!

There are a variety of options for preventing heartworm infection, including an injectable, monthly topicals and monthly chewable tablets. Preventative medications are extremely effective and when given properly, on a regular basis, can completely prevent your pet from contracting heartworm. But remember, year-round heartworm protection is as good as your diligence in remembering to give your pet the prescribed medication, as directed by your veterinarian!

Canine heartworm symptoms include:

- Difficulty breathing
- Coughing
- Fatigue, a dog that tires easily
- Listlessness
- Weight loss
- Rough hair coat.



Ask your veterinarian

Because of the regional and climate-dependant nature of the heartworm cycle, it is crucial to consult your veterinarian before giving any medication to your pet. Your veterinarian is your best reference, with expert knowledge of the heartworm cycle and transmission patterns in

your region, along with the individual health and activity profile of your dog. Before starting a preventive program, all dogs that could possibly be affected with mature heartworms should be tested as preventive medicines may cause severe reactions in dogs that are already hosts to adult heartworms. A dog that is on a preventive medicine should be tested routinely to ensure on going protection – especially when a dose has been missed or forgotten.

Can you catch heartworm and other parasites from your pet?

Mosquitoes transmit heartworm, not pets. Humans are unnatural hosts for heartworm – therefore cases of infection are rare. Many heartworm preventative medicines for pets do eliminate other parasites such as hookworms, whipworms and roundworms, which are more commonly seen in humans. Parasitic infections that can be transmitted from animals to humans are known as parasitic zoonoses:

1. Hookworms

In dogs, hookworm infection occurs through ingestion or skin penetration of hookworm larvae found in the stools or soil contaminated by feces of an infected animal. The larvae then develop and migrate to the intestines where they hook onto the intestinal wall and feast on the host's blood. The larvae of hookworms can penetrate the skin and infect humans through contact with soil or sand contaminated by feces of host dogs or cats. In a human host, the hookworm larvae do not migrate to the intestines and become blood-sucking adults as they do in pets. Instead, they move around under the skin and eventually die causing an inflammatory skin reaction known as cutaneous larva migrans, or "creeping eruptions". It is important to keep your pet free of hookworms with good hygiene, preventive medication and regular veterinary check ups. Also, keep stray dogs and cats out of sandboxes and gardening areas.

2. Roundworms

Roundworms are parasitic worms that are round in shape, live in the dog's intestines and consume partially digested food. Unlike hookworms, they do not attach to the intestinal wall, but literally swim in their food. Adult worms resemble spaghetti and may come out in the feces or vomit of an infected dog. Transmission to dogs is through eggs in feces, eating a prey animal that is a host (usually rodents), mother's milk, or in utero. In dogs, roundworms cause diarrhea, vomiting and in extreme cases pneumonia and intestinal obstruction. In humans, roundworms can cause a serious condition known as visceral larva migrans. Most victims are children who are infected when putting

contaminated fingers into their mouths. Once ingested, the roundworm larvae, though not in its usual host, tries to complete its lifecycle. The roundworm gets lost in the human body, usually in the eye, dies and generates an inflammatory reaction that can cause blindness. Proper hand washing can prevent infection.

Pet deworming of puppies and preventive medication will reduce environmental contamination.

3. Whipworms

The only way a dog can contract whipworms is by ingesting the eggs. When a dog walks on ground infected by eggs, they are picked up on the paws and travel into the mouth when he licks his paws or any contaminated toys or food bowls. Whipworm eggs can survive extreme exterior conditions for months and even years. Within one to three months after the eggs are swallowed they hatch in the dog's intestine, attach to the wall and begin to suck blood and lay eggs. In dogs, whipworm can cause diarrhea, weight loss and in some cases, anemia. Whipworm infection in humans is extremely rare.

Be safe, not sorry

Children are more prone to contracting zoonotic parasites, as they tend to kiss and play more readily with pets. Parasite larvae are shed in the pet's feces and may contaminate soil and sand. When children play in the contaminated areas and place their fingers in their mouths this allows the eggs to be ingested, causing infection. Hookworm larvae are capable of infecting a host through penetration of the skin. Be sure to pick up feces promptly and avoid eating while playing with your pet. Frequent hand washing, as well as good general hygiene for people and dogs, is recommended. Routine check ups by your veterinarian – including a diagnostic test for worms and heartworm – as well as a physical exam along with medical prevention, will not only keep your dog healthy but will reduce any risk to you and your family.
