

HEARTWORM DISEASE

All from a mosquito bite?

Heartworm disease is a serious and potentially fatal disease in pets caused by foot-long worms (heartworms) that grow and live in the heart, lungs and associated blood vessels. It leads to severe lung disease, heart failure and damage to other organs in the body. Heartworms affect dogs, cats and ferrets (also wolves, coyotes and foxes - important carriers of the disease because they live close to urban areas).

Dogs: The dog is a natural host for heartworms, which means that the heartworms that live inside the dog mature into adults, mate and produce offspring. If untreated, their numbers increase. Dogs have been known to harbor several hundred worms in their bodies.

Cats: The cat is an atypical host for heartworms, and most worms in cats do not survive to the adult stage. Cats with adult heartworms typically have just one to three worms, and many cats affected by heartworms have no adult worms.

The mosquito plays an essential role in the heartworm life cycle. Adult female heartworms living in an infected animal produce microscopic baby worms called microfilaria that circulate in the bloodstream. When a mosquito bites and takes blood from an infected animal, it picks up these baby worms, which develop and mature into “infective stage” larvae. Then, when the infected mosquito bites another dog, cat, or susceptible animal, then enter the new host through the mosquito’s bite wound. Once inside a new host, it takes approximately 6 months for the larvae to mature into adult heartworms. Once mature, heartworms can live for 5 to 7 years in dogs (up to 2 or 3 years in cats). Because of the longevity of the worms, each mosquito season can lead to an increasing number of worms in an infected pet.

In the early stages of the disease, many dogs show few symptoms or no symptoms at all. It usually takes several years before dogs show clinical signs of infection. Consequently, the disease is diagnosed mainly in 2-8 year old dogs. The disease is rare in dogs less than one year of age. Unfortunately, by the time clinical signs are seen, the disease is usually well advanced.

SIGNS & SYMPTOMS

The signs of heartworm disease depend on the number of adult worms present, the location of the worms, the length of time the worms have been in the dog, and the degree of damage that has been sustained by the heart, lungs, liver, and kidneys. The most obvious clinical signs of heartworm disease are a soft, dry cough, shortness of breath, weakness, listlessness, and loss of stamina. All of these signs are most noticeable following exercise, when some dogs may even faint or become disoriented. Signs of heartworm disease can also include a reluctance to exercise, decreased appetite, and weight loss. As heartworm disease progresses, pets may develop heart failure and the appearance of a swollen belly due to excess fluid in the abdomen.

Adult heartworms cause disease by clogging the heart and major blood vessels leading from the heart, including the pulmonary artery. By clogging the main blood vessels, the blood supply to other organs of the body is reduced, particularly blood flow to the lungs, liver, and kidneys - causing these organs to malfunction. Dogs with large numbers of heartworms can develop a sudden blockages of blood flow within the heart, leading to a life-threatening form of cardiovascular collapse - marked by a sudden onset of labored breathing, pale gums, and dark bloody or coffee-colored urine. Without prompt surgical removal of the blockage, few dogs survive.

Heartworm disease has been diagnosed in all 50 states. Some very high-risk areas include large regions, such as near the Atlantic and Gulf coasts, and along river tributaries. Because infected mosquitoes can come inside, *both outdoor and indoor pets are at risk. Louisiana leads the country in heartworm disease;* it is essential that your pet be on heartworm preventative at all times. Missing doses is dangerous, as it is an opportunity for your pet to become infected.

All dogs should be tested annually for heartworm infection, done during routine visits for other preventive care. Annual testing is necessary, even when dogs are on heartworm prevention year-round. Heartworm preventatives are highly effective, but dogs can still become infected. If you miss just one dose—or give it late—it can leave your dog unprotected. If you don't get your dog tested, you won't know your dog needs treatment.

No one wants to hear that their dog has heartworms, but the good news is that most infected dogs can be successfully treated. The goal is to first stabilize your dog if he is showing signs of disease, then kill all adult and immature worms while keeping the side effects of treatment to a minimum.

Here's what you should expect if your dog tests positive:

- *Confirm the diagnosis.* The diagnosis should be confirmed with an additional, different test. The treatment regimen for heartworm is both expensive and complex, your vet will want to ensure treatment is necessary.
- *Restrict exercise.* This requirement might be difficult to adhere to, especially if your dog is accustomed to being active. Physical exertion increases the rate at which the heartworms cause damage in the heart and lungs. The more severe the symptoms, the less activity your dog should have.
- *Administer treatment.* Once your vet has determined your dog is stable and ready for treatment, he or she will recommend a protocol involving several steps. The American Heartworm Society has guidelines for developing this plan of attack. Dogs with no signs or mild signs of heartworm disease, such as cough or exercise intolerance, have a high success rate with treatment. More severe disease can also be successfully treated, but the possibility of complications is greater.
- *Test and prevent.* Approximately 6 months after treatment, your vet will perform a heartworm test to confirm that all heartworms have been eliminated. To avoid the possibility of your dog contracting heartworm disease again, you will want to administer heartworm prevention year-round for the rest of their life.