Heartworm Disease: Transmission and Prevention

Drs. Foster & Smith Educational Staff

Veterinary insight about heartworm disease is constantly evolving. This devastating disease was once thought to only affect dogs in the southern United States. Now, veterinarians and pet owners know that this condition is much more common and they need to be vigilant about prevention.

AREAS OF THE U.S. AFFECTED BY HEARTWORM DISEASE

HEARTWORM DISEASE, caused by the parasite *Dirofilaria immitis*, is now found in all 50 states. According to the American Heartworm Society, most cases of heartworm disease are found in the hot, humid areas of the southeast. There are, however, high incidences of heartworm disease in pockets of Minnesota, Oklahoma, California, and many other states. Additionally, heartworm is not just an American problem - heartworm infections happen worldwide.

HEARTWORM LIFECYCLE

HEARTWORM IS TRANSMITTED between animals by many species of mosquitoes. The transmission occurs when a mosquito takes a blood meal from an infected animal and then feeds on another animal. Heartworm infection can involve both dogs and cats, but the infection occurs differently in each species.

IN DOGS, the immature larval stage of the worm is deposited into the dog's skin by an infected mosquito.

prevention

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These larvae enter the dog's skin through the bite wound of the mosquito. Then in about 2 months, the juvenile worms migrate through the bloodstream to the right side of the heart. There they grow into adult worms (some can grow up to 12 inches in length!). The female then begins to produce offspring, called *microfilariae.* She may produce as many as 1000 of these offspring... these *microfilariae* grow to about 1/2" to 3/4" in length and are fed by the blood of the infected animal. This process takes about 6 months. As they grow, the heartworms lodge in the heart and the large blood vessels going from the heart to the lungs. Adult worms can live up to 7 years in a dog's body. If untreated, dogs usually die of heart failure.

HEARTWORM DISEASE IN CATS is different than in dogs on many levels. For instance, heartworms are smaller in cats than in dogs and it takes about one month longer for the larvae to develop into adults in the heart. Additionally, the lungs are the major organ affected in cats and it only takes a small number of worms to cause disease. According to the American Heartworm Society, the life span of the heartworm is shorter in cats than in dogs. Remember that the vector for heartworm disease, the mosquito, does not bite exclusively outside the house. Indoor-only cats are affected by this disease, as well.

SIGNS OF HEARTWORM DISEASE

IN DOGS, the first outward signs of heartworm disease may not be apparent until a year after infection and may begin simply as a soft cough. The severity of this disease depends on the number of heartworms present. As the disease progresses, the infected pet will find it more difficult to breathe. He will be reluctant to exercise, and he may have a decreased appetite and weight loss.

HEARTWORM DISEASE IS EASY TO PREVENT.

A heartworm prevention program is effective and simple, and consists of three parts:

1. REGULAR BLOOD TESTS - This ensures your pet is free from heartworms before he begins or continues on his preventive medication. Your veterinarian will advise you as to the frequency of regular blood tests.

2. PREVENTIVE MEDICATION - This means administering a heartworm preventive to your pet year round (according to American Heartworm Society guidelines). Prevention for dogs includes monthly oral preparations like Iverhart Max, Heartgard products, Tri-Heart Plus or Sentinel (which includes flea prevention). These medications are given in treat form that dogs readily accept. Topical combination heartworm/flea/tick preventives include Revolution and Advantage Multi. Heartgard, Revolution and Advantage Multi also offer monthly heartworm preventives for cats.

3. REDUCING YOUR PET'S EXPOSURE TO MOSQUITOES - This means making your pet's environment less hospitable to mosquitoes, which in turn decreases the risk of your pet being infected with heartworm in the first place.

Heartworm prevention is safe, easy, and inexpensive compared to treatment. Talk to your veterinarian today about starting a prevention program for your pets.

INFECTED CATS have clinical signs that mimic many other diseases. These include difficult or rapid breathing, coughing, vomiting, fainting, seizures, blindness, loss of appetite, and weight loss. Heartworm is more difficult to diagnose in cats than in dogs.

For additional information, view our "How to Manage Heartworm" video.

JUST A FEW HEARTWORM PREVENTIVES

Heartgard® Plus Chewables

Tri-Heart® Plus

Iverhart Max™

Revolution®

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