

Ask A Vet: What About Heartworms?

Sunday, June 8, 2014

Dear Dr. Weldy's,

I keep hearing about heartworms. Can you tell me what they are and why I should care about them?

Dear Reader,

Heartworms (*Dirofilaria immitis*) are parasites that live in and damage the large blood vessels of the heart and lungs. They primarily infect dogs, but have been found in many other mammals, including cats, ferrets, wolves, foxes, coyotes, and sea lions.

Heartworms are spread when a mosquito carrying heartworm larvae bites a dog. The larvae migrate through tissue and find their way to the large blood vessels of the heart and lungs, where they lodge and mature. It takes 6 to 7 months for larvae to become adults after a dog has been bitten. Once the worms mature, they begin to reproduce and the females release first stage larvae (microfilaria) into the bloodstream. Adult worms can be up to 12 inches long and live 5 to 7 years. A dog can have from 1 to 250 worms in its system. As you can imagine, that many worms living in blood vessels can cause problems – including heart failure and death if not treated.

Canine heartworm infection has been found in dogs native to all 50 states. All dogs, regardless of their age, sex, or habitat, are susceptible to heartworm infection. The highest infection rates (up to 45%) in dogs (not maintained on heartworm preventive) are within 150 miles of the Atlantic and Gulf coasts from the Gulf of Mexico to New Jersey and along the Mississippi River and its major tributaries. Other states have lower infection rates. For the last several years, the infection rate in Indiana has stayed around 1% to 2%. While this seems low, consider a few numbers: there are about 1.5 million dogs in Indiana (calculated based on AVMA statistics). An infection rate of 1% means that 15,000 infected dogs are diagnosed each year in Indiana.

Prevention of heartworm disease is easy and relatively inexpensive, compared to the cost (in a dog's health and an owner's finances) of treating heartworm disease. There are a variety of preventive medications available – chewable tablets, liquid spot-ons, and injectable ProHeart. Many also have the added benefit of preventing other parasites such as intestinal worms or fleas and ticks. The cost of heartworm prevention for the life of a dog is often similar to or less than the cost of treating a dog with heartworms.

As for treating heartworm disease, at this time the only approved treatment is an arsenic based compound to kill the worms. To determine which treatment regimen is best for a particular dog, chest x-rays and blood tests should be done before any treatment is started. The medication is given as injections deep into muscle. Often steroids and antibiotics are given to decrease chances of complications or side effects of the treatment. Following treatment, the dog must be confined for 6 weeks of strict cage rest – which can be hard on both owners and dogs.

For more information, talk to your veterinarian

-Dr. Teresa Alessandri