

HEARTWORM DISEASE IN DOGS



Canine heartworm disease is a very dangerous disease in dogs that is carried by mosquitoes. Heartworm is quite prevalent in the upper Midwest and should be a concern for any dog owner. Even if your dog does not go outside that much, mosquitoes often can find a way into your house, so every dog in this area could potentially get this deadly disease. The purpose of this handout is to describe what heartworm disease is and how to prevent it.

What is Heartworm Disease?

Heartworms are worms that reside in the heart and lungs of dogs and cats. The worms cause permanent heart damage due to the obstruction they create. The heart is forced to work harder, causing changes in its structure. Also, the inflammation caused by the worms can cause permanent

changes in the lungs similar to emphysema. While the worms can be removed through medical treatment, the damage to the heart and lungs is often non-reversible.

The heartworm larvae are carried by mosquitoes. The mosquitoes acquire the larvae from an infected animal when they feed. The larvae undergo some development in the mosquito and then are deposited into an animal when that mosquito feeds again. The larvae then go through several molts in the animal's body before migrating to their permanent residence in the heart and adjacent vessels, where they reside and reproduce.



This is a heart from a heartworm-infected dog. The worms' presence in the heart led to heart disease and, eventually, failure.

Treatment for heartworm disease involves hospitalization and a painful injection to kill the adult worms. After the injection the dog's activity level must be restricted for a month to prevent embolic damage to the lungs. Two injections are usually necessary in order to kill the adults slowly, because if all of the adults are killed too quickly, the dying worms form an emboli that can cause sudden death. It is important to note that while treatment will get rid of the worms, damage to the heart and lungs may be permanent, and the animal may suffer lifelong illness.

How Can I Prevent Heartworm Disease?

We recommend a once-a-month oral chew (Heartgard® or Sentinel®) given either year-round or May through November.

Unless the dog is a puppy which has never been through a mosquito season, dogs should be tested prior to using a preventative to make sure they are not positive. An infected dog will have high numbers of larvae in its blood stream, and giving the preventative will kill these larvae. The sudden death of high numbers of larvae can cause a life-threatening allergic reaction, hence the recommendation for yearly testing.

Important Points to Remember About Heartworm Disease in Dogs

- Heartworm is prevalent anywhere there are mosquitoes. Though a positive dog can be treated and the infection can be eliminated, the damage to the heart and lungs is often permanent.
- Current heartworm preventatives are very effective at preventing heartworm disease, if used as labeled and as recommended by your veterinarian.
- All dogs (except puppies, who cannot be positive if they haven't been exposed to mosquitoes previously) should be tested prior to using heartworm preventative to reduce the risk of a reaction to the medication. Testing recommendations are made by both the makers of heartworm preventatives and the American Heartworm Society.
- For more information on this deadly disease, we recommend visiting the American Heartworm Society website at www.heartwormsociety.org.