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## Heartworm Disease

Heartworms are a preventable, but potentially fatal, parasite that primarily infects dogs, cats and ferrets.

### How is heartworm transmitted?

Heartworms can only be transmitted from animal to animal by mosquitoes. When a mosquito bites an infected animal, young heartworms called microfilariae enter into that mosquito's system. Within two weeks, the microfilariae develop into infective larvae inside the mosquito; these infective larvae can be transmitted to another animal when this mosquito takes its next blood meal.



The infective larvae mature into adult heartworms in approximately 6 months. During the first three months, the larvae migrate through the animal's body, eventually reaching the blood vessels of the lungs. During the last 3 months, the immature worms continue to develop and grow to adults, with females growing up to 14 inches in length. The worms damage the blood vessels, and reduce the heart's ability to pump, resulting in severe lung and heart disease. Adult heartworms can survive for 5-7 years in dogs and several months to years in cats.

### Where are heartworms found?

Geographically, heartworms are a potential threat in every state as well as in many other countries around the world. Heartworms have definitely been found in Iowa and recent statistics are showing that the prevalence is on the rise.

### What pets should be tested/treated for heartworms?

Because heartworms are spread by mosquitoes, any pet may be exposed. This includes pets that only go outside occasionally. Mosquitoes can also get into homes, putting indoor-only pets at risk as well.

### How can I tell if my pet has heartworm infection or disease?

**DOGS:** If your dog has been recently or mildly infected with heartworms, he/she may show no signs of illness until the adult worms have developed in the lungs and signs of heartworm

disease are observed. As the disease progresses, your dog may cough, become lethargic, lose his/her appetite or have difficulty breathing. You may notice that your dog seems to tire rapidly after only moderate exercise. In some cases, the first sign of illness is sudden death.

A simple blood tests can be performed in the clinic to detect the presence of adult heartworms. Further tests, such as chest x-rays, a blood profile, or an echocardiogram (an ultrasound of the heart), may be necessary to confirm the diagnosis, to evaluate the severity of the disease, and to determine the best treatment plan for your dog.

**CATS:** Signs of possible heartworm disease in cats include coughing, increased breathing effort, and vomiting. In some cases, a cat may suddenly die from heartworms.

The diagnosis of heartworm infection in cats is more difficult than it is with dogs. A series of different tests may be needed to help determine the likelihood of heartworm infection as the cause of your cat's illness and, even then, the results may not be conclusive.

### **How can my pet be treated?**

Heartworm is a progressive, life-threatening disease. The earlier it is detected and treated, the better the chances that your pet will recover and have less complications.

**DOGS:** As with most medical problems, it is much better to prevent heartworm infection than to treat it. However, if your dog does become infected with heartworms, treatment is available. There is substantial risk involved in treating a dog for heartworms. However, serious complications are much less likely in dogs that are in good health and when you carefully follow your veterinarian's instructions.

**CATS:** There is currently no effective and safe medical treatment for heartworm infection or heartworm disease in cats. If your cat is diagnosed with heartworms, your veterinarian may recommend medications to reduce the inflammatory response and the resulting heartworm disease, or surgery to remove the heartworms.

### **Can heartworm disease be prevented?**

Yes!! Heartworm infection is almost 100% preventable in dogs and cats. There are several FDA-approved heartworm preventives available in a variety of formulations. We would be more than happy to help find the preventive that works best for you and your pet. Of course, you have to remember to give your pet the preventive in order for it to work!

The preventives do not kill adult heartworms, but actually attack the larval stages of the disease. They will not eliminate heartworm infection or prevent signs of heartworm disease if adults are present in the pet's body. Therefore, a blood test for existing heartworm infection is needed before beginning a prevention program to assess the pet's current heartworm status. Heartworm tests should also be performed annually to ensure that your pet doesn't subsequently become infected with the disease and to ensure the appropriate amount of medication is being prescribed and administered.

The heartworm preventive should be given year round to ensure complete protection for your pet.