

*Heartworm disease is a preventable, but serious and potentially fatal, parasitic disease that primarily affects dogs, cats and ferrets. It can also infect wild animals, such as exotic canids. There are documented human infections, but they are thought to be rare and do not result in clinical disease.*

## How is heartworm disease transmitted and what does it cause?

Heartworms are 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 which are then injected into another animal through the mosquito's bite. Over the next six months, the infected larvae mature into adults: during the first three months, the larvae migrate through the animal's body eventually reaching the blood vessels of the lungs; during the last three months, the larvae become adults and enter the heart. Once in the heart, the heartworms will continue to grow up to 14 inches in length. In time, the worms will injure the blood vessels, resulting in severe lung and heart disease. If worms of both sexes are present, they will create new microfilariae that can damage other organs when the animal's immune system attempts to combat the infection. This life cycle continues when a mosquito bites the infected animal and ingests the microfilariae. Heartworms may survive for 5 to 7 years in dogs and 2 to 5 years in cats.



## Where is heartworm disease found?

Geographically, heartworms are a potential threat in every state except Alaska, as well as in many other countries around the world. All dogs, regardless of age, sex, or living environment, are susceptible to heartworm infection. Indoor, as well as outdoor, cats are also at risk for the disease. If you plan to travel with your dog or cat to a different part of the country, ask your veterinarian about the risk of heartworm disease in the area where you are going to relocate or visit.

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

**Dogs:** If your dog has been recently or mildly infected with heartworms, it may initially show no signs of disease. However, as the disease progresses, your dog may cough, become lethargic, lose its appetite or have

difficulty breathing. You may notice that your dog seems to tire rapidly after only moderate exercise.

Your veterinarian will test your dog's blood for the presence of heartworms. Further tests, such as chest x-rays, a blood profile and an echocardiogram, may be necessary to confirm the diagnosis, to evaluate the severity of the disease, and to determine the best treatment protocol for your dog.

**Cats:** Signs of possible heartworm infection in cats include coughing, respiratory distress, and vomiting. (In rare cases, a cat may suddenly die from heartworms.)

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

## How can my pet be treated?

**Dogs:** As with most medical problems, it is much better to prevent heartworm than to treat it. However, if your dog does become infected with heartworms there is an FDA-approved treatment available. There is some risk involved in treating a dog for heartworms. However, serious complications are much less likely in dogs that are otherwise in good health and if the disease is detected early.

The goal of heartworm treatment is to kill the adult worms and microfilariae that are present in your dog's body. While your dog is hospitalized and for a period of time afterwards, it will require complete rest and may need additional medications to help limit inflammatory reaction as the worms die and are absorbed by the body.

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

## Can heartworms be surgically removed?

Some veterinarians are equipped for surgical removal of heartworms from dogs and/or cats. This is a high-risk procedure and is typically reserved for severe cases.

## Can heartworm disease be prevented?

Heartworm disease is almost 100% preventable in dogs and cats. There are several FDA-approved heartworm preventives available in a variety of formulations. Your

veterinarian can recommend the best method of prevention based upon your pet's risk factors and lifestyle.

A blood test for existing heartworm infection is recommended before beginning a prevention program to confirm that your pet is not already infected with the disease. In addition, annual re-testing is recommended to check your pet's status and ensure that the appropriate medication is being prescribed.

*Heartworm infections are preventable. Check with your veterinarian today to help ensure that your pet is protected.*

The AVMA appreciates the assistance of the American Heartworm Society  
[www.heartwormsociety.org](http://www.heartwormsociety.org)

## And Now A Note On Your Pet's *General Good Health*

*A healthy pet is a happy companion. Your pet's daily well-being requires regular care and close attention to any hint of ill health. The American Veterinary Medical Association suggests that you consult your veterinarian if your pet shows any of the following signs:*

- Lumps or swelling
- Reduced or excessive appetite or water intake
- Marked weight loss or gain
- Limping, stiffness, or difficulty getting up or down
- Difficult, discolored, excessive or uncontrolled waste elimination (urine and feces)
- Abnormal discharges from any body opening
- Head shaking, scratching, licking, or coat irregularities
- Changes in behavior or fatigue
- Foul breath or excessive tartar deposits on teeth

*Pets age more rapidly than people and can develop disease conditions that can go unnoticed, even to the most attentive pet owner. Veterinarians are skilled in detecting conditions that have gradual onset and subtle signs. Early detection allows problems to be treated most easily and affordably. Help foster early detection and treatment by scheduling regular examinations.*



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# What You Should Know About **HEARTWORM DISEASE**



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