

# Heartworm Disease: Signs, Treatment, Prevention

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Many new pet owners and some long-time owners of pets may not know the reason their pet needs a heartworm preventive. This article explains how it is transmitted, signs of the disease, how veterinarians diagnose and treat the disease, and most importantly, how it is easily prevented.

For additional help, view our ["How to Manage Heartworm" video](#).

Heartworm Disease, caused by the parasite *Dirofilaria immitis*, was once considered a disease of the southern United States. But it has been diagnosed in all 50 states of the United States. A heartworm infection can affect both dogs and cats, but the disease is a bit different in each species.

**In dogs**, the immature larval stage of the worms are deposited into the dog's body by a mosquito. Within 45-65 days, they migrate through the muscles to the bloodstream ending in the large blood vessels leading from the right heart to the lungs. There they grow into adult worms. As they grow, the heartworms can lodge in these blood vessels. If they are in large numbers, they also lodge in the heart. If untreated, dogs usually die of heart failure.

**Cats'** bodies react to heartworm infestation a bit differently. It takes about one month longer for the larvae to develop into adults. The heartworms affect the respiratory system more than the heart, causing "HARD" - Heartworm Associated Respiratory Disease. Both the larvae and adults can cause severe inflammation. Additionally, the larvae may migrate to other tissues of the cat's body, such as the brain.

## Signs

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 dog will be reluctant to exercise, and he may have a decreased appetite and weight loss. His quality of life can severely diminish, and as heart failure occurs, the dog can die. Severity of heartworm disease in dogs depends on the number of heartworms present.

Infected cats have signs that mimic many other diseases. These include coughing and difficulty breathing. You may also see vomiting, collapse, seizures, lack of coordination, loss of appetite and weight loss. Severity of disease is not dependent upon the number of heartworms present in cats. Cats with heartworm disease usually have fewer than 10 adult heartworms present.

## Diagnosis

If a dog has heartworm disease, an immature stage of the worms, called "microfilariae," will be present in 80% of individuals. These can be identified microscopically by your veterinarian. The most common blood test, however, detects certain proteins on the adult female worm. Another blood test detects antibodies the pet's body has made in an attempt to kill the heartworms. Both of these tests are commonly used in cats. If a test is positive, other confirmatory tests including x-rays, ultrasound, and additional laboratory tests are performed.

## Treatment

**In dogs**, heartworm disease can be treated, but treatment can result in complications - sometimes fatal ones. The adult worms are killed by injections of arsenic-containing compounds. The treatment must be done carefully to avoid drug toxicity or complications resulting from the dead or dying worms.

These complications can occur when the dead or dying worms obstruct blood vessels to the lungs. Dogs must be hospitalized during treatments and must be kept quiet (cage rest) for at least four weeks after treatment. The treatment will kill the adult worms, but damage already done to the heart and lungs will remain. In severe cases, the worms may need to be surgically removed from the heart.

## Prevention

The good news is that there is no need for your pet to have to endure heartworm disease or its treatment, because it is so easy to prevent. A heartworm prevention program is effective and simple, and consists of three parts:

- **Regular blood testing for Dogs** - This ensures your dog is free from heartworms before he begins or continues on his preventive medication. Your veterinarian will advise you as to the recommended frequency of regular blood tests. Interpreting test results in cats is more problematic and you should discuss testing with your



veterinarian.

- **Preventive medication** - This means administering a heartworm preventive to your pet **year round**, regardless of the mosquito season. Prevention for dogs includes monthly preparations like [Tri-Heart® Plus](#), [Heartgard®](#) products, [Iverhart Plus®](#), [Revolution®](#), [Advantage Multi®](#), [Iverhart Max®](#), [Trifexis®](#), or [Sentinel®](#) (which includes flea prevention). [Heartgard®](#), [Revolution®](#), [Interceptor®](#), and [Advantage Multi®](#) also offer a monthly feline heartworm preventive.
- **Reducing your pet's exposure to mosquitoes** - This means making your pet's environment less hospitable to mosquitoes. In dogs only, products such as [K9 Advantix® II](#) can be used to kill and repel mosquitoes. This decreases the risk of your pet being exposed to mosquitoes which may be carrying heartworms.

Heartworm prevention is safe, easy and inexpensive compared to treating a dog or cat after worms have matured into adults. While treatment for heartworm disease is possible in dogs, it is a complicated and expensive process, taking months for infected animals to recover and there is often permanent damage to the heart. For cats, there is no effective treatment to kill the worms. By investing in a preventive medication, you will spare your pet from this deadly disease and its complicated treatment. Talk to your veterinarian today to start a prevention program for your pets.

Learn what every pet owner needs to know about heartworm prevention: visit our Special [Heartworm Disease](#) Information Section!