

The Bark & Mew

Information & Updates from Falconbridge Animal Hospital & Village Veterinary Hospital
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HEARTWORM DISEASE IN DOGS

INFECTIONS:

A tiny mosquito may be your dog's worst enemy. If an infected mosquito bites your dog, your dog may die. The problem starts when a mosquito draws blood from a heartworm infected dog. As it feeds, it draws up immature heartworms (*Dirofilaria immitis*) with its meal. If afterward it bites your dog, the immature heartworms are injected into your dog's bloodstream. The heartworms then migrate towards the heart and can grow to an adult length of 10-14 inches. These adult worms cause a blockage between the heart and lungs and will interfere with the function of the heart or any organ related to it. These adults produce babies called microfilariae, then another mosquito bites your infected dog and the disease is spread to yet another dog.

WIDESPREAD:

Since mosquitoes transmit heartworms, your pets are at risk if mosquitoes thrive in your area. Dogs from all fifty states have been diagnosed with heartworms, with the highest infection rates on the Atlantic and Gulf coasts and along the Mississippi River valley. Many people that move to North Carolina are not aware that heartworms can potentially be contracted year-round. People that move here from colder climates either are not aware of heartworms at all or do not realize that because of our warmer climate mosquitoes can spread heartworms even during the winter months. Conversely, people that move to North Carolina from warmer climates often feel that we have cold winters so mosquitoes must not be a problem. The truth is that in North Carolina the temperature fluctuates often, which allows mosquitoes to live and reproduce even during the coldest months of the year.

SYMPTOMS:

The symptoms are similar to chronic respiratory infection, such as exercise intolerance, heart murmur, coughing, shortness of breath, and lethargy. Your pet may also experience heart or liver failure. Sadly, if symptoms are noticeable, it usually means the disease has already progressed to a more advanced stage.

TREATMENT:

It is possible to treat a dog with heartworms if the dog is in good health. The treatment consists of a two injection series of an arsenic direvitive over a two day period to kill the adult worms, followed by a month of cage rest, and finally a drug treatment to kill the offspring that are in the bloodstream. This treatment is expensive, painful, and can have side effects, especially in older or sick dogs. The damage that occurred to the internal organs from the heartworms cannot be reversed.

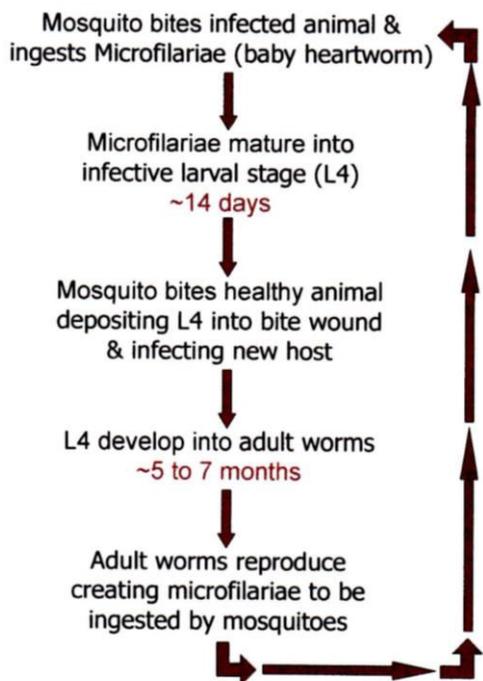
PREVENTION...THE BEST COURSE OF ACTION:

Because heartworm disease is so prevalent in this area, all dogs should be on preventative medication all year round. A yearly heartworm test is highly recommended in order for us to test for heartworms and tick borne illnesses. Although the preventatives available are quite good, even being one day late in administering them could leave your dog at risk. It is safe to give prevention even if your dog is infected with heartworms but treatment to kill the adult worms is necessary to decrease symptoms and prevent further illness.

METHODS OF PREVENTION:

There are several brands of preventatives. We carry Iverhart Max (ivermectin/pyrantel pamoate/praziquantel)

Heartworm Life Cycle



which is the generic version of Heartgard Plus. It is administered monthly in a chewable tablet. Along with heartworm prevention, it treats dogs for roundworms, hookworms, and tapeworms.

HEARTWORM DISEASE IN CATS

Infection with heartworms (*Dirofilaria immitis*) is known to be a serious problem, particularly in the southeastern United States. Cats have been considered at low risk for this infection because they are not the preferred host. Over the last decade more infections in cats have been recognized. Heartworm infection in cats has been reported in 29 of the 50 states. A study performed in part at North Carolina State University College of Veterinary Medicine showed 9% of cats with clinical signs compatible with heartworm disease were infected. The same study found 26% of the cats showed evidence of exposure to heartworms in their blood. The information indicates that 2% to 5% of cats in North Carolina are infected with heartworms. This is equal to or greater than the percentage of cats infected with feline leukemia or feline AIDS.

Heartworms produce different signs in cats than in dogs. The signs tend to be more serious and include cough, convulsions or other neurologic disorders, chronic vomiting, labored breathing, heart failure and sudden death. Many cats do not show symptoms when infected with heartworms. A few will have clinical signs that can be life threatening. Sudden death may occur in cats that appear completely healthy. This problem is compounded by the fact that current diagnostic tests are not as accurate for testing cats as for dogs due to the low number of worms in infected cats. Furthermore, there is no safe and effective treatment for heartworms in cats.

What can I do?

While difficult to diagnose and to treat in cats, heartworm infection is a preventable disease using monthly preventatives similar to those used in dogs. When properly administered, Heartgard is nearly 100% effective and can be used in all cats 6 weeks and older. It is safe enough to be given to pregnant and lactating cats and to cats in breeding programs. Revolution, another heartworm prevention medication, is a monthly topical that is applied to the skin of the neck. Revolution will also prevent fleas, ear mites, and some intestinal parasites. While avoidance of outdoor exposure may reduce the risk of heartworm infection in your cat, approximately 1/3 of the cats diagnosed with heartworms at the College of Veterinary Medicine at NCSU lived exclusively indoors.

Unlike dogs, heartworm prevention in cats can begin without prior testing, and annual heartworm testing is not recommended. Treatment for heartworms in cats is not usually indicated, but symptomatic treatment for clinical signs is recommended. The adult heartworms will live only about two years in a cat. This is in contrast to a dog where they may survive five to seven years. If heartworm prevention is started in an infected cat, it will prevent the cat from acquiring additional heartworms while the old worms age and eventually die.

Due to the severity of clinical signs and inability to treat the problem, we strongly recommend monthly prevention for all cats year-round.

Did you know? Heartworm Edition

- Horses can also become infected by heartworms
- In extremely rare cases humans have been diagnosed with heartworm infections
- It only takes one bite from an infected mosquito to infect your pet
- 28% of heartworm positive cats in one NC study were indoor only
- Treatment can cost upwards of \$800
- Prevention is typically less than \$10 per month



For additional information on heartworm disease, please visit the following sites:

- www.fda.gov/animalveterinary/resourcesforyou/animalhealthliteracy/ucm188470.htm
- www.heartwormsociety.org/

- www.knowheartworms.org/
- www.capcvet.org/