

NEWSLETTER

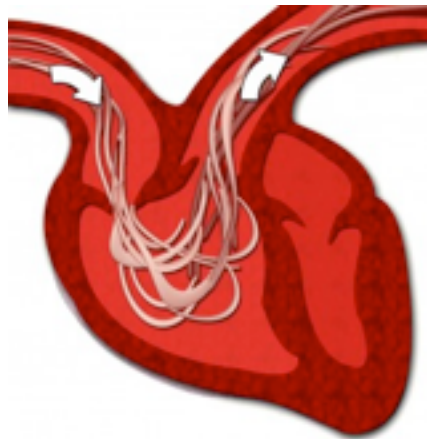


News on Heartworm Disease

Heartworms are a parasite that effect the canine species (dogs, wolves, coyotes, foxes, and many other species) and are spread by mosquitoes. Dogs from all 50 states and Canada and Mexico are subject to infection. We now see new infections year round due to climate changes. Cats are an accidental host and occasionally are infected in endemic regions.

Heartworm microfilaria (the immature form of the worm) are picked up by a mosquito (called a vector) from an infected host and carried to your dog. The microfilaria are injected into the skin of your dog by a mosquito bite. There they undergo several developmental stages over several months until they arrive in your dog's heart and pulmonary artery as mature, sexually active adult worms.

Adult worms begin producing microfilaria (infective larva) about 6



¹ see pg.2

months after the first exposure. Rarely, all the worms are of one sex or there is not a heavy burden of worms, so there are not any microfilaria. Also, years ago when testing involved only looking for the microfilaria, it was discovered that the microfilaria were more active during times of the day when mosquitoes were present! Testing now involves looking for worm protein (antigen) in the dog's blood.

Quick Facts:

Heartworms are caused by Dirofilaria immitis and are transmitted by mosquito bites. Even dogs kept indoors are at risk.

Symptoms of the disease include cough, weakness, weight loss, and sudden death.

Testing involves a blood test every 12-24 months. The test available to our patients also tests for Lyme disease, Ehrlichia canis and Anaplasma at the same time.

Treatment for heartworm disease is costly and involves months of convalescence, however most dogs are capable of a healthy recovery.

Prevention is the key! It is easy and cost effective, and can be combined with prevention of other intestinal and external parasite products.

Adult heartworms prevent the normal blood flow through the heart. The microfilaria may also cause an immune reaction as they filter through the lungs and bump up against immune cells.

The onset and severity of symptoms depends on the parasite 'burden'. Dogs with higher numbers of worms have more severe heart and lung changes. Dogs can have anywhere from one to 250 worms in their heart and blood vessels! The worms cause



the heart to become enlarged and weakened and cause heart failure.

Symptoms in early disease may be absent. Later, cough, exercise intolerance and weight loss may be noted. Some owners see a 'potbelly' from fluid build up in the abdomen as a result of organ failure. Some dogs die suddenly.

Treatment for heartworm disease involves testing to determine the extent of the damage already done to the vascular system, and then, a medication given to kill the adult worms. Dogs **MUST** be kept in strict confinement for eight weeks after the last treatment while the worms die and are broken down and digested by the dog's immune system. Otherwise they may break away and cause an embolism (blockage in the lung). Finally, the microfilaria (the immature form that can infect the mosquito) are removed with an additional medication. In the gulf coast regions of the US, some dogs require a specialized surgery to remove the worms from veins due to a heavy parasite load.

The good news is that heartworm

disease can be easily prevented with monthly doses of medication to prevent the larval stages of the parasite from developing in the dog!

There are several different types of preventative available for dogs and cats. Each have their advantages and a discussion of the best type for your pet should be on an individual basis. Many preventatives also help to control internal parasites as well.

Heartworm Resistance? In some areas of the southeast US, there have been reports of apparent failures of heartworm preventatives. Some of these cases can be explained by inconsistent administration of medication or perhaps by a pet not actually taking a pill that is given or vomiting it up. What we do know is that it appears that there is a strain of heartworm local to northeast Georgia that is resistant when given only a single dose of heartworm preventative, but when *given regular monthly dosing, all the monthly medications appear to be about 98% -99% effective. This is why it is important to do heartworm testing every 12 -24 months as directed by your veterinarian.*

Resources

At the great resources found below you will find more information, videos, and even email reminders to give your dog his/her heartworm preventative on a regular basis!

- <http://www.heartwormsociety.org/pet-owner-resources/canine-heartworm.html#>
- <http://www.remindmypet.com>
- <http://www.heartwormsociety.org/pet-owner-resources/video-gallery.html>
- <https://www.revolution4dogs.com/default.aspx?sec=Heartworms>

¹image credit page 1: pethealthlibrary.purinacare.com