



Heartworm Disease

Heartworm (*Dirofilaria immitis*) is the most common parasite affecting dogs, and despite worldwide distribution of the disease it is most prevalent in the U.S. to the east of the Mississippi River.

Heartworms are transmitted by mosquitoes. A mosquito carrying the parasites will deposit larvae onto the dog's skin and they slowly make their way through the tissue to the blood stream. In the blood the larvae become microfilaria, which can be seen under a microscope in an infected dog's blood. The parasites settle on the right side of the dog's heart and as the microfilaria become adults and grow larger they cause fatal heart problems.

Do cats get Heartworm? Yes, but cats aren't the natural host so infection is rare. Mosquitoes that carry heartworm actually prefer to feed on dogs. Also, if larvae do make their way into a cat's skin it is unlikely they will reach the heart at all. Microfilaria can't usually be seen in a cat's blood because their immune system is so effective at removing it.

In dogs the clinical signs of Heartworm often include lethargy, vomiting, coughing, difficulty breathing, weight loss, collapse, convulsions or sudden death. Treatment of Canine heartworm involves killing adult heartworms and microfilaria, which must be done slowly with several visits to the vet and strict exercise restriction to avoid heart failure.

Fortunately, there is a way to prevent Heartworm disease in dogs and it comes in the form of flavored, treat-like tablets that are given once monthly. Most Heartworm preventatives also prevent populations of intestinal parasites as well. At WHVC we recommend puppies begin on Heartworm meds after their first visit to the vet so we provide the first Interceptor or Sentinel tablet as part of their first physical exam. We usually check for Heartworm using a simple blood test when dogs are about a year old if treatment began as a puppy. An adult dog whose status is unknown should be tested before beginning Heartworm preventative. Puppies can usually forego this for awhile since it is unlikely they would get heartworm in their first few months alive.

At WHVC we recommend giving preventative year-round, not just April – November because "mosquito season" isn't always so well defined. For dogs that are given meds year round we only test for Heartworm every other year, and for dogs who receive preventative for part of the year we recommend testing yearly.

We carry Interceptor and Sentinel flavor tabs for prevention of Canine Heartworm disease. Interceptor and Sentinel both use Milbemycin oxime as an anthelmintic. This is believed to work by interfering with invertebrate neurotransmission in the tissue stage of the larvae, causing death before they become microfilaria in the blood. This also adversely affects the adult hookworm, roundworm and whipworm so monthly treatment should also prevent

infestation by these intestinal parasites. Note that Roundworms and Hookworms are transmissible to humans.

In addition, Sentinel flavor tabs also contain Lufenuron, which is an insect development inhibitor. After a flea bites a dog treated with Sentinel it will then be deposited in her eggs, most of which will never hatch or won't mature into adults. (See flea product chart)