

## **Park Plaza Animal Hospital**

839 Ohio Pike, Cincinnati, OH 45245

(513) 752-3366

### **HEARTWORM DISEASE**

#### ***What are heartworms?***

Heartworm disease (dirofilariasis) is a serious and potentially fatal disease in dogs. It is caused by a worm called *Dirofilaria immitis*. Heartworms are found in the heart and large adjacent vessels of infected dogs. The female worm is 6 to 14 inches long and 1/8 inch wide; the male is about half the size of the female. One dog may have as many as 300 worms.

#### ***How does a dog get heartworms?***

Adult heartworms live in the heart and pulmonary arteries of infected dogs. They live for years and the female produces millions of young (microfilaria), which live in the bloodstream. The immature heartworms cannot complete the entire life cycle in the dog; the mosquito is required for some stages.

The female mosquito bites the infected dog and ingests the microfilariae during a blood meal. The microfilariae develop further in the mosquito and then enter the mouth parts of the mosquito. When the infected mosquito bites a dog, the infective larvae enter the dog's bloodstream and move to the heart and adjacent vessels, where they grow to maturity and start reproducing, thereby completing the full life cycle.

#### ***What signs will an owner see if the dog has heartworms?***

Many dogs infected with heartworms do not show any signs of disease for a long time. Unfortunately, by the time symptoms are seen, the disease is advanced. The signs of heartworm disease depend on the number of adult worms present, the location of the worms, the length of time the worms have been present, and the amount of damage to the heart, lungs, liver, and kidneys from the adult worms and the microfilaria.

Adult worms cause disease by clogging the heart and major blood vessels leading from the heart. Microfilaria circulate throughout the body and may block small blood vessels. The liver, lungs, and kidneys are affected most.

The most obvious signs are coughing, shortness of breath, weakness, nervousness, and listlessness. These signs are most noticeable following exercise, when some dogs may even faint. In advanced cases, congestive heart failure may occur and the abdomen and legs will swell from fluid accumulation. There may also be weight loss, anemia, or jaundice. Severely infected dogs can die suddenly.

#### ***How are heartworms diagnosed?***

A simple blood test should be performed annually to detect heartworms.

#### ***Are heartworms common in Cincinnati?***

Yes. Heartworms are common in the Midwest especially near rivers where mosquitoes live.

#### ***If a dog only goes outside to go to the bathroom, can it catch heartworms?***

Yes. It only takes one bite from an infected mosquito to get heartworms. Dogs that stay outside all the time have a much higher risk, but a dog that stays inside all the time can still be bitten by an infected mosquito.

#### ***If a dog is not around any other dogs, can it still get the disease?***

Yes. The disease is not spread directly from dog to dog, but rather through the bite of infected mosquitoes that can travel larger distances.

#### ***Can heartworms be prevented?***

Heartworms can be prevented by monthly medication. This is either a tablet (Interceptor™, Sentinel™) or a topical oil (Revolution™). This medication should be given year round in Cincinnati to protect the dog if there is a warm February or March with mosquito activity.

#### ***Does a dog have to be heartworm tested before starting or restarting the preventative?***

Dogs need to be tested before beginning or restarting the preventative. If a dog has heartworms, an allergic reaction may occur which can be fatal.

***If preventative is given all year, does a blood test still need to be done?***

It is still recommended to test the dog annually in case any worms survived the preventative or the dog did not absorb the medication correctly because of vomiting, diarrhea or weight change. The likelihood of this occurring is small, but because of the severity of the disease, this safeguard should be taken.

***If a dog is diagnosed with heartworms, can it be treated?***

There is successful therapy for heartworm disease, but it is very hard on the dog. They must be hospitalized for several days, during which they receive a series of arsenic containing injections. Because of the danger and the cost of treatment, it is better to prevent heartworms.

***Can cats get heartworms?***

Rare cases have been reported, although cats seem to have some natural resistance to heartworms. If you have a cat that goes outdoors, preventative is available both as pills and a topical oil.