

Dog Heartworm

Dirofilaria immitis

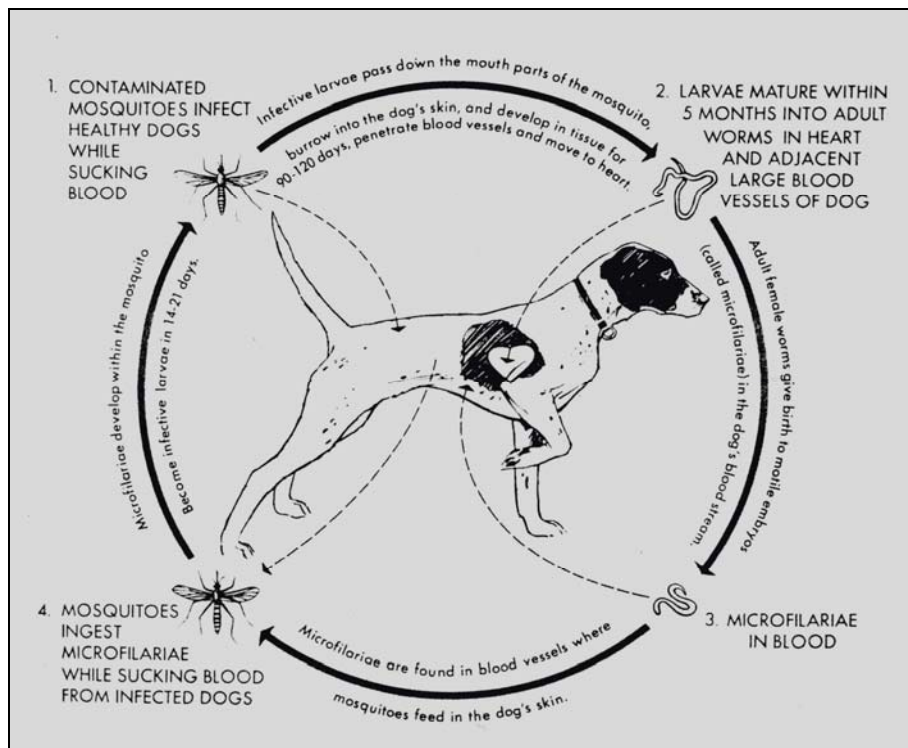
What is dog heartworm?

Dog heartworm is a disease common in canines throughout most of the United States. It is caused by a parasitic roundworm (nematode) that lives its adult life primarily in the heart and large vessels of the lung. Adult female heartworms measure from 9-16 inches in length, while males are a little more than half as long. The worms seriously impair the operation of the heart by prohibiting proper valve closure. In heavier infestations the blood vessels to the lungs become clogged by the worms.

What is the role of the mosquito?

A female mosquito takes her blood meal from a dog infected with the microscopic larval stage of heartworm called microfilariae. The microfilariae migrate to the digestive tract of the mosquito and undergo a transformation within 2 to 3 weeks. By this stage they are miniature adults that break into the body cavity of the mosquito and migrate to the mouthparts. As the mosquito takes her blood meal the infective larvae are deposited on the skin of the host animal. The worms burrow into the skin and lodge in the tissue where they remain for several months. After the worms increase in size they enter the bloodstream and eventually lodge in the chambers of the right side of the heart where they mature. The entire cycle takes approximately 9 months. Microfilariae must be ingested by a mosquito to become infective in a dog.

Dog Heartworm Disease Cycle



American Cyanamid Co. Wayne, NJ.

How do I know my dog has heartworm?

The only conclusive way to determine whether or not your dog has heartworm is a blood test administered by a veterinarian which checks for microfilariae activity. Dogs with advanced stages of disease will experience increased fatigue, shortness of breath, frequent coughing, and exhaustion. In severe cases and if left untreated dogs will become jaundice, experience heart failure and death.

Microfilariae can survive up to 3 years in the blood of a dog. An infected dog can be a constant source of infection for heartworm free dogs.

Is heartworm treatable?

A dog must be converted back to a negative state with a drug that causes adult heartworms to die. This treatment is critical to the life of the dog and must be administered and monitored by a veterinarian. The adult heartworms die and disintegrate over a period of time so as not to suffocate the animal with accumulated tissue. Larvae or microfilariae still in the bloodstream must be eliminated with another treatment. Other drugs are available from your veterinarian to prevent heartworm infestation. An oral drug is available that should be administered during the mosquito season on a monthly basis. These medications can cause complications and should only be administered by a veterinarian. A topical pesticide that is absorbed into the skin can also be used to deter mosquitoes, as well as fleas and ticks. Have your dog checked twice a year to help keep your dog, disease free. Always follow your veterinarian's advice.

How do I limit my dog's exposure to mosquitoes?

To prevent mosquitoes from breeding around your home and to help minimize a dogs exposure to mosquitoes follow these helpful tips:

- Change animal's drinking water daily
- Remove any empty containers that can hold water from your yard
- Remove or drill holes in abandoned tires
- Fill in any ruts or low areas in your yard
- Change water in bird baths every 2 days
- Stock ornamental ponds with fish
- Limit your dog's outside activity when mosquitoes are present

Your local mosquito control agency can give you more tips or provide an assessment of your property to manage mosquito production.

References

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Crans, Wayne. Does your dog have heartworm? (A mosquito-borne disease?) Cooperative Extension Service Cook College. Rutgers the State University of NJ. New Brunswick, NJ. Rev. 1990.

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