

# Heartworm

## TREATMENT AND PREVENTION

**The heartworm test:** You probably think of it as a formality, a necessary procedure before your veterinarian dispenses the preventive medication. Unfortunately, this year you get a surprise – your dog has tested positive.

Before you hit the panic button and have nightmares of your dog dying with worms writhing in his heart, have the diagnosis verified. Test results can be in error. Your veterinarian may want to do a different type of test to confirm that your dog is truly infested.

If the second test also comes back positive, your dog has heartworm and needs to be treated.

At this point, you may be wondering why your dog seems to be healthy.

The symptoms associated with heartworm infestations depend on how many worms are present and how long they have been there. Dogs with just a few worms can carry them for years without showing any symptoms. On the other hand, dogs with many worms often develop serious heart, lung, liver and kidney problems, with symptoms such as weight loss, coughing, fever, poor hair coat and inability to tolerate exercise. Dogs like this die unless the worms are eradicated.

If you have been testing your dog every spring, you know he was 'clean' last year. This means the infestation is quite new. It also means treatment will be easier on him than for a dog with severe symptoms.

### Treatment

The most common medication used for treating heartworm is melarsomine (brand name Immiticide®). When it became available about 15 years ago, melarsomine replaced the more toxic thiacetarsamide. Both medications contain arsenic to kill the heartworms.

A single injection of melarsomine kills 90 per cent of male heartworms and 20 per cent of females. Followed by another injection 24 hours later, this double whammy kills 100 per cent of the males and 98 per cent of the female worms. It is used in Class I and II dogs. (See sidebar for grading system.)

For Class III dogs, an alternate protocol is often employed. One injection is given, then one-to-two months later, the two-injection protocol is followed. The reason for the early single dose is that the treatment can be very hard on the dog.

Though the medication itself can be toxic, the main issue is the possibility of thromboembolism – worms die and end up blocking the narrow arteries. This effect is minimized by keeping the dog quiet and using anti-inflammatory medications such as prednisone. Using the early single dose technique stages the worm kill and lessens the chance of death.

Treatment of severe heartworm disease is time-consuming, hazardous, costly and not always successful. It is much better to prevent infestation from happening.

Dogs become infested with heartworm if they are bitten by



parasite-carrying mosquitoes. The mosquito injects tiny heartworm larvae into the dog's body as it feeds. These microscopic larvae burrow into the dog's tissues, emerge into blood vessels, and eventually travel to the dog's heart and pulmonary arteries.

Once there, the worms mature and grow up to 30 cm (12 inches) long. Adult heartworms then mate, producing new larvae called microfilariae. These circulate in the dog's blood, waiting to be picked up by biting mosquitoes. They mature in the mosquito, ready to infest the next victim, and the cycle begins again.

## Grading heartworm disease

Heartworm disease is graded according to its clinical signs. If a dog has Class I disease, he either has no symptoms or just an occasional cough.

A dog with persistent coughing or exercise intolerance is in Class II.

Finally, if the dog suffers from a poor appetite, is losing weight and having periods of fainting, he is in heart failure and has Class III disease.

## Risk of exposure

The areas of Canada that are endemic (a risk) for heartworm are southern Ontario, southern Quebec, southern Manitoba, and the Okanagan Valley in British Columbia. It is transmissible only in warmer seasons, when it can mature in the mosquito.

Find out if there is a heartworm threat in your area. Your veterinarian is the best source of information about this. If you

travel to the U.S., research your destination to see if there is a heartworm issue there.

Protecting dogs from heartworm is easy with either a monthly medication or an injection that lasts for six months. These are prescribed by your veterinarian.

The adage "An ounce of prevention is worth a pound of cure" certainly applies to this parasite. You don't want your dog to have to go through heartworm treatment.

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