HOLT
VETERINARY
CLINIC

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HEARTWORM DISEASE/FACT SHEET

The diagonal line across this page is not an error - it is a life-sized schematic representation of an adult female heartworm. When fully grown, female heartworms reach a length of 10 to 14 inches. Males are approximately half that size.

Heartworms are most damaging in their adult stage. In the parasitized dog, the adult heartworms collect in the heart and pulmonary arteries, restricting blood flow to the lungs, kidneys, and liver. These organs are strained by restricted blood flow, causing disability and eventually death.

Heartworm disease is of continuing medical concern. The heartworm disease parasite is wide spread, not only throughout the United States, but worldwide. A mosquito is necessary for the parasite to be transmitted from one animal to another.

How is the heart damaged? Adult heartworms localize in the heart and pulmonary arteries where they mate and produce young called microfilariae. Although the number of microfilariae released from each adult female heartworm varies considerably, as many as 5,000 of them may be deposited in one day by one female. Adult heartworms live in the heart for about five years. Microfilariae live and circulate in the blood stream for about three years.

Do dogs transmit the disease directly to one another? No. The microfilariae will not mature into adults in the dog but must return to a mosquito. Inside the mosquito, the microfilariae undergo maturing changes before they become infective larvae which can infect another dog. Thus, the mosquito picks up the microfilariae in the larval stage from the blood of an infected animal, provides a place for it to mature, and then transfers the parasite in the infective larvae stage back to a susceptible animal. In the susceptible animal the infective larvae mature into adult heartworms, mate and produce more microfilariae, reinitiating the cycle...

Are dogs the only animal susceptible to heartworms? The wild and domestic dog family is the most susceptible to the disease, and, as such, constitutes the major carrier and victim. Heartworms have been reported in man, but the parasite cannot complete its life cycle in the human body, therefore humans cannot serve as definitive hosts.

Heartworms can occur in domestic cats and the incidence is no longer thought to be extremely low. We recommend that you use heartworm preventive medication for your cats. The preventive is different from that dispensed for dogs. Damage caused by only a few worms in a cat's heart is often fatal. Remember that a cat's heart is about one half as large as a heart of a similar sized dog, yet the mature heartworms are the same size in both cats and dogs. We recommend our cat owners use the heartworm preventive we dispense for their cats. Please phone ahead to us to let us verify your cat's weight and dispense the once a month oral preventive.

Can heartworm disease be treated? Yes. Treatment kills the adult heartworms and microfilariae. However, successful treatment depends on the age and general health of the dog, therefore, not all dogs can survive the treatment. Treatment is costly. No treatment is currently used for infected cats.

Can heartworms be prevented? Absolutely! Although there is no heartworm vaccine, there is a preventive drug available in tablet form. It can be given only to dogs who have had a blood test showing that they are free of microfilariae. The dog takes the pills from the start of mosquito season in May until the end of November. The medication kills the infective larvae and microfilariae. A cat uses preventive during this time, but does not currently need a blood test, because the cat usually does not harbor a detectable number of microfilariae.

Why is a yearly blood test required? If a dog is harboring microfilariae and the preventive is administered, the dog could go into shock caused by the massive killing of the microfilariae. Rapid death can follow. For this reason, **DO NOT BEGIN ADMINISTERING HEARTWORM PREVENTIVE IN THE SPRING UNTIL YOUR DOG'S BLOOD HAS BEEN TESTED AND SHOWN TO BE FREE OF MICROFILARIAE.** We notify you of the outcome of the heartworm test.

ANY FURTHER QUESTIONS YOU MAY HAVE CAN BE ANSWERED BY CALLING OUR OFFICE.

PRACTICE OF VETERINARY MEDICINE, SURGERY AND DENTISTRY

VETERINARY FILE: HEARTWORM DISEASE/FACT SHEET