Heartworm Disease & Treatment

Heartworms are internal parasites that infest all members of the canid family (domestic dogs of all breeds, foxes, coyotes, and wolves). Other species, such as humans and cats, can be infested with Heartworms, but this is rare. The canine (dog) heartworm problem is one of worldwide proportions.

Heartworms are spread from dog to dog by mosquitoes when they bite and feed on a dog. When a mosquito bites a dog that already has heartworms, the mosquito sucks up some of the microfilaria (baby heartworms that circulate freely in the dog's blood) in the drop of blood that is the mosquito's meal. The microfilaria that is now in the mosquito and it undergoes developmental changes in the mosquito.
Eventually the microfilaria is re-injected into another dog during a subsequent feeding session. This injected microfilaria has developed to a stage whereby it can now grow into an adult in the host dog.

This whole process, from the point in the time where the mosquito bites a dog that already has heartworms, until it injects infective microfilaria into another dog can take from two to three weeks (longer if cool weather slows down the mosquitoes body functions). The development of the infective microfilaria into an adult heartworm can take from three to four months in the host dog. The whole process thus takes from four to six months or longer.

The disease that is produced by heartworm infestation in dogs is essentially congestive heart failure. The main organs that are damaged in the host dog are the heart, lungs, and liver, and sometimes the kidneys. An adult heartworm can be quite large (up to eleven inches long), and can be present in the heart in great numbers. The adult heartworms can live for many years in the host dog. What commonly happens is that a few new heartworms are picked up each year, allowing the heartworm population to steadily grow in the host dog as time passes. The progression of the disease is slow, and as a result, most dogs with heartworm disease appear to be clinically healthy until middle age and older. This slow progression is dangerous, because it frequently allows the problem to "Sneak up" on the dog's owner. By the time a dog becomes clinically ill from heartworm disease, a great deal of damage has already been done, and treatment of an obviously sick dog can have great risks. For this reason, routine testing of all dogs 4 months of age and older should be done, and if not infected already, be placed on a preventive medication. This involves either a monthly dose of oral medication or an injection every six months.

It is MUCH CHEAPER AND SAFER to keep your dog from getting Heartworms in the first place, than it is to rid your dog of the problem after the fact.

HEARTWORMS ARE TREATABLE. Your dog can be treated successfully, but this is fairly expensive and has risk factors to consider.

The treatment program for heartworms is divided into two parts. The first part consists of arsenic solution injections (the arsenic is chemically combined with a protein substance to reduce it's toxicity, otherwise the arsenic would be very poisonous) that are given with great care. These injections kill the adult heartworms. As they die, they dislodge from the heart and flow "Downstream" from the heart and re-lodge in the lungs.

It is in the lungs that the heartworms disintegrate and are absorbed into the dog's system. (Heartworm treatment is different from treating intestinal worms, in that after the medicine kills intestinal worms, the dead worms are passed out in the dog's stool.) This process of absorbing the dead worms can be toxic and can make the dog very sick. In fact, when a dog dies from heartworm treatment complications, it is usually from the toxic material coming out of the disintegrating dead worms, rather than from the medicine.

A four to six week rest period is needed between the first part of the treatment, and the second part. This rest period allows all the toxic material from the dead adult worms to be cleared from the dog's system before any additional medication is administered. The second part of the treatment program kills the microfilaria (the baby worms that are free in the dog's general circulation). This part of the treatment is usually not as dangerous as the first part of the program.

Two weeks after the microfilaricide is given, the dog needs to be re-tested to make sure that all of the worms have been killed and removed from the dog's system.

After the entire treatment program has been completed successfully, it is very advisable to put your dog on preventive medicine, and keep it on preventive medicine forever. It is now universally advised to give preventive medicine all year long (not all the mosquitoes die during cold weather). Many of them survive freezing, and can re-emerge during the winter months if daytime temperatures become warm enough.