



What is heartworm?

Heartworm disease is caused by an infection with a worm called *Dirofilaria immitis*. It affects a variety of species including dogs, cats, ferrets, foxes, wolves, sea lions and horses, although dogs are the most common reservoir.

What is the lifecycle?

When a mosquito bites a dog carrying an infection with heartworm, it fills with blood containing baby heartworms called microfilariae. The microfilariae grow within the mosquito into a larval (or adolescent) stage. When that mosquito bites another dog, it delivers the larvae to the dog's bloodstream. Over the next 3 months, the larvae grow and travel to the arteries of the lungs. Once in the lung vessels they grow into adult heartworms over the next 3 months. As adults they migrate to the heart vessels. Therefore, it takes about 6 months for the adolescent larvae that a mosquito delivers to the blood to form adult heartworms in the heart and lung vessels where they start producing more baby microfilariae.

How do we test for heartworm disease?

The test we use for heartworm disease is a blood test. A small amount of blood is drawn and placed in a snap kit. If adult female heartworms are living in the lung and heart vessels, the test will show a positive result.

What are the signs of heartworm disease?

Most animals are asymptomatic or exhibit minimal signs such as occasional coughing and exercise intolerance can occur. In severely affected dogs and those in which heart vessels are affected, weight loss, exercise intolerance, collapsing episodes or heart failure can occur.

Why is heartworm preventative a misnomer?

Heartworm preventatives like interceptor, sentinel and heartgard, do not prevent mosquitoes from biting dogs or from delivering heartworm larvae. Instead, the medication kills the larval stage of heartworm retroactively every month that it is given. This is why it is important to administer the medication every month. If 3-6 months of treatment are missed, it is possible for the heartworm to grow to the adult stage at which time the heartworm medication can no longer work.

The heartworm preventative medication, interceptor also contains intestinal parasite dewormer. Therefore, if given monthly, heartworm preventative actually protects against roundworms, hookworms and whipworms, by killing off any worms that dogs pick up each month. For this reason, it is a good idea to administer the medication year round.

If we give heartworm preventative every month, why do we need to test for heartworm disease?

Heartworm medication relies on the successful killing of any infection and relies on routine monthly administration. We test to make sure that prophylactic treatment has worked. Our heartworm test also screens for tick borne disease such as Lyme disease, which has recently become more prevalent in this area.

Why does my dog need to test negative before beginning heartworm preventative?

Rarely, administration of the preventative can cause an acute anaphylactic reaction if adult heartworms are present and are reproducing microfilariae.

Why is it better to prevent heartworm disease? Can't we just treat it if my dog catches heartworm?

Prevention of heartworm disease involves medications that are aimed at killing the immature stages of heartworm when they are living in the smaller vessels of the body. Treatment of a dog infected with the adult form involves killing larger worms that are living in critical vessels of the heart and lungs. Often times, infected dogs and cats must be hospitalized for treatment in order to watch for side effects of dying adult worms.