

# What Is Heartworm Disease?

Heartworm disease is a serious and potentially fatal condition caused by parasitic worms living in the arteries of the lungs and occasionally in the right side of the heart of dogs, cats and other species of mammals, including wolves, foxes, ferrets, sea lions and (in rare instances) humans. Dogs and cats of any age or breed are susceptible to infection.

The disease is spread by mosquitoes that become infected with microfilariae while taking a blood meal from an infected dog/cat and then biting and transferring those microfilariae to an unaffected dog/cat. For about 2 months the larvae migrate through the connective tissue, under the skin, then pass into the animal's venous blood stream and are quickly transported to the arteries of the lung. It takes a total of approximately six months for the infective larvae to mature into adult worms that begin producing offspring, microfilariae. Adult heartworms can live for five to seven years in the dog. In the dog, the larvae progress in their development to an adult form of the worm, and live in the pulmonary vessels, where they continue the life cycle and cause extensive injury. In most cases the cat is not an effective reservoir host, since microfilaria are produced in less than 20% of the cats.

In the cat, the larvae molt as well, but fewer worms survive to adulthood. While dogs may suffer from severe heart and lung damage from heartworm infection, cats typically exhibit minimal changes in the heart. The cat's primary response to the presence of heartworms occurs in the lungs.

## What Are the Signs of Heartworm Disease?

For both dogs and cats, clinical signs of heartworm disease may not be recognized in the early stages, as the number of heartworms in an animal tends to accumulate gradually over a period of months and sometimes years and after repeated mosquito bites.

Recently infected dogs may exhibit no signs of the disease, while heavily infected dogs may eventually show clinical signs, including a mild, persistent cough, reluctance to move or exercise, fatigue after only moderate exercise, reduced appetite and weight loss. Cats may exhibit clinical signs that are very non-specific, mimicking many other feline diseases. Chronic clinical signs include vomiting, gagging, difficulty or rapid breathing, lethargy and weight loss.

## How Do You Detect Heartworm Disease?

Heartworm infection in apparently healthy animals is usually detected with blood tests for a heartworm substance called an "antigen" or the larvae (microfilaria) are identified in a blood sample.

## Prevention

Heartworm prevention is safe, easy and inexpensive. While treatment for heartworm disease in dogs is possible, it is a complicated and expensive process, taking weeks for infected animals to recover. There is no effective treatment for heartworm disease in cats, so it is imperative that disease prevention measures be taken for cats.

There are a variety of options for preventing heartworm infection in both dogs and cats. All of these methods are extremely effective, and when administered properly on a timely schedule, heartworm infection can be completely prevented. These medications interrupt heartworm development before adult worms reach the lungs and cause disease.