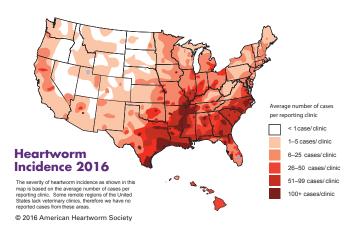
### Did you know?

- **Heartworms are spread by mosquitoes**—if there are mosquitoes in your area, your dog is at risk!
- In addition to dogs, wildlife in your area can be a source of infection. Mosquitoes that bite an infected fox, wolf, or coyote can then transmit the infection to unprotected dogs.
- Even dogs that look healthy can be infected with heartworms, so annual testing for heartworm disease is recommended.
- Annual testing is critical to avoid a delay in detecting early infection and starting life-saving therapy, as heartworms cause significant damage to your dog's heart and lungs.
- Heartworm preventive medications are very effective when given properly on the prescribed schedule. Combining prevention with a mosquito repellant is an even more effective strategy.
- The best way to reduce the risk of heartworm infection in your dog is to give the preventive medication year-round. Mosquitoes can survive 12 months a year, even in parts of the country where there is a cold winter, so all dogs are at risk.
- While heartworm disease can be treated, prevention is always safer and more affordable than treating adult heartworm infections.



## Heartworm disease is found in all 50 states.



## The cornerstone of heartworm management is prevention.

The American Heartworm Society recommends year-round administration of a heartworm preventive medication and annual testing for heartworm disease for all dogs.





To learn more about the increasing threat of heartworm disease, talk to your veterinarian and visit the American Heartworm Society website at **www.heartwormsociety.org.** 

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## What Does a "Negative" Heartworm Test Mean?



#### Keep Them Safe. Love Them Always.

Prepared by the American Heartworm Society and the Association of Shelter Veterinarians

# What does a "negative" heartworm test mean? Well, it depends!

Heartworm disease is a complicated medical condition caused by an infection of worms that is spread by mosquitoes. There are a few different ways to test for heartworm infection.

A "negative" test means that no signs of heartworm infection were detected with the test method used.

A single negative heartworm test, or a combination of tests, helps us to understand that no evidence of infection was detected at that time.

The preferred language for a test that shows no sign of infection is "below detectable limits" or "no antigen detected."

#### What is heartworm disease?

Heartworm disease is a serious and potentially fatal disease in pets, spread by mosquitoes. The disease is caused by worms that can grow up to a foot long that live in the heart, lungs, and blood vessels of affected pets, causing severe lung disease, heart failure, and damage to other organs in the body. Heartworm disease is easy to prevent with regular use of preventive medication available through your veterinarian. Treating heartworm disease is more complicated.



#### What are the different types of heartworm tests?

There are two main types of tests for heartworm infection in dogs.

**Microfilaria test:** A microfilaria test screens the blood stream for tiny heartworms that can be circulating throughout the body. These can be found when there is at least one adult female worm and one adult male worm present to breed. A drop of blood can be examined under the microscope for the microfilaria, or the sample can be "concentrated" using filters or centrifuges to increase the likelihood of finding the tiny worms, if they are there.

**Antigen test:** A test for heartworm antigen can detect proteins that are shed into the blood stream by an adult female worm; it takes about six months for a worm to reach this stage of maturity. There is no test available that detects the adult male worm or worms of either sex after they have grown beyond the microfilaria stage but before they are fully mature.

### Is it possible that a dog could have "negative" tests and still be infected?

Yes, a dog can have a "negative"/"below detectable limits"/"no antigen detected" heartworm test result and still harbor heartworms. This could be because:

- The heartworms are still young and sexually immature
- There is infection with a single sex—all male or all female worms
- The dog's immune system is killing off the microfilaria as they are being produced
- Microfilaria may not have been present at the time of testing
- The dog's immune system is blocking detection of the heartworm antigens
- The worms have been exposed to medications that kill microfilaria but do not kill the adults
- The worms have been exposed to medications that result in infertility of the female heartworms

Sometimes an infection won't be detected with a microfilaria test but it will be detected with an antigen test or vice versa. For these reasons, the American Heartworm Society recommends testing all dogs with both microfilaria and antigen tests every year.

## Can a dog be infected even though it has been on heartworm preventive?

Yes. Even the most diligent owner can forget a dose now and then. Even if a previous owner tells us the dog has been on preventive, not all pills are swallowed, and not all topical medications are properly applied—resulting in a pet that may be less protected than we think.

The use of heartworm prevention medication in a heartworm infected dog can make detecting the presence of heartworms more difficult. The good news is that using preventive medication in a heartworm-infected dog reduces the impact of those worms on a dog's health.

### Well, now I'm really confused! What does it mean and what am I supposed to do?

Talk with your veterinarian about steps to take to keep your newly adopted dog healthy. A "negative" heartworm test result means that the chances your dog still has heartworms are lower. Your dog should be kept on preventive yearround and should be tested every year, with both types of tests. This increases the chances of an occult (hidden) infection being detected sooner, before the worms can cause serious and irreversible damage.

## What if a later test is positive? Will you pay for the dog's heartworm treatment?

As much as we would like to treat our shelter animals for all of their conditions, we simply cannot afford to do so. We are grateful to you for partnering with us to save this dog's life! Please speak to a member of our staff for our post-adoption medical expense policies.

The veterinarians listed below understand the reasons for our testing policy, and are happy to see recently adopted dogs.

Please make an appointment today.