

LYME DISEASE

What is Lyme Disease?

Lyme Disease (not Lyme's Disease) is caused by a spirochete called *Borrelia*. A spirochete is a type of bacterium. It is transmitted to dogs through the bite of a tick. Once in the blood stream, it is carried to many parts of the body. It is especially likely to localize in joints.

It was first thought that only a few types of ticks could transmit this disease, but now it appears that several common species may be involved.

Can this disease also affect people?

Yes, but people do not get it directly from dogs. They get it from being bitten by the same ticks that transmit it to dogs. Therefore, preventing exposure to ticks is important for you and your dog.

How is a dog affected?

Many people having the disease develop a characteristic rash at the site of the bite within 3 to 30 days. For these people, the disease can be easily diagnosed at an early stage. However, symptoms of Lyme Disease are more difficult to detect in animals than in people.

This characteristic rash does not develop in dogs or cats. Because the other symptoms of the disease may be delayed or not recognized, and because the symptoms are similar to those of many other diseases, Lyme Disease in animals is often not considered until other diseases have been eliminated.

Many dogs affected with Lyme Disease are taken to a veterinarian because they seem to be experiencing generalized pain and have stopped eating. Affected dogs have been described as if they were "walking on eggshells." Often these animals have high fevers.

Dogs may also become lame because of the disease. This painful lameness often appears suddenly and may shift from one leg to another. If untreated, it may eventually disappear, only to recur weeks or months later.

How is Lyme Disease diagnosed?

Dogs with lameness, swollen joints, and fever are suspected of having Lyme Disease. However, other diseases may also cause these symptoms. There are several types of tests used to confirm this diagnosis.

- Antibody Tests: These tests measure antibodies in the blood produced in response to infection with Lyme. There are two major tests available.
 - o Snap Test: This test is performed at the hospital. A small blood sample is taken and results are available within 15 minutes. Although this test is convenient and valuable in making treatment decisions quickly, the test cannot distinguish between dogs with an active infection and those previously infected or exposed but not clinically infected.
 - o C6 Test: For this test a blood sample is sent to the laboratory. The level of a specific antibody (C6) is measured. Based on this level an active infection can be distinguished from a previous infection or exposure.

- PCR Test: These tests detect the DNA from actual Lyme spirochetes in the sample. Although blood can be used; Lyme bacteria prefer to migrate to the joints and other connective tissues. A blood sample may be falsely negative, while samples of joint fluid are most likely to yield a true result.

How is Lyme Disease treated?

Because the Lyme spirochete is a bacterium, it can be controlled by antibiotics. However, a lengthy course of treatment is necessary to completely eradicate the organism.

The most commonly prescribed antibiotic is Doxycycline. Because Lyme bacteria often migrate to connective tissues that do not have a large blood supply, a lengthy treatment is needed to clear the infection. Although Doxycycline is the antibiotic of choice, it can be hard on the stomach for some dogs. Other treatment options are available if needed.

How can I prevent my dog from getting Lyme Disease?

The key to prevention is keeping your dog from being exposed to ticks. Ticks are found in grassy, wooded, and sandy areas. They find their way onto an animal by climbing to the top of a leaf, blade of grass, or short tree. Here they wait until their sensors detect a close-by animal on which to crawl or drop.

Keeping animals from thick underbrush reduces their exposure to ticks. Dogs should be kept on trails when walked near wooded or tall grass areas.

How do I remove a tick from my dog?

Check your pet immediately after it has been in a tick-infected area. If you find a tick moving on your pet, the tick has not fed. Remove the tick promptly and place it in rubbing alcohol or crush it between two solid surfaces.

If you find a tick attached to your pet, grasp the tick with fine tweezers or your finger nails near the dog's skin and firmly pull it straight out. You may need another person to help restrain your dog. Removing the tick quickly is important since the disease is not transmitted until the tick has fed for approximately 12 hours. If you crush the tick, do not get the tick's contents, including blood, on your skin. The spirochete that causes Lyme Disease can pass through a wound or cut in your skin.

Is there a vaccine that will protect my dog from Lyme Disease?

A vaccine is now available for protecting dogs against Lyme Disease. This vaccine is initially given twice, at two week intervals. Annual revaccination is also necessary to maintain immunity. The vaccine has been shown to be safe and very effective. We recommend it for any dog that has exposure to ticks.