



The Standard of
Veterinary Excellence

Bellevue Animal Hospital, PC **402-291-1255**

LYME DISEASE

Lyme disease is the most commonly reported tick-transmitted disease in the United States. The disease is caused by a parasitic spirochete bacterium called *Borrelia burgdorferi*. Lyme disease is a zoonotic disease, which means it can affect both people and pets

It is transmitted primarily by the deer tick *Ixodes scapularis* (also called the black-legged tick.) The tick requires multiple animal hosts to complete its life cycle. Adult ticks feed preferentially on deer and the females drop off and lay their eggs. The eggs hatch into larvae, which then feed on rodents or small mammals infected with the organisms. These infected tick larvae molt into nymphs, which are about the size of a pinhead and are active mainly in the late spring, summer, and early fall. Adult ticks are most active in the fall, and may even be active throughout winter.

Although the disease can be transmitted by either the nymph or the adult tick, it is the nymph stage that poses the greatest threat to humans. Because of their small size and grayish color, the nymphs are difficult to see. Adult ticks are the primary transmitter of disease to dogs.

Symptoms of Lyme disease in humans are a characteristic red skin rash, fever, lethargy, and headache. As the disease progresses, it may affect heart and nervous system function. Arthritis may develop over the next few weeks, months, or even years.

While cats, horses, and cows have also been found to harbor the organism, the dog is the most commonly infected domestic animal that exhibits active disease. Symptoms in the dog include fever, lethargy, and lameness. Vomiting may occur and the lymph nodes may be swollen. The lameness resulting from arthritis may shift from joint to joint, or it may appear and disappear.

Lyme disease is, fortunately, usually very responsive to antibiotic treatments; however, treatment works best when the disease is diagnosed early. Medical care should be sought as soon as symptoms appear. Blood tests may be required confirm a diagnosis of Lyme disease.

Prevention of the disease is, of course, preferable to treatment. Avoid prime tick habitats (wooded areas with lots of ground-cover, and areas with tall grass, weeds, shrubs, or leaf litter) whenever possible. Wear light-colored clothing to make ticks more visible, and use a good tick repellent on both yourself and your pet. You should examine your pet daily for ticks: it takes approximately 24-72 hours of attachment before the tick transmits the spirochetes, so early removal of ticks can help prevent infection. Ask your veterinarian about the best products for your pets to prevent tick infestations!

A vaccine for dogs is available for Lyme disease. The vaccine is given in a series of two shots two to four weeks apart, and requires yearly boosters thereafter.

For more information you can visit the following websites: <https://www.cdc.gov/lyme/index.html> or <https://www.cdc.gov/media/dpk/diseases-and-conditions/lyme-disease/index.html> or to see a map of reported cases of Lyme disease in humans in the USA <https://www.cdc.gov/lyme/stats/maps.html>

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