

Know the risk. Take the precaution.

Lyme disease is a painful, multi-system disorder caused by the spirochete bacteria *Borrelia burgdorferi* and transmitted by ticks.⁸

Dogs may be at risk of contracting Lyme disease.

If you answer yes to any of the following questions, your dog may be at an *increased* risk:

- Does your dog spend time in wooded or grassy areas?
- Does your dog live in or visit Lyme-endemic areas such as the Northeast, Mid-Atlantic or upper Midwest?
- Do you see wildlife in your area such as deer, white-footed mouse, lizards, and migratory birds?

Help protect your dog from Lyme disease:

- Vaccinate your dog with RECOMBITEK® Lyme vaccine, which helps block the transmission of the bacteria that cause Lyme disease from an infected tick to your dog.
- Administer adequate tick control for your dog.
- Brush dogs frequently during tick season and conduct thorough tick checks.
- If you find a tick attached, remove it promptly with tweezers and without crushing the tick.

Contact your veterinarian if you are concerned.

...and protect yourself:⁹

- Avoid heavily grassy, brushy, or wooded areas.
- Use Environmental Protection Agency (EPA) registered insect repellents.
- Check your body for ticks after being outside, and remove any ticks promptly.
- Clear shrubs and bushes from play areas and patios near your home.
- Prevent family pets from bringing ticks into the home by limiting their access to tick-infested areas and by using veterinarian-prescribed tick prevention products on your dog.
- Be Alert for Fever or Rash: An unexpected summer fever or odd rash may be the first signs of Lyme disease, particularly if you've been in tick habitat. See your healthcare provider if you have symptoms.

¹ Greene, CE, ed. *Borreliosis*. In: *Infectious Diseases of the Dog and Cat*. 4th ed. Philadelphia: WB Saunders Co.; 2012,447-465.

² Lyme Disease: Transmission. The Centers for Disease Control and Prevention website. <https://www.cdc.gov/lyme/transmission/index.html>. Accessed October 25, 2019.

³ How many people get Lyme disease? Centers for Disease Control and Prevention website. <http://www.cdc.gov/lyme/stats/humanCases.html>. Accessed March 8, 2019.

⁴ Tick-Borne Disease. Centers for Disease Control and Prevention website. <https://www.cdc.gov/niosh/topics/tick-borne/default.html>. Accessed March 21, 2019.

⁵ Parasite Prevalence Maps. U.S. Canine Positive Lyme Results. CAPC website: <https://capcvet.org/maps#2018/all/lyme-disease/dog/united-states/>. Data accessed on March 8, 2019.

⁶ Consensus Statement. ACVIM consensus update on Lyme borreliosis in dogs and cats. ACVIM. <https://doi.org/10.1111/jvim.15085>. Accessed September 5, 2019.

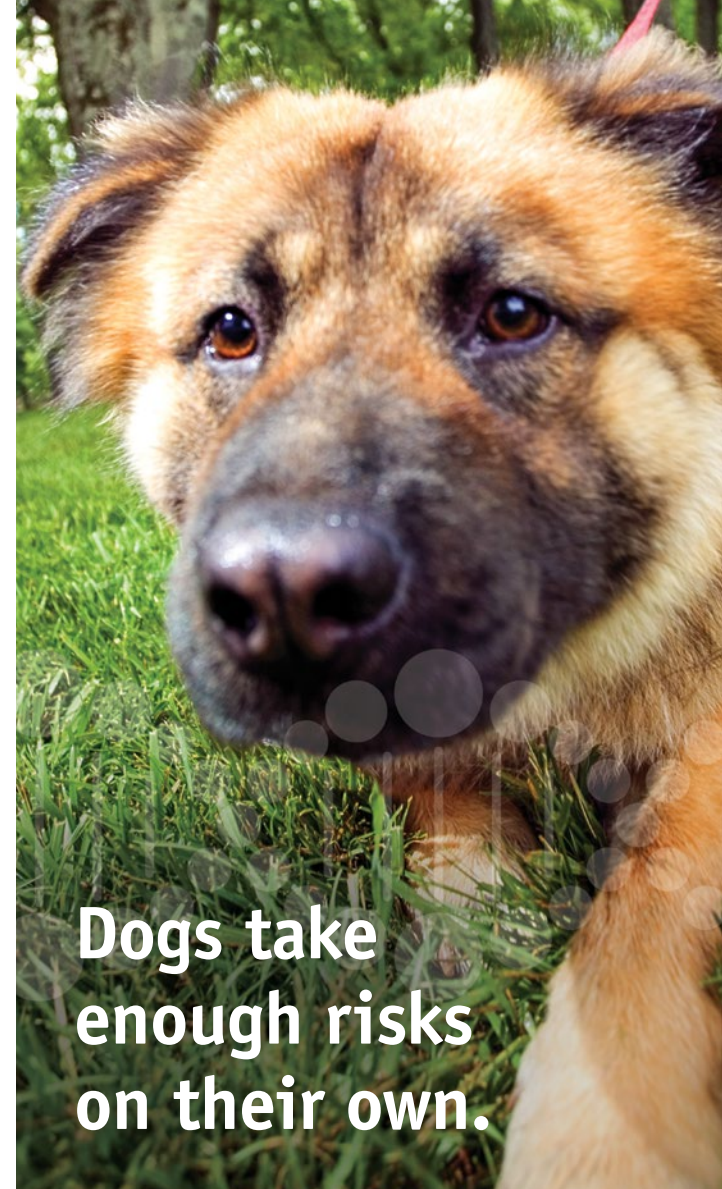
⁷ Eisen RJ, Eisen L, Beard CB. County-Scale Distribution of *Ixodes scapularis* and *Ixodes pacificus* (Acari: Ixodidae) in the Continental United States. *Journal of Medical Entomology*, 53(2), 2016, 349-386.

⁸ Aiello SE, Mays A, editors. *The Merck Veterinary Manual*. 8th ed. Whitehouse Station, NJ: Merck and Co; 1998. *Borreliosis*; p 436-438.

⁹ Preventing Tick Bites: Centers for Disease Control and Prevention website. <https://www.cdc.gov/ticks/avoid/on-people.html>. Accessed June 14, 2018.



RECOMBITEK® is a registered trademark of Boehringer Ingelheim Animal Health USA Inc. ©2019 Boehringer Ingelheim Animal Health USA Inc., Duluth, GA. All rights reserved. PET-1434-REC0419.



Dogs take enough risks on their own.

Help keep yours safe with
the targeted protection of
RECOMBITEK® Lyme vaccine.



Lyme disease

Lyme disease clinical signs are variable in dogs ranging from as mild as no signs to fatal kidney failure. Most common clinical signs of Lyme disease are fever, joint/limb swelling, lameness, lethargy, malaise, and anorexia which may progress to polyarthritis and fatal acute progressive renal failure. Initial signs of Lyme disease may not begin to show up until two to six months after the dog has been exposed to the infected tick. Antibiotics can help manage the disease, but do not eliminate the organism. Lyme disease is a recurring condition that can strike again and again once a dog contracts it.¹

There is no evidence that dogs can spread Lyme disease directly to their owners.² However, people spending time outdoors walking their dogs, camping, gardening, or hunting can potentially come in contact with infected ticks. In addition, it is possible for dogs to bring infected ticks into the home or yard. **According to the CDC, about 30,000 cases of human Lyme disease are reported in the U.S. annually, but estimates as high as 329,000 people are diagnosed with Lyme disease annually.**³

Ticks



Adult



Nymph



Larvae

In North America, the bacteria that causes Lyme disease is carried and spread by the Blacklegged or Deer tick (*Ixodes scapularis*) and the Western Blacklegged tick (*Ixodes pacificus*). Both of these ticks are smaller than other ticks commonly found on dogs, which can make them even more difficult to detect.¹

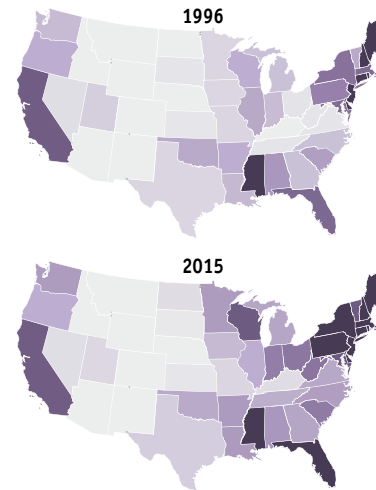
Multiple stages of deer ticks (nymphs and adults) can target humans and dogs, contributing to the spread of Lyme disease. Additionally, based on the seasonal activity of tick life-cycle stages and their preference to feed, the risk of infection in dogs might be all year round.

Tick habitats are expanding

The ticks that carry *B. burgdorferi*, causative agent of Lyme disease, are widespread. In fact, according to the Centers for Disease Control (CDC), Lyme disease is the most commonly reported tick-borne disease in the U.S. human population.⁴ Lyme-positive dogs have been found in all 50 states.⁵ Additionally, traveling with a dog may lead to an increased risk of contracting Lyme disease even if it does not reside in an endemic state.

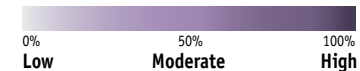
Recently the geographic distribution of infected ticks has expanded due to factors such as suburban sprawl, climate changes and bird migration.⁶

Distribution of the Lyme disease transmitting ticks, *Ixodes* Spp., in the United States⁷



As of 2015, *Ixodes scapularis* or *Ixodes pacificus* ticks have been documented in 1,531 of the 3,110 counties in the continental United States. This represents an increase of about 45% in number of counties compared with previous surveillance data from 1996. The tick surveillance maps shown compare 1996 data to recent data from 2015, demonstrating that the number of counties where *Ixodes* Spp. have been recorded has increased for many states.

Percentage of counties in a state that recorded the presence of ticks



RECOMBITEK®
lyme

