

# Lyme Disease



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 **MERCK**  
Animal Health



## What is Lyme disease?

Lyme disease is a bacterial infection transmitted by ticks to dogs, other animals, and people. Most Lyme disease in the United States is spread by the deer tick (pictured below), which is found primarily in the Northeast, Southeast, and Upper Midwest. The western black-legged tick is the primary source of Lyme disease transmission in the western states.<sup>1</sup>

**DEER TICK**  
(ENLARGED VIEW)



## What are the signs of Lyme disease?

Many dogs can have Lyme disease and show no signs. The most common signs include<sup>2</sup>:

- Fever ●
- Loss of appetite ●
- Painful or swollen joints ●
- Lameness that comes and goes between different legs ●
- Loss of energy ●

Signs may come and go, vary in severity, and can sometimes be mistaken for those of other conditions.





## How serious is Lyme disease?

If left untreated, severe cases of Lyme disease can lead to<sup>2</sup>:



HEART DAMAGE



CENTRAL NERVOUS  
SYSTEM DISORDERS



FATAL KIDNEY DISEASE

Your veterinarian will typically diagnose your dog by looking for signs of Lyme disease, then confirm it with a blood test.<sup>2</sup>

## BACTERIA BREAKDOWN

The bacteria that causes Lyme disease is called *Borrelia burgdorferi*.

### THAT'S A MOUTHFUL...LITERALLY!

Ticks spread this bacteria by biting an animal and passing it through their saliva, while feeding, over the course of 24–48 hours.<sup>2</sup>

## Is my dog at risk of infection?

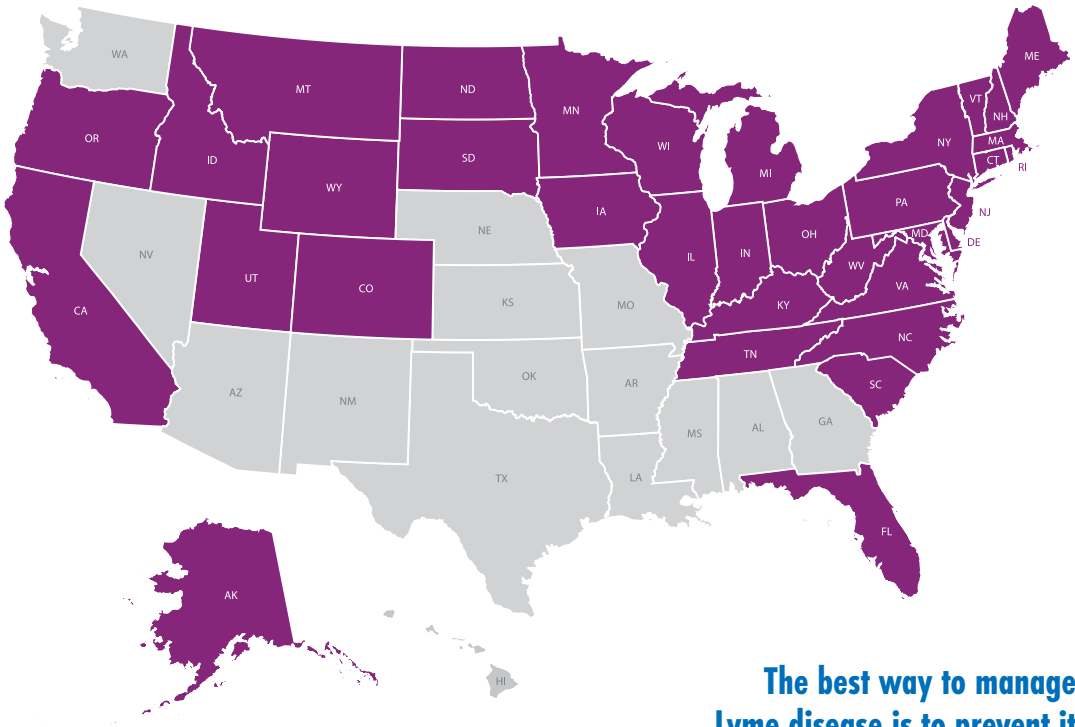
Any dog can be infected with Lyme disease, but dogs living in or traveling to areas where Lyme disease is prevalent have a higher risk of infection.

## What can I do if my dog is infected?

Dogs can be treated for Lyme disease with 4 weeks of antibiotics; however, it's possible that the symptoms could return, requiring further treatment.<sup>2</sup>

LYME DISEASE  
IS A NATIONWIDE THREAT!<sup>3</sup>

**35 STATES** have a moderate-to-high prevalence of Lyme disease, but positive cases have been reported in **every state in the US.**<sup>3</sup>



**The best way to manage Lyme disease is to prevent it**



# How can I protect my dog from LYME DISEASE?



## STOP THE TICK

Keep your dog on year-round preventative medication to kill ticks before they can transmit disease.<sup>4</sup>

Also, check your dog for ticks after spending time outdoors and immediately remove any ticks you find.<sup>2</sup>

- **Vaccinating your dog may help keep them safe in case you don't remove an infected tick in time.<sup>4</sup>**



## STOP THE BACTERIA

To protect your dog from the bacteria that cause Lyme disease, your dog must be vaccinated against Lyme disease before it is bitten by an infected tick.<sup>2</sup>

CHECK OUT THE BACK COVER FOR  
A LYME PROTECTION CHECKLIST.



## Assess your dog's risk of Lyme disease.

### Are Lyme vaccines safe?

Lyme vaccines have been used to protect dogs since 1990,<sup>5</sup> and side effects have been rare.<sup>6</sup> If they occur, they are usually mild and typically resolve within a few days.<sup>7</sup>

To find out more visit  
**StopLyme.com**

Check **YES** or **NO**:

Does your dog live in one of the 35 states with a moderate-to-high prevalence of canine Lyme disease?

☐ YES  
☐ NO

Have you taken, or are you planning to take, a trip with your dog to one of the 35 states?

☐ YES  
☐ NO

Do you ever take your dog on hunting trips or other outdoor activities?

☐ YES  
☐ NO

Does your dog spend a lot of time outdoors?

☐ YES  
☐ NO

Has anyone from your local area been diagnosed with Lyme disease?

☐ YES  
☐ NO

**SHARE YOUR ANSWERS  
WITH YOUR VETERINARIAN.**

If you answered **YES** to any of the above questions, it is likely that your dog would benefit from Lyme vaccination.

# Lyme Protection Checklist

1

Make sure your dog is vaccinated against Lyme disease.

2

Ask your veterinarian to recommend a year-round preventative medication.

3

After a trip outdoors, check your dog for ticks. Remove them immediately.

4

Have your veterinarian screen for ticks at your dog's next visit.

5

Be aware of any changes in your dog's behavior. Watch for signs of Lyme disease, such as limping, fever, lack of energy, or loss of appetite.

## Nobivac®

Protection unites us.

**References:** 1. Lyme disease—transmission. Centers for Disease Control and Prevention website. Available at: <https://www.cdc.gov/lyme/transmission/index.html>. Accessed November 3, 2020. 2. Staubinger, RK. Lyme disease (Lyme Borreliosis) in dogs. Available at: <https://www.merckvetmanual.com/dog-owners/disorders-affecting-multiple-body-systems-of-dogs/lyme-disease-lyme-borreliosis-in-dogs>. Accessed November 3, 2020. 3. Parasite prevalence map—ticks. Companion Animal Parasite Council website. Available at: <https://capcvet.org/maps/#2020/all/lyme-disease/dog/united-states/>. Accessed November 3, 2020. 4. Lyme disease. Companion Animal Parasite Council website. Available at: <https://capcvet.org/guidelines/lyme-disease/>. Accessed November 3, 2020. 5. Canine Lyme disease vaccine introduced. United Press International website. Available at: <https://www.upi.com/Archives/1994/10/05/Canine-Lyme-disease-vaccine-introduced/2060781329600/>. Accessed November 3, 2020. 6. Data on file. Merck Animal Health. 7. Moore GE, Gupitll LF, Ward MP, et al. Adverse events diagnosed within three days of vaccine administration in dogs. *J Am Vet Med Assoc*. 2005;227:1102–1108.