

## What is Lyme disease?

Lyme disease is a disease caused by the bacteria *Borrelia burgdorferi* which is transmitted by the bite of a deer tick, also known as a Blacklegged tick.

*Borrelia burgdorferi* is a corkscrew-shaped **bacteria**. Ticks can be infected with *Borrelia burgdorferi* when they feed on an infected animal, typically a white footed mouse. The tick may later feed on a person and transmit Lyme if attached for a day or more.

**Nymphal ticks** are most likely to transmit Lyme disease because of their small size (about the size of a poppy seed). They are so small that you may not know that you have been bitten.



Ticks are small.

Nymphs are present from May through July when people spend a lot of time outdoors.

**Adult ticks** can also transmit Lyme, but they are larger and easier to see. Adult ticks are abundant in the fall months. Nymph and adult deer ticks have eight legs, while larvae have six.

**Lyme disease** cannot be transmitted from one person to another through touching, kissing or sex. Lyme transmission from breastfeeding or blood transfusions has not been reported.

## How is Lyme disease treated?

Health care providers may use symptoms and lab tests to diagnose Lyme disease. The disease is treated with **antibiotics** like doxycycline or amoxicillin.

Some people may not feel completely better after treatment and may have **long-lasting symptoms**. It is not known why this occurs, but may be due to damage caused by Lyme disease. Symptoms usually resolve over the course of months, additional antibiotic treatment is not needed.

## How to remove a tick



Use **tweezers** or a tick puller to grasp as close to the skin as you can and slowly pull the tick away without twisting.



After removing the tick, **wash** the bite location with **soap and water**. Watch for signs of sickness from a tickborne disease.

## There are two stages of Lyme disease

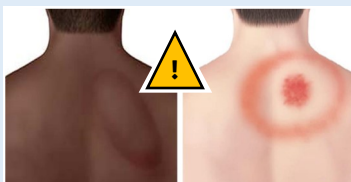
**Early Lyme Signs and Symptoms** usually appear 3 -30 days after a tick bite. Look for:

- Erythema migrans (EM),\* a type of skin rash;
- Fatigue (feeling run down);
- Fever and chills;
- Headaches;
- Joint pain; and/or
- Swollen lymph nodes.

**Late Lyme Symptoms** may appear 30 or more days after infection if there has been no treatment. Watch for:

- Arthritis symptoms—joint pain and swelling;
- Nerve pain or paralysis including Bell's palsy (drooping of face muscles);
- Meningitis symptoms (stiff neck);
- Cardiac symptoms (irregular heartbeat); and/or
- Memory or concentration problems

## \*EM is a common skin rash in Lyme disease.



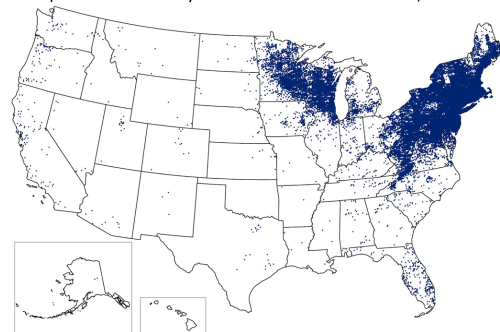
It typically first appears at the tick bite site as a **round or oval rash**. It may expand in size and may look like a bull's eye, but this is not always the case. Eventually, multiple rashes may appear all over the body. You may not have or notice a rash, but you may feel like you have the flu.

**You can get Lyme disease more than once.**

## Where is it found?

In the U.S., most cases of Lyme disease are reported from states in the Northeast and Upper Midwest areas of the country.

Reported Cases of Lyme Disease -- United States, 2022



1 dot placed randomly within county of residence for each case

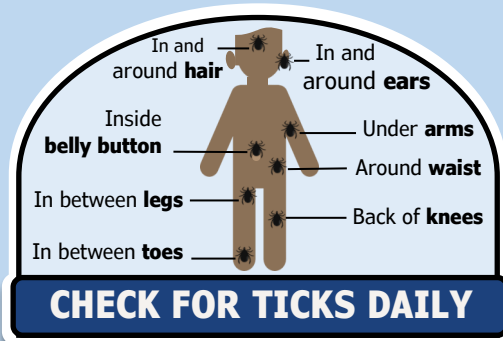
For Lyme disease to be transmitted in an area both the deer tick and infected animals must be present.

## How common is Lyme disease?

Very common. Deer ticks are present in all 67 counties in Pennsylvania. About one in four nymphs and one in two adult ticks are infected with the bacteria that causes Lyme disease. **Pennsylvania** reports more than 10,000 cases of Lyme disease every year. Since many cases are not diagnosed or reported, the actual number of cases may be much higher.

## How to prevent getting sick from ticks

- Treat shoes, gear, and clothing with 0.5% **permethrin**.
- Use insect **repellents** that contain DEET, picaridin, IR3535, or oil of lemon eucalyptus.



- **Check for ticks** all over your body.
- **Help young children** with tick checks.
- **Look closely**, ticks can be very small.
- Find a tick, **remove it** immediately.
- If possible, **shower** after spending time outdoors to help rinse off ticks that may be crawling.