

## Lyme disease

Lyme disease is an illness that may affect the skin, joints, nervous system, heart, and other areas of the body. People of all ages can get Lyme disease, which is caused by the bacteria *Borrelia burgdorferi*. The bacteria are transmitted to humans by the bite of an infected deer tick. The deer tick (*Ixodes scapularis*) is also called the blacklegged tick.

### Introduction

Lyme disease is one of many tick-borne diseases in Minnesota and causes more than 300,000 illnesses each year in the United States. The disease has a diverse arsenal of symptoms that can affect many different areas of the body.

In order to contract Lyme disease, a person must be bitten by a blacklegged tick (also known as deer tick or bear tick) that is infected with the Lyme disease bacteria. Remember: not all ticks are infected with the bacteria, so not all ticks transmit disease. Ticks do not jump, fall or fly from trees. Ticks find a host at or near ground level and then attach themselves.

It's believed a tick must be attached for at least 24 hours to transmit the bacteria. The chance of getting Lyme disease increases the longer the tick is attached.

### Signs and symptoms

Recognizing the early signs and symptoms of Lyme disease is important. If you have one or more of these signs and symptoms within 3 to 30 days after a deer tick bite, see your physician immediately.

- Rash: May look like a bull's-eye, or a red ring with a clear center that may grow several inches in width. May not be itchy and painful. Not everyone gets or sees a rash and not all rashes are shaped like a bulls eye.
- Fever and chills
- Fatigue
- Muscle and joint pain
- Headache

If a person is not treated early in the disease, these late signs and symptoms may develop weeks, months, or years after the tick bite:

- Multiple rashes
- Facial paralysis on one side
- Weakness, numbness, or pain in arms and legs
- Irregular heartbeat
- Memory and/or concentration problems
- Chronic arthritis in one or more joints, usually the knees, which may be swollen and painful

### Diagnosis and Treatment

Diagnosis of Lyme disease is based on signs and symptoms, presence of the characteristic rash, and a history of exposure to deer ticks. A blood test may be helpful in confirming the diagnosis.

Antibiotics are used to treat Lyme disease. Treatment works best in the early stages of the disease.

### Prevention

In Minnesota, precautions are most important during April-July and September-October.

- Check and recheck yourself and pets for ticks.
- When in the woods, wear a repellent with DEET or permethrin to avoid picking up ticks. Follow directions on the label, reapply as directed.
- Create a barrier to ticks by tucking pants into socks or boots.
- Wear light-colored clothes so ticks are visible. (Tumble dry clothes and any gear on high heat for at least 60 minutes after being in an area where ticks live.)

## Tick Check and Removal

Check for ticks daily if you live or are in an area where tick presence is common. Prompt removal of attached ticks prevents disease. Inspect all areas of the body including groin, armpit, and in and behind the ears. There is no human vaccine available for Lyme Disease.

1. Use tweezers to grasp the tick close to its mouth.
2. Gently and slowly grasp the tick by its head, pull the tick straight out, do not twist and pull. Clean area with soap and water.
3. Do not burn it off or use petroleum jelly.
4. Not all people bitten by a deer tick will get a disease. Not all deer ticks carry diseases. If a deer tick is infected, it must be attached for at least 24 hours before it can transmit Lyme disease.



## Questions

If you have questions on this topic, please contact Health, Safety, and Risk Management at (612) 626-6002.

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Content source: <https://www.cdc.gov/lyme/index.html>