

# Ticks and Lyme Disease



For more information about Lyme disease, visit <http://www.cdc.gov/Lyme>

## How to prevent tick bites when working outdoors

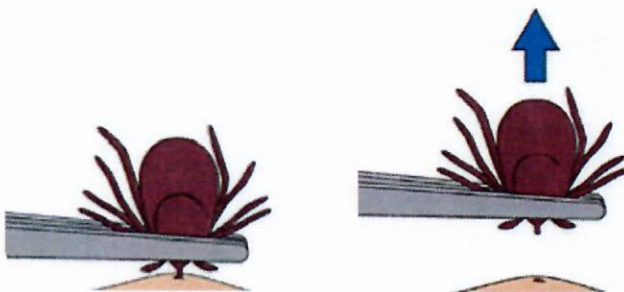
**Ticks can spread disease, including Lyme disease. Protect yourself:**

- Use insect repellent that contains 20 - 30% DEET.
- Wear clothing that has been treated with permethrin.
- Take a shower as soon as you can after working outdoors.
- Look for ticks on your body. Ticks can hide under the armpits, behind the knees, in the hair, and in the groin.
- Put your clothes in the dryer on high heat for 60 minutes to kill any remaining ticks.

## How to remove a tick

1. If a tick is attached to you, use fine-tipped tweezers to grasp the tick at the surface of your skin.
2. Pull the tick straight up and out. Don't twist or jerk the tick—this can cause the mouth parts to break off and stay in the skin. If this happens, remove the mouth parts with tweezers if you can. If not, leave them alone and let your skin heal.
3. Clean the bite and your hands with rubbing alcohol, an iodine scrub, or soap and water.
4. You may get a small bump or redness that goes away in 1-2 days, like a mosquito bite. This is not a sign that you have Lyme disease.

**Note:** Do not put hot matches, nail polish, or petroleum jelly on the tick to try to make it pull away from your skin.

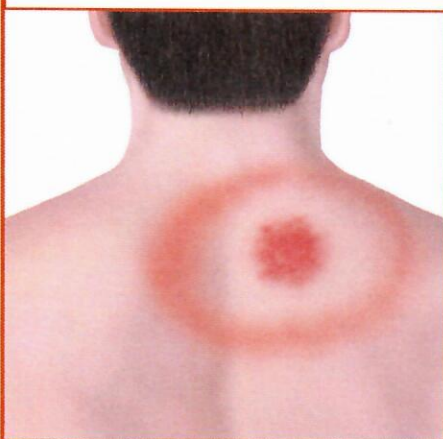


*If you remove a tick quickly (within 24 hours) you can greatly reduce your chances of getting Lyme disease.*





*Facial paralysis.*



*Bull's eye rash on the back.*



*Arthritic knee.*



## When to see your doctor

See a doctor if you develop a fever, a rash, severe fatigue, facial paralysis, or joint pain within 30 days of being bitten by a tick. Be sure to tell your doctor about your tick bite. If you have these symptoms and work where Lyme disease is common, it is important to get treatment right away.

If you do not get treatment, you may later experience severe arthritis and problems with your nerves, spinal cord, brain, or heart.

## Antibiotics are used to treat Lyme disease

Your doctor will prescribe specific antibiotics, typically for 2-3 weeks. Most patients recover during this time. You may feel tired while you are recovering, even though the infection is cured.

If you wait longer to seek treatment or take the wrong medicine, you may have symptoms that are more difficult to treat.

## Looking ahead to recovery

Take your antibiotics as recommended. Allow yourself plenty of rest. It may take time to feel better, just as it takes time to recover from other illnesses.

Some people wonder if there is a test to confirm that they are cured. This is not possible. Your body remembers an infection long after it has been cured. Additional blood tests might be positive for months or years. Don't let this alarm you. It doesn't mean you are still infected.

Finally, practice prevention against tick bites. You can get Lyme disease again if you are bitten by another infected tick.

## Additional information

1. <http://www.cdc.gov/Lyme>
2. The Clinical Assessment, Treatment, and Prevention of Lyme Disease, Human Granulocytic Anaplasmosis, and Babesiosis: Clinical Practice Guidelines by the Infectious Diseases Society of America  
<http://cid.oxfordjournals.org/content/43/9/1089.full>
3. Tick Management Handbook (Connecticut Agricultural Experiment Station, New Haven)  
[http://www.ct.gov/caes/lib/caes/documents/special\\_features/tickhandbook.pdf](http://www.ct.gov/caes/lib/caes/documents/special_features/tickhandbook.pdf)

**For more information please contact Centers for Disease Control and Prevention**  
1600 Clifton Road NE, Atlanta, GA 30333  
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-63548  
Email: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov) Web: [www.cdc.gov](http://www.cdc.gov)