

# Tick Bites and Lyme Disease - The Basics

## *What Are the Symptoms?*



The first sign of infection is usually a circular rash called Erythema Migrans, or EM. This rash occurs in approximately 70-80% of infected persons and begins at the site of a tick

bite after a delay of 3-30 days. A distinctive feature of the rash is that it gradually expands over a period of several days, reaching up to 12 inches (30 cm) across.

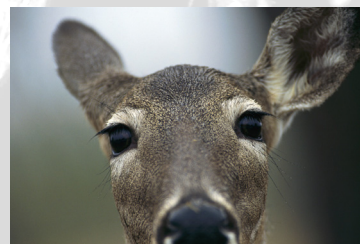
The center of the rash may clear as it enlarges, resulting in a bull's-eye appearance. Other symptoms include: fatigue, chills, fever, headache, muscle and joint aches, and swollen lymph nodes. In some cases, these may be the only symptoms of infection.

Untreated, the infection may spread to other parts of the body within a few days to weeks, producing an array of symptoms. These include loss of muscle tone on one or both sides of the face (called facial or "Bell's" palsy), severe headaches and neck stiffness, shooting pains that may interfere with sleep, heart palpitations and dizziness due to changes in heartbeat, and pain that moves from joint to joint. Many of these symptoms will resolve even without treatment.

After several months, approximately 60% of patients with untreated infection will begin to have intermittent bouts of arthritis, with severe joint pain and swelling. Large joints are most often affected, particularly the knees.

Most cases of Lyme disease can be cured with antibiotics, especially if treatment is begun early in the course of illness. However, a small percentage of patients with Lyme disease have symptoms that last months to years after treatment with antibiotics.

These symptoms can include muscle and joint pains, arthritis, cognitive defects, sleep disturbance, or fatigue. The cause of these symptoms is not known. There is some evidence that they result from an autoimmune response, in which a person's immune system continues to respond even after the infection has been cleared.



Source: **Center for Disease Control**  
<http://www.cdc.gov/ncidod/dvbid/Lyme/>

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## *How to Protect Yourself from Tick Bites*

- Ticks prefer wooded and bushy areas with high grass and a lot of leaf litter.
- Take extra precautions in May, June, and July. This is when ticks that transmit Lyme disease are most active.
- If you do enter a tick area, walk in the center of the trail to avoid contact with overgrown grass, brush, and leaf litter.
- Use insect repellent with 20% - 30% DEET on exposed skin and clothing to prevent tick bites.
- Wear long pants, long sleeves, and long socks to keep ticks off your skin. Light-colored clothing will help you spot ticks more easily. Tucking pant legs into socks or boots and tucking shirts into pants help keep ticks on the outside of clothing. If you'll be outside for an extended period of time, tape the area where your pants and socks meet to prevent ticks from crawling under your clothes.
- Remove ticks from your clothes before going indoors. To kill ticks that you may have missed, wash your clothes with hot water and dry them using high heat for at least one hour.
- Perform daily tick checks after being outdoors, even in your own yard. Inspect all parts of your body carefully, including your armpits, scalp, and groin. Remove ticks immediately, using fine-tipped tweezers. Firmly grasp the tick very close to your skin, pull the tick's body away from your skin with a steady motion, and clean your skin with soap and warm water. Do not use petroleum jelly, a hot match, nail polish, or any other products to remove a tick. Do not be alarmed if the tick's mouthparts remain in the skin; the tick can no longer transmit the Lyme disease bacteria. The mouthparts may cause minor irritation, but should work themselves out like a small splinter. If infection occurs, consult your physician.
- If a tick is attached to your skin for less than 24 hours, your chance of getting Lyme disease is extremely small. But just to be safe, monitor your health closely after a tick bite and be alert for any signs and symptoms of tick-borne illness.

Source: [Center for Disease Control](#)

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