

Hot Zone Bulletin

SUBJECT: LYME DISEASE AND ANIMALS

Lyme disease is a bacterial disease caused by *Borrelia burgdorferi* (boar-ELL-ee-uh burg-dorf-EFFeye). Within 1 to 2 weeks of being infected, people may have a “bulls-eye” rash with fever, headach, and muscle or joint pain. Some people have Lyme disease and do not have any early symptoms. Other people have a fever and other “flu-like” symptoms without a rash.

After several days or weeks, the bacteria may spread throughout the body of an infected person. These people can get symptoms such as rashes in other parts of the body, pain that seems to move from joint to joint, and signs of inflammation of the heart or nerves. If the disease is not treated, a few patients can get additional symptoms, such as swelling and pain in major joints or mental changes, months after getting infected.

CAN ANIMALS TRANSMIT LYME DISEASE TO PEOPLE?

Yes, but not directly. People get Lyme disease when they are bitten by ticks carrying *B. burgdorferi*. Ticks that carry Lyme disease are very small and can be hard to see. These tiny ticks bit mice infected with Lyme disease and then bite people or other animals, such as dogs and horses, passing the disease to them.

HOW CAN PEOPLE PROTECT THEMSELVES FROM LYME DISEASE?

1. Whenever possible, you should avoid entering areas that are likely to be infested with ticks, particularly in spring and summer when nymphal ticks feed.
2. If you are in an area with ticks, you should wear light-colored clothing so that ticks can be spotted more easily and removed before becoming attached.
3. If you are in an area with ticks, wear long-sleeved shirts, and tuck your pants into socks. You may also want to wear high rubber boots (since ticks are usually located on the ground).
4. Application of insect repellents containing DEET (n,n-diethyl-m-toluamide) to clothes and exposed skin, and permethrin (which kills ticks on contact) to clothes, should also help reduce the risk of tick attachment. DEET can be used safely on children and adults but should be applied according to EPA guidelines to reduce the possibility of toxicity.
5. Since transmission of *B. burgdorferi* from an infected tick is unlikely to occur before 36 hours of tick attachment, check for ticks daily and remove them promptly. Embedded ticks should be removed using fine-tipped tweezers. Cleanse the area with an antiseptic.
6. You can reduce the number of ticks around your home by removing leaf litter, and brush and wood piles around your house and at the edge of your yard. By clearing trees and brush in you yard, you can reduce the likelihood that deer, rodents, and ticks will live there.