

TICK REMOVAL

Ticks feed by embedding their mouthparts into the skin and taking a blood meal. If the tick has the bacteria that can cause Lyme disease, it is during feeding that the bacteria are transmitted to people or animals. Removing the tick within 24 hours reduces the risk of contracting Lyme disease.

Tweezers are used to remove attached ticks. (photo enlarged to show detail).



Image used with permission of the California Department of Public Health

To remove an attached tick:

- Use fine or blunt-tipped tweezers to grab the mouthparts as close to the skin as possible and gently, but steadily, lift the tick up and out of the skin. If tweezers are not available, fingers may be used. Using a tissue, grasp the tick as close to the skin as possible and lift it straight out.
- Clean the skin with soap and warm water.
- Do not squash a tick while it is still attached to skin.
- Use an antiseptic at the bite location once the tick is removed.

A localized reaction or infection can occur where the tick was attached. If redness or pain develops at the tick bite site, consult your physician.

IMPORTANT: Do not use a hot match, petroleum jelly, nail polish, gasoline, or any other product to coax the tick out of the skin. Do not twist or "unscrew" the tick from the skin. These products and methods may increase the risk of contracting a tick-borne disease.

LYME DISEASE IN CONTRA COSTA COUNTY

Lyme disease is fairly rare in Contra Costa County. On average there are two to four human cases reported per year. District staff monitor the risk of Lyme disease by collecting and testing Western black-legged ticks from several locations. On average, only one or two in one hundred Western black-legged ticks test positive for the bacterium.

PREVENTING LYME DISEASE

The most effective prevention for Lyme disease is to ensure that you don't get bitten in the first place.

- Wear light colored clothing so that the tick is more easily seen.
- Wear long sleeved shirts and tuck your pants into your shoes or socks.
- Apply a tick repellent to your clothing. Use products that contain the pesticide permethrin that kills ticks on contact. Permethrin should be used on clothing only.
- Apply a tick repellent to your skin. Use products that contain DEET that repels ticks. Always follow the directions on the product package.
- Avoid trails and areas with tall grass. Adult ticks climb to the tips of vegetation and simply wait for a host to walk by so they can hitch a ride. Ticks do not jump or fly.
- Check your pets to make sure they do not have ticks that can be brought into the house or into contact with people. Control ticks on animals by using products recommended by your veterinarian.
- Complete a Tick Check: After visiting an area known to have ticks, check your entire body for several days. Check the dark, warm areas of your body such as your hairline, at your beltline, behind your ears, under your arms and breasts, and in the groin area. Run your hands over your body, feeling for attached ticks. An embedded tick is more likely to be found this way than by a visual inspection.

ABOUT CONTRA COSTA MOSQUITO & VECTOR CONTROL DISTRICT

Protecting Public Health Since 1927

Early in the 1900s, Northern California suffered through epidemics of encephalitis and malaria, and severe outbreaks of saltwater mosquitoes. At times, parts of Contra Costa County were considered uninhabitable resulting in the closure of waterfront areas and schools during peak mosquito seasons. Recreational areas were abandoned and Realtors had trouble selling homes. The general economy suffered. As a result, residents established the Contra Costa Mosquito Abatement District which began service in 1927.

Today, the Contra Costa Mosquito and Vector Control District continues to protect public health with environmentally sound techniques, reliable and efficient services, as well as programs to combat emerging diseases, all while preserving and/or enhancing the environment.

FREE Services for Contra Costa County Residents

MOSQUITOES
Inspection and control

TICKS
Tick identification

MOSQUITOFISH
Free for residential ponds

RATS AND MICE
Inspection and advice

YELLOWJACKETS AND BEES
Ground-nest and swarm control

SKUNKS
Inspection and assistance

PUBLIC EDUCATION
Literature and presentations



Scan.
Learn.
Stay Healthy.

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TICKS & LYME DISEASE



CONTRA COSTA
MOSQUITO & VECTOR CONTROL DISTRICT



LIFE CYCLE OF THE TICK

There are four stages in the tick's lifecycle: egg, larva, nymph and adult. In order to mature into the next stage, a tick must attach itself to an animal for several days in order to take a blood meal. Larvae and nymphs of the Western black-legged tick feed on birds, lizards and small rodents, and adults feed on larger animals such as a deer. The Lyme disease bacterium is transmitted during the feeding process.

Life cycle of the Western black-legged tick

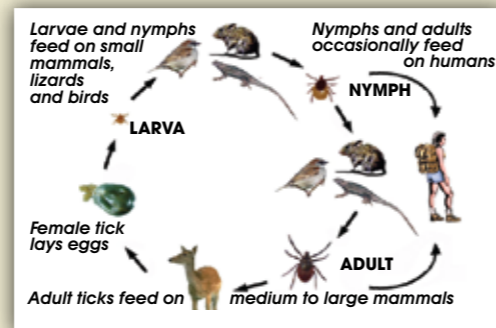


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Tick larvae and nymphs are usually found in the leaf litter under trees or on logs in cool moist environments. Adult ticks are found in these same places, as well as on the tips of long grass where they simply wait for an animal to brush by them. Ticks do not hop, jump or fly.

Studies show that tick nymphs, which are about the size of a poppy seed, are more likely to transmit the Lyme disease bacterium to people because they are very tiny and difficult to see. Completing a tick check will reduce the risk of contracting this disease. Please see **Preventing Lyme Disease** in this pamphlet.

From left to right: larva, nymph, male, and female tick on a finger (photo enlarged to show detail)



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SYMPTOMS OF LYME DISEASE

The Lyme disease bacterium can infect several parts of the body producing different symptoms at different times. The first sign of infection is usually a spreading, non-itchy rash called erythema migrans or EM, which occurs in 70 percent to 80 percent of infected persons. The rash usually begins at the site of the tick bite three to 30 days after infection, but can occur on other parts of the body. It's important to note that not everyone will experience an EM rash. A reddened area at the tick bite site that is painful and does not spread can sometimes happen one day after the tick bite. This is the body's response to the tick's saliva and is not a symptom of Lyme disease. Early symptoms occur days or weeks following a tick bite and include flu-like symptoms such as muscle aches, fatigue, headache, chills, fever, and joint pain. Some people experience paralyzed muscles of the face. Other people may experience palpitations of the heart. Untreated infections can cause people to experience intermittent bouts of arthritis with severe joint pain and swelling.

Examples of erythema migrans rashes



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Most cases of Lyme disease can be cured with antibiotics, especially if the treatment begins early in the course of the illness. Late stage symptoms include numbness, tingling or burning feelings in the arms and legs; difficulty with memory, concentration, learning or speech; and some patients experience depression or mood swings.

If you think you or a family member may have Lyme disease, contact your physician immediately. District personnel are not trained to identify or diagnose rashes or other medical conditions.

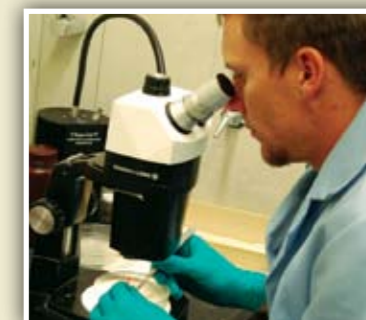
All cases of tick-borne diseases are reportable to the California Department of Public Health by physicians via their county health department. Prompt treatment with antibiotics during early Lyme disease can cure the infection and prevent complications of late Lyme disease. If treatment is delayed, treatment can be difficult and recovery may take longer.

TICK IDENTIFICATION & LYME DISEASE TESTING

The District surveys public parks and other areas for the ticks that transmit Lyme disease. The District also provides tick identification services to the public and doctors. People who are concerned about possible Lyme disease infections should contact their physician.

Information on Lyme Disease testing on ticks may be found at <http://bit.ly/TickTestQandA>

Several commercial laboratories will test ticks for Lyme disease for a fee. Visit <http://bit.ly/LabsTickTesting> for more information.



TICKS OF CONTRA COSTA COUNTY & LYME DISEASE

There are three species of common human-biting ticks in Contra Costa County.

- Western black-legged tick
- Pacific Coast tick
- American dog tick

Of these three, only the Western black-legged tick (*Ixodes pacificus*) is known to transmit Lyme disease in California. Adult females of the species are about 1/8" long and reddish-brown in color. Males are slightly smaller and brownish-black.

Pictured above: an engorged tick after taking a blood meal from a person.