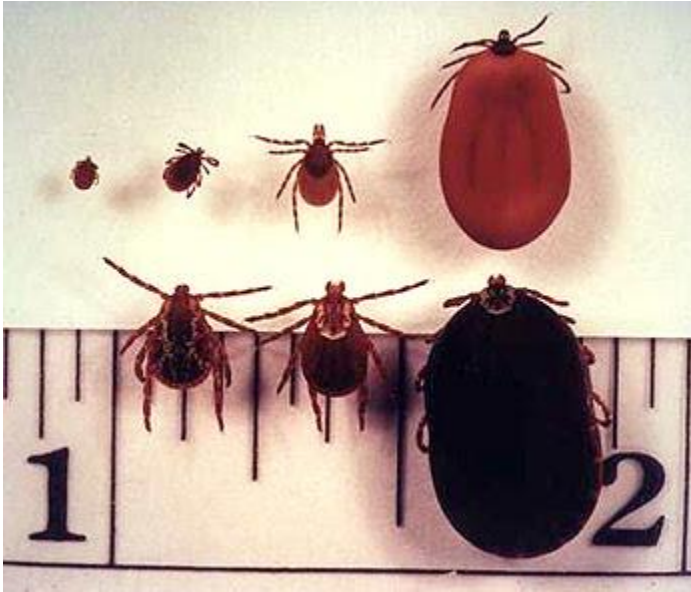


# Summertime Ticks

by Michele Brannan, MPAS, PA-C  
June 11 2015 10:00 PM



Along with warmer weather, spring and summer also bring on a higher incidence of tick bites.

Ticks are not only a nuisance, but are the main vector for tick-borne illness such as Lyme disease and Rocky Mountain Spotted Fever (RMSF).

Lyme disease is the most common tick-borne disease in the United States and is caused by a special type of bacteria called a spirochete (pronounced SPY-ro-keet), specifically a species called *Borrelia burgdorferi*.



Ticks have three stages in their life cycle:

larva, nymph, and adult. It is the nymph that most actively feeds on its prey (humans and select other animals).

The *Ixodes scapularis*, or the deer tick, is the culprit which can transmit Lyme disease.



The primary vector of Rocky Mountain Spotted Fever in the eastern and south central United States is *Dermacentor variabilis* (the American dog tick), and the *Dermacentor andersoni* (the Rocky Mountain wood tick) in the mountain states west of the Mississippi River.

Under most circumstances the tick needs to be attached for over 48 hours for infection to be transmitted (1). This means that transmission risk is low if it was adhered for less than two days.

When bitten by a tick, it is also important to note if it was the wood, deer, or dog tick, if it was a larval, nymphal, or adult tick, and if it was engorged.

Fortunately, not every tick carries disease.

The first symptoms of Lyme disease resemble that of most viral infections and include fever, body aches, and fatigue.

Some patients also develop a rash called Erythema Migrans which occurs within a week or two at the bite site.

This red rash develops a central clearing as it expands, sometimes leaving a target-looking area.

Later stages of Lyme disease occur months later and can include neurologic and cardiac

problems, such as Bells Palsy and heart arrhythmia, respectively.



Years later, Lyme disease is associated with arthritis usually of the large joints, such as the knee.

Treatment for Lyme disease is typically based on clinical suspicion if a tick has been attached for more than 48 hours. There is blood testing for Lyme disease and RMSF however these are not reliable if the bite was recent and so not routinely done prior to initiating treatment.

The treatment for both Lyme disease and RMSF is an antibiotic called doxycycline. In young children, often amoxicillin is chosen as an alternative. Doxycycline is usually well-tolerated, with the most common side effect being upset stomach and sun sensitivity. It should not be taken with milk or milk products.

To avoid tick bites, it is best to:

- Wear long-sleeved shirts and pants and tuck the latter into your socks.
- Use insect repellants.
- Wear light-colored clothes to make it easier to see the ticks that have climbed on

- Thoroughly check your body for ticks after being outdoors, taking care to fully examine your scalp, armpits, groin, and back.
- Shower within two hours of being outdoors.
- Keep other animals away, such as deer and mice which also carry ticks.

There have been as many methods of tick removal that people have developed as there are ticks. Some methods are better than others.

A study compared the use of forceps or fingers, application of petroleum jelly (Vaseline), fingernail polish, alcohol, and a hot match. It found that only the use of forceps or protected fingers resulted in the satisfactory removal of dog ticks without leaving the mouthparts in the human skin (2).

In other words, don't try the other methods as they are ineffective and possibly harmful.

## HOW TO REMOVE A TICK

- Use tweezers or forceps to tightly grasp the tick as close to the skin as possible. If forceps are not available, try paper or cloth around your fingers for protection before pulling it out.
- Using firm pressure and without twisting, pull the tick straight up and out.
- Do not squeeze or crush the tick body as it may release infection.
- Afterward, cleanse the skin with soap and water and be sure to wash your hands.
- If tick mouthparts remain in the skin, leave them alone as they typically will be expelled naturally with time.
- Watch the area for development of a rash for about a month following the bite.

***Michele Brannan is a certified Physician Assistant of Internal Medicine and has been in practice in the Riverbend area for over 10 years.***

***The health information provided herein is not intended to replace the advice or discussion with a healthcare provider and is for educational purposes only. Before making any decisions regarding your health, speak with your healthcare provider.***

## REFERENCES:

1. Piesman J, Maupin GO, Campos EG, Happ CM. Duration of adult female *Ixodes dammini* attachment and transmission of *Borrelia burgdorferi*, with description of a needle aspiration isolation method. *J Infect Dis* 1991; 163:895.
2. Needham GR. Evaluation of five popular methods for tick removal. *Pediatrics* 1985; 75:997.

