

TICK-BORNE DISEASE  
PREVENTION  
COMPILED BY  
SPC (P) CAREY  
Preventive Medicine Specialist



lone star tick  
(Southern tick-associated rash illness) (STARI)  
Gulf of Mexico



deer tick  
(Lyme disease)  
Pacific Coast



dog tick  
(Rocky Mountain spotted fever)(RMSF)

Tick-borne diseases are also known as zoonotic diseases. A zoonotic disease is an infectious disease that can be transmitted between animals and humans. Ticks are very effective transmitters of disease because most ticks take blood from a large variety of small and large mammals, reptiles, and even birds. In general, ticks must ingest a blood meal before they can molt and move to the next stage in their life cycle. Ticks become infected with a disease-causing agent by feeding on infected mammals or birds.

One tried-and-true prevention measure to prevent ticks from leaching on to your body is to walk in the center of trails to avoid overhanging brush and tall grass. This is effective because of the way some ticks seek a host, which is called "questing." A questing tick will perch itself, front legs extended, on the top of the stems of grass, low brush, or on the edges of leaves on the ground. Using this ambush strategy, the tick waits until a suitable host brushes against the vegetation. Ticks do not jump, fall, or fly to find a meal and are generally found within three feet of the ground. They use the carbon-dioxide that humans exhale, as well as heat movement that is used to detect a possible blood meal and are usually found around the head, neck, underarms, and groin.

However not all ticks are infected, so a tick bite doesn't necessarily mean you will get the disease. In the event that a tick is indeed infected, it must be attached to your skin for at least several hours before it can successfully transmit the pathogens to you. Since you cannot tell if a tick is infected or not by looking at it, the sooner you remove attached ticks, the safer you will be. FYI ticks that are just crawling on your skin or clothing cannot make you sick.

It is highly encouraged to treat all tick bites as tick-borne diseases by observing signs and symptoms, monitor if he or she experiences a sudden high fever, severe headache, muscle or joint aches, or nausea, vomiting, or diarrhea. If these symptoms occur following a tick bite, or even after exposure to tick habitat, the health care provider should be informed of this fact. Another possible sign of tick-borne disease is a rash or pus-filled wound that appears at the site of a tick bite, or a spreading rash that follows a tick bite or exposure to tick habitat.

If you find a tick remove it immediately with either tick tweezers or with tweezers to prevent any infections. When removing ticks use the flat end of the mouth of tweezers and press near the skin and clap the tweezers around the mouth part of the tick, use slow and steady movement when removing the tick from the skin. After removing the tick, disinfect the area of the skin with soap and water or with any other disinfectant that is available (i.e. hand sanitizer). Save the tick for future identification should you develop disease symptoms.

Preserve the tick by placing it in a clean, dry jar (or other sturdy container) and keeping it in the freezer. You may discard the tick after about one month, as tick-borne diseases will generally display symptoms within this time period.

Things to do:

- **Treat clothing with permethrin** repellent it makes the ticks too sick and weak to bite you. Lasts the life of the uniform typically 5-6 launderings for aerosol and IDA kit clothing soaked in special solution 50 launderings.
- **Wear DEET** repellent on the skin only a thin layer is necessary to protect you. One application will last up to 12 hours.
- **Wear the proper clothing:** that includes long pants tucked into boots or socks, long sleeves, shirt tucked into pants, light-colored clothing makes it easier to spot ticks.
- **Check yourself for ticks routinely:** Use the buddy system to check each other for ticks, when you go indoors, remove your clothes and take a shower, checking your skin carefully, placing your clothes in a hot dryer for 20-30 minutes will ensure that any ticks you failed to notice will be killed, check children and pets carefully.

Things not to do:

- DO NOT WEAR FLEA AND TICK COLLARS they are not for human use the chemicals will burn your skin.
- DO NOT squeeze the body of the tick or apply any substance, including petroleum jelly, finger nail polish, finger nail polish remover, repellents, pesticides, or a lighted match to the tick, while it is attached. These materials or methods are either ineffective, or worse, might force more infective fluid into the bite site.

Effective websites on combating tick-borne diseases:

<http://www.cdc.gov>

<http://usachppm.apgea.army.mil/>

<http://www.dhss.mo.gov>