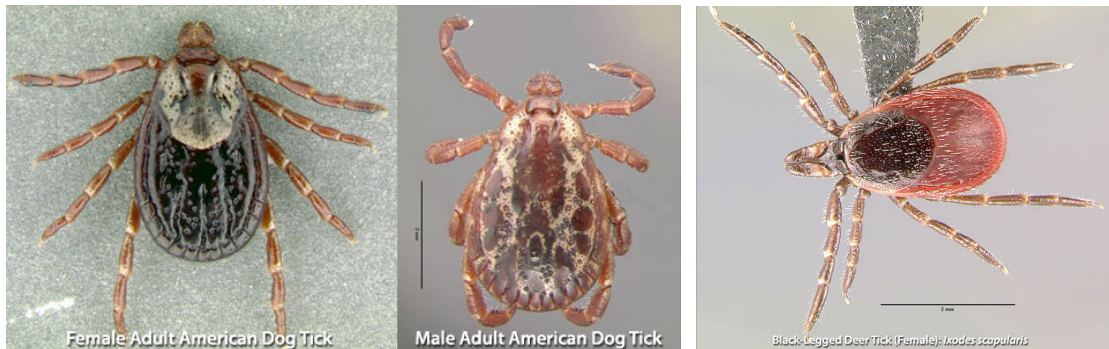


# Ticks



**The American dog tick (left), *Dermacentor variabilis***, can be recognized by its larger size and speckled white or creamy dorsal appearance. Females have a shorter “shield” or dorsal plate while the males are slightly smaller with a dorsal plate that covers most of their body. People normally find female adult ticks on their person as these ticks search for a blood meal. Male ticks and nymphs and larvae feed on smaller mammals. Dog ticks are normally very flat in appearance unless they are expanding with blood. They anchor themselves with a single barbed structure called a hypostome. Because of the barbs, it is important to pull the tick out slowly and straight.

○ = Actual Body Size

**The black-legged or deer tick (right), *Ixodes scapularis***, can be recognized by its much smaller size and reddish dorsal appearance. Females have a shorter dorsal plate and a “tear-drop shape. Males are smaller with a rounder dorsal plate that covers most of their body. The mouth parts of the female black-legged deer tick are longer than the male’s mouth parts. The larval tick is no bigger than the period at the end of this sentence.

○ = Actual Body Size

## Life History

Ticks prefer woods and tall grassy areas along animal trails. In some years, ticks may become locally abundant, especially in wet areas. A female adult tick may lay thousands of eggs. Once the eggs hatch, the larval ticks rapidly disperse and normally find a small mammal or lizard as a host. Hosts may be detected by a combination of movement, color, carbon dioxide and other factors. Ticks are able to wait for extended periods of time until a host passes by. After feeding, larval ticks drop off, molt to a nymph and may feed on a different mammal host. As the ticks develop from small larvae and nymphs into larger adults, they move higher up in the vegetation. As an adult, ticks often latch onto humans, deer or other mammals.

## Disease

The first tick recognized as a vector for human disease was the wood tick *Dermacentor andersoni*, which was shown early in this century to be the causative agent of Rocky Mountain spotted fever. Rocky Mountain spotted fever has now spread to the south

central, southern, and eastern regions of the US. About 1000 cases of Rocky Mountain spotted fever are reported annually, and new foci of infection are continually being identified. Rocky Mountain spotted fever has a high mortality rate if untreated.

The black-legged deer tick, *Ixodes scapularis* transmits Lyme disease, a disease caused by a spiral shaped bacterial microbe called *Borrelia burgdorferi*. This disease is known from Europe, Africa, Asia and in almost all US states. It is especially common in the Northeast, in Minnesota and in northern California.

### **Avoiding Tick Bites**

Do not let the fear of ticks prevent you from enjoying the warmer months of the year. If you are in a tick infested area you should be wearing long, light colored pants tucked into your socks. This will help you to spot ticks before they become attached. Ticks rest in brushy vegetation waiting for an animal to pass by; they are not found as often in open mowed areas. A careful check for ticks after a day of outside activity will help to prevent tick disease since ticks must remain attached for many hours before the disease organism is transmitted.

Some helpful hints:

- Keep away from infested areas -- particularly in May, June and July.
- Wear light-colored clothes to spot ticks more easily.
- Wear long-sleeved shirts and pants, and tuck pant legs into boots.
- Use an insect repellent containing DEET on your clothes and skin.
- After being outdoors, wash clothing, drying it at a high temperature.
- Comb your hair with a fine-toothed comb
- Shower and inspect your body for ticks.

Most experts believe the tick has to be on the body at least 12-24 hours to transmit the disease. It's really important to check your body carefully after being out in the woods.

### **Removing Engorged Ticks**

An engorged tick is hard to remove after it has become attached. Its head is partially hidden by its enormously enlarged abdomen and its mouth parts are well attached into the skin. The following procedure will help you to remove these ticks quickly and safely. The best method is to grasp the tick with fine tweezers, placing them as close to the tick's head as possible and pulling straight back, taking care not to crush the tick. Make sure all mouth parts are removed, and wash and disinfect the bite area.

Since the Lyme bacteria and other diseases are injected by the tick when it bites, you must be careful not to squeeze the tick when removing it which could result in more bacteria being injected. Clean the bite with soap and water. Do NOT attempt to remove with lighted cigarettes, matches, nail polish, or Vaseline. Save the tick in case of illness so that a more accurate diagnosis can be made. Dogs can catch Lyme disease from ticks and may need to be treated by a veterinarian.