

## It's Tick Season – The Basics of Ticks and Lyme Disease

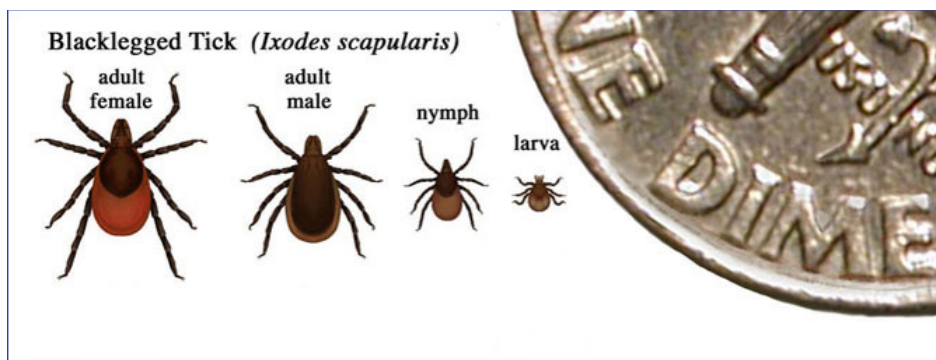
The sunny, warm days of summer mean it's time for gardening, picnics and walks in the woods, but they also mark the beginning of tick season. While the majority of tick species don't bite humans, the ticks that do bite humans can spread disease.

Tick bites are associated with several different diseases, but one of the most dangerous, and common, is Lyme disease. If left untreated, Lyme disease can have lifelong effects on joints, the heart and nervous system. Studies suggest that there are more than [300,000 cases of Lyme disease](#) in the US annually. Almost 95 percent of these cases are diagnosed in only fourteen states, one of which is Maryland.

What does it all mean? It's important both to enjoy the outdoors and to be aware of how to prevent, recognize and treat tick bites. Some key information, taken from the [US Center for Disease Control website](#) is presented below. Visit the site for more in-depth material on ticks and Lyme disease.

### Ticks That Carry Lyme Disease

Lyme disease is caused by a bacteria that is carried by blacklegged ticks (also called deer ticks), generally smaller than the dog ticks with which you might be familiar. Most infections are thought to occur through the bites of ticks in their immature nymph stage, at which point they are no bigger than a poppy seed.



*Nymph stage blacklegged ticks are thought to be primarily responsible for Lyme disease. Adult blacklegged ticks are around the size of a sesame seed; nymphs are around the size of a poppy seed.*

Dog ticks are also quite common in Maryland. They are larger than blacklegged ticks, and it's not unusual to find them on you or your pets after being outside. While all ticks can spread disease, dog ticks are not thought to carry Lyme disease.



*Dog ticks (above left) are larger than blacklegged or deer ticks. If ticks are not removed, they feed on their host's blood and can swell to many times their normal size (above right).*

## Prevention

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While it's not possible to eliminate ticks from our lives entirely, a little prevention can work wonders.

For people:

- If you walk in the woods, stay in the center of trails, away from brush
- Avoid walking through brushy areas with high grass and leaf litter
- Wear long pants and long-sleeved shirts when in high-risk areas
- Use insect repellent that contains 20 percent or more DEET, picaridin or IR3535 on exposed skin. You can also use this [EPA Insect Repellent Guide](#) if you want to avoid particular chemicals.
- Use permethrin on clothing to repel ticks

For pets:

- Reduce the tick habitat in your yard by clearing tall grass, mowing regularly and keeping wood piles dry (to discourage the rodents that ticks feed on)
- Talk with your veterinarian about using tick preventatives on dogs and cats

## Tick Detection and Removal

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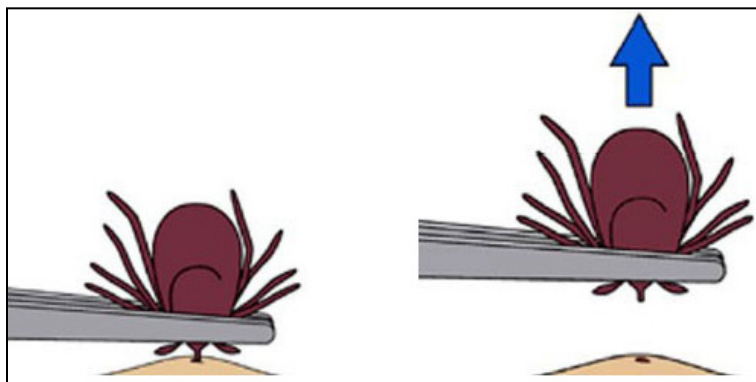
When you return home from the woods, a field or other high-risk tick area, there are things you can do to remove ticks before they cause problems:

- Bathe or shower within 2 hours of getting home to more easily find and wash off any ticks that are crawling on you.
- Conduct a full-body tick check using a hand-held or full-length mirror to view all parts of your body upon return from tick-infested areas. Parents should check their children for ticks under the arms, in and around the ears, inside the belly button, behind the knees, between the legs, around the waist, and especially in their hair.
- Examine gear and pets.
- Tumble dry clothes in a dryer on high heat for 10 minutes to kill ticks on dry clothing after you come indoors.

### Removal

If you do find a tick, there's no need to panic. Just grab a pair of tweezers.

1. Use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
2. Pull upward with steady, even pressure. Don't twist or jerk the tick; this can cause the mouth-parts to break off and remain in the skin. If this happens, remove the mouth-parts with tweezers. If you are unable to remove the mouth easily with clean tweezers, leave it alone and let the skin heal.
3. After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub, or soap and water.
4. Dispose of a live tick by submersing it in alcohol, placing it in a sealed bag/container, wrapping it tightly in tape, or flushing it down the toilet. Never crush a tick with your fingers.



NOTE: If you develop a fever or rash within a few weeks of removing a tick, call Dr. Pierce or Afrookteh and schedule a visit.

## When to See a Doctor

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While it's important to be aware of Lyme disease, it's also important not to overreact to every tick bite, most of which do not carry Lyme disease. For example, a small bump or redness at the site of a tick bite that occurs immediately and goes away in a day or two is not a sign of Lyme disease.

When Lyme disease is caught and treated early (typically with common antibiotics) people usually recover quickly and completely. Left untreated, the initial symptoms may disappear, but the bacteria can often return months or years later with significant consequences.

### **Symptoms and warning signs associated with Lyme disease**

If you notice any of these after getting a tick bite, contact Dr. Pierce or Afrookteh. Also remember that you can be bitten by a tick without knowing it, so keep an eye out for these symptoms whenever you've spent time outside, especially in the woods.

#### **Early Signs (3 to 30 days post bite)**

- Fever, chills, headache, fatigue, muscle and joint pain, swollen lymph nodes
- Circular rash, often in the shape of a bullseye



- This rash:
  - Occurs in most, but not all, cases of Lyme disease
  - Begins at the site of a tick bite after a delay of 3 to 30 days (average is about 7 days)
  - Expands gradually over a period of days reaching up to 12 inches or more across
  - May feel warm to the touch but is rarely itchy or painful
  - Sometimes clears as it enlarges, resulting in a target or "bull's-eye" appearance
  - May appear on any area of the body

#### **Later Signs and Symptoms (days to months post bite)**

- Severe headaches and neck stiffness

- Additional EM rashes on other areas of the body
- Arthritis with severe joint pain and swelling, particularly the knees and other large joints.
- Facial palsy (loss of muscle tone or droop on one or both sides of the face)
- Intermittent pain in tendons, muscles, joints, and bones
- Heart palpitations or an irregular heart beat
- Episodes of dizziness or shortness of breath
- Inflammation of the brain and spinal cord
- Nerve pain
- Shooting pains, numbness, or tingling in the hands or feet
- Problems with short-term memory

## Resources

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While ticks can be a nuisance, there's no need to let them ruin your summer. By paying attention and using common sense, you can avoid Lyme related health problems. There are lots of resources on the web about ticks and Lyme disease. If you'd like to learn more, try the following:

[Center for Disease Control](#) – An immense amount of information about ticks and Lyme disease, and the source of the information and images in this article.

[Mayo Clinic](#) – A good overview of symptoms, causes, risk factors and treatment.

[Medline Plus](#) – Lots of information from the National Library of Medicine, including practical tips as well as journal articles, clinical trials and statistics.