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Keeping ticks away from your door (and body)

by Joan Eliyesil · Friday, May 16, 2014

Ticks. What was Mother Nature thinking?

TICK-BORNE DISEASES REPORTED IN THE

NORTHEASTERN U. S.

Carried by blacklegged ("deer") tick

Lyme • Anaplasmosis • Babesiosis

Borrelia miyamotoi • Powassan disease

Carried by dog tick

Tularemia

Rocky Mountain spotted fever

Source: Center for Disease Control

Since Lyme disease was first recognized in 1982, the number of tick-borne illnesses throughout the United States has continued to increase. The Center for Disease Control and Prevention lists seven different tick-borne illnesses that have been reported in the northeastern U.S., with Lyme being the most prevalent. Last year, the CDC acknowledged that the number of people diagnosed with Lyme disease each year is probably around 300,000, ten times the number of cases actually reported to the CDC. While scientists continue to work on human vaccines and other methods to control the spread of tick-borne diseases, there are ways to make yourself and your surroundings less appealing to these dangerous little blood suckers.

Going hiking?

Wood ticks (or dog ticks) are the most frequently encountered ticks in Harvard. (Courtesy photos)

Deer ticks have reddish brown bodies with darker heads. They start life the size of a poppy seed.

If you're heading into prime tick territory, wear shoes, long pants, and long sleeves. Tucking pants into socks will help keep ticks on the outside of clothing, and light-colored clothing will make ticks easier to spot. Stay away from the edges of trails. Insect repellents containing 20 to 30 percent DEET are recommended on exposed skin. The latest in tick prevention is clothing pre-treated with Permethrin, an insect repellent that is touted as more effective than DEET. The clothes are available at many online retailers and outdoor apparel companies. The repellency lasts for 70 washes. Permethrin is also available as a spray for use on clothing or outdoor gear.

Ticks don't jump, fly, or drop from trees; they grasp onto a host's foot or leg, then make the long journey upward looking for thinner skin. When returning from a possible tick-infested area, it's best to shower within two hours to wash off any meandering ticks. There's no sensation when a tick bites because it secretes chemicals that numb the skin before boring in, so it's also important to do a full-body tick check

(see sidebar). Deer ticks in the nymph stage, prevalent in the spring and summer, are only about the size of a pinhead, but these difficult-to-spot ticks are responsible for the majority of Lyme cases. Ticks brought into the house on clothing can survive for up to four days, so wash any exposed clothing and put it into a hot dryer—many ticks can actually survive even a hot water laundering.

Get it off me!

If you find an attached tick, remove it as soon as possible. Most tick-borne diseases are not transmitted within the first 24 hours. Use pointy tweezers or a tick remover (available free of charge from the Harvard Board of Health). When removing a tick, it's important to grab the insect as close to the skin as possible to avoid squeezing the germs from the tick's stomach up and into you. While it is important to remove as much of the tick as possible, it is not critical to remove the mouthparts. After removing the tick, disinfect the area with alcohol or antibiotic ointment. Save the tick for identification, and notify your doctor.

Altering the landscape to increase sunlight and decrease humidity will create a less tick-friendly environment. (Courtesy photo)

Tick-unfriendly yards

The Connecticut Agricultural Experiment Station estimates that 75 percent of all Lyme disease cases are acquired from ticks picked up during activities around the home, such as gardening, yard work, and play. Ticks like damp and shady areas, decomposing leaves, and tall grasses. You can make your yard less welcoming to ticks by eliminating those areas, and by installing a mulch barrier between the woods and

your yard (see sidebar). It's also helpful to make your yard less hospitable to deer, as well as mice and other small rodents.

- **TIPS FOR DEALING WITH TICKS**

Outdoors

- Avoid wooded and bushy areas with high grass and leaf litter.
- Walk in the center of trails. Edges of recreational fields should be avoided.
- In infested areas, wear shoes, long sleeves, and long pants tucked into socks.
- Use repellents that contain 20 to 30 percent DEET on exposed skin and clothing. Always follow product instructions. Parents should apply this product to their children, avoiding hands, eyes, and mouth.
- Use products that contain Permethrin on clothing. Treat clothing and gear, such as boots, pants, socks, and tents.

Returning indoors

- Bathe or shower as soon as possible after coming indoors to wash off and more easily find ticks that are crawling on you.
- Examine gear, clothing, and pets.
- When returning from tick-infested areas, conduct a full-body tick check using a hand-held or full-length mirror to view all parts of your body. 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.

Landscaping tips

- Keep grass cut short.
- Remove leaf litter and brush from around your home.
- Prune low-lying shrubs to let in more sunlight underneath the shrub.
- Keep plants around stone walls cut short.
- Don't use ground covers in frequented areas of your yard.
- Use a 3-foot-wide woodchip, mulch, or gravel barrier where your lawn meets the woods.
- Keep woodpiles and bird feeders off the ground and away from your home. This will make your yard less attractive to mice and other small rodents that carry ticks.
- Ask your local nursery about plants to use in your yard that do not attract deer.

Source: Harvard Board of Health

Deer are thought to be the primary host for adult deer ticks, but the white-footed mouse is considered to be the principal animal that carries the bacteria that cause Lyme disease, anaplasmosis, and babesiosis. In some areas, 50 percent of white-footed mice are infected with all three bacteria. When young ticks feed on these mice, they become infected and pass the infection on to any other animals they feed on. Deer, on the other hand, don't contribute any bacteria to the ticks that feed on them. But they do provide a hearty meal, allowing the adults ticks to survive long enough to lay their clutch of up to 2,000 eggs, which keeps the tick population booming.

Latest on vaccines

While a vaccine is widely available for dogs, there is no vaccine currently available for humans. A human vaccine that proved to be 80 percent effective in preventing Lyme disease was introduced in 1998, but it was withdrawn after a successful anti-vaccine campaign resulted in class action lawsuits. But scientists at multiple universities, including the Stony Brook School of Medicine, Virginia Commonwealth University, and the University of Rhode Island, are currently working on vaccines, some of which protect against multiple tick-borne illnesses. In addition, scientists at U.S. Biologic have developed a Lyme vaccine-laced bait for mice. They are working with the University of Memphis to map areas of the U.S. where mice and ticks interact with humans so that they can begin spreading the vaccine.

For more information on tick prevention and tick-borne diseases, visit the Board of Health website. Harvard residents can pick up a free tick remover at the Board of Health office upstairs in Town Hall, staffed on Tuesday and Thursday mornings between 8 and 11 a.m, or email the board at boh@harvard.ma.us to arrange pickup.

Other tick information sources

Center for Disease Control website:**www.cdc.gov/ticks**

University of Rhode Island Tick Encounter Resource Center website: **www.tickencounter.org**

Tick Management Handbook, The Connecticut Agricultural Experiment Station: **www.ct.gov/caes/lib/caes/documents/special_features/tickhandbook.pdf**