

A Homeowner's Guide to Managing Ticks

Many long-time Mainers can recall a time when ticks were rare in Maine and Lyme disease had yet to be identified. But that's not today's reality. Tick populations have grown steadily south of Aroostook County and Lyme disease has become a fact of life in southern and coastal Maine. And while many Mainer's have heard some advice about avoiding Lyme disease, most of us have yet to see a simple, comprehensive guide to managing both ticks and Lyme disease.

The good news is that the science around controlling ticks and Lyme disease has been steadily advancing—to the point where it's possible to dramatically reduce the incidence of ticks around your home and reduce your chances of contracting Lyme disease. Read on to find out how.

What's the Big Deal with Ticks Anyway?

Tick experts agree that deer tick populations are increasing in number and expanding their range. While the initial range of the deer tick in Maine was centered around southwestern Maine (Cumberland and York counties), by the early 2000's, it had expanded to the Midcoast region. Current data indicates that the deer tick is now appearing in Downeast Maine and Aroostook County. Given available habitat (primarily deciduous or mixed forests) and available hosts (rodents and white-tail deer), Maine may see the deer ticks expand even farther, putting more people at risk to Lyme and other tick-borne diseases

The Maine Center for Disease Control and Prevention (Maine CDC) tracks confirmed cases of diseases transmitted by ticks and mosquitoes. The first confirmed case of Lyme disease in Maine occurred in 1986. In 2001, the per capita rate of Lyme disease in Maine was 8.4 human cases per 100,000 people. By 2014, the rate had risen to 105 cases per 100,000 people.

But Lyme disease isn't the only tick-borne disease that the Maine CDC is tracking. In addition to the 1200 reported cases of Lyme disease in 2015, preliminary data show that Maine residents also contracted 186 cases of Anaplasma, 55 cases of Babesia, and one case of Powassan encephalitis virus. And one other tick-borne pathogen—relapsing fever—is known to be present in Maine. There is solid evidence indicating that all of these diseases are on the rise in Maine.

The Best Defense Involves a Multifaceted Approach

In general—when it comes to combating ticks and Lyme disease—no single strategy is as effective as a combination of common-sense strategies that work together to form a multipronged defense. Scientists commonly refer to this approach as *Integrated Pest Management* or *IPM*, where multiple strategies are integrated into a comprehensive approach. And this is especially true with ticks and tick-borne diseases.

Make Your Yard Tick Unfriendly

Ticks thrive in a cool, moist environment such as tall grass or low, dense foliage and leaf litter, particularly in shaded areas. Deer ticks feed mostly on wildlife. Juvenile deer ticks bite birds and small mammals such as field mice, while adult ticks feed on deer. However, both young and adult ticks will bite people and pets that venture into their habitat. Ticks are often encountered in the woods, along trails or in unmown grassy areas at forest edges. Low growing, dense ornamental plantings around the house also make suitable habitat for ticks. Ticks are not common in dry, open areas such as mown, sunny lawns, driveways and patios. To reduce tick habitat around your home:

- Move birdfeeders away from the house—at least seventy feet if possible;
 - Birds and rodents that feed on spilled birdseed act as reservoirs of Lyme disease which they transmit to immature ticks that feed on them.
- Discourage rodents around wood piles and rock walls;
- Keep lawn areas regularly mowed;
- Remove leaf litter promptly and thoroughly around the home and yard;
- Prune the lower branches from trees and prune shrubs to increase sunlight and air movement near the ground to reduce moisture and tick habitat;
 - When planning or maintaining ornamental plantings around the house, consider plantings that can be pruned near the ground or that grow in way that doesn't result in dense foliage near the ground.
- Remove undergrowth in wooded areas bordering lawns and trails;
- Use woodchips or hardscaping to create a tick barrier along the border with wooded areas or dense vegetation; and
- Create a pea-stone barrier around the foundation (this will also discourage a variety of home invading pests such as ants and mice).

If these measures are not enough, consider hiring a professional to treat perimeter areas, leaf litter under trees at the edge of lawns and low, dense vegetation with

either a liquid pesticide sprayed at high enough pressure to penetrate into the leaf litter, or a granular, non-systemic pesticide formulation. A single application in May to target young ticks is recommended. A second application in the fall to kill adult ticks may also be considered.

Repellents and Protective Clothing

Dressing for success against ticks relies on a combination of repellents and clothing. Wear long pants and a long sleeve shirt when venturing into tick habitat. Ticks often grab hold at shoe or ankle height and then crawl upward in search of bare skin to attach to. Apply a DEET or permethrin-based repellent on shoes, socks and pant legs for added defense—do not apply permethrin to bare skin.

Tested strategies and products include:

- Wearing light colored clothing to improve visibility of ticks during frequent checks;
- Applying a repellent on shoes, socks and pant legs;
- Purchasing factory-treated repellent clothing—which retains its repellent properties for 75 laundry cycles;
- Sending your own clothing away for commercial treatment—which retains its repellent properties for 70 laundry cycles; and
- Making a tick-prevention fashion statement by tucking your pant cuffs into your socks.

Don't Forget Your Pets

One way that ticks commonly find their way to humans and their homes is via our pets. Reducing pet introduction of ticks can be achieved by treating your pets all year long. Be very careful with pet products, consult your veterinarian and read and follow the product labels. Be sure to apply the correct amount for the weight of your pet. Cats are especially sensitive to some tick control products so talk to your veterinarian and prevent cats from grooming recently treated dogs. Never apply repellents intended for human use to pets.

When pets are outdoors, keep them away from prime tick habitat such as forested areas, rock walls and areas with leaf litter. In addition, consider checking and grooming your pets when they return from outdoors, and inspect/vacuum the areas where they sleep and spend time.

Tick Checks—the Last Line of Defense

Possibly the single most important tactic for preventing tick-borne diseases is the daily tick check. Deer ticks—especially the immature forms—are extremely small and difficult to see. After spending time in tick habitat, remove your clothes immediately, place them in the dryer, and dry on high heat for at least 20 minutes. This will kill any ticks that may be on the clothing. Next, conduct your tick check in a well-lit room with full-length and hand mirrors. Ticks will migrate to areas where they are better protected and hidden. So pay special attention to difficult to see areas such as behind the knees, arm pits, belly buttons, the groin area, behind the ears, and in your hair. Showering may also help rid ticks before they bite.

If you find a biting tick, remove it slowly and carefully using steady pressure with fine tweezers or a tick removal tool. Do not squeeze the body of the tick. Never use folklore techniques like Vaseline or matches which can cause the tick to regurgitate, thereby increasing the chance of getting a tick-borne disease.

Be keenly aware of the symptoms of Lyme disease, such as fever, muscle aches, fatigue and joint pain. Seventy to eighty percent of individuals with Lyme disease develop the tell-tale “bull’s-eye” rash, known as *Erythema migrans*, which will develop anywhere from three to thirty days following the tick bite.

For more information about ticks and how to reduce your risk of tick-borne disease visit the Maine Integrated Pest Management Council webpage at www.gotpests.org or search for ‘tick’ at www.maine.gov or visit <https://extension.umaine.edu/ipm/tickid/>. The Maine Board of Pesticides Control can answer your tick-related pesticide questions—call 207-287-2731 or visit thinkfirstspraylast.org.