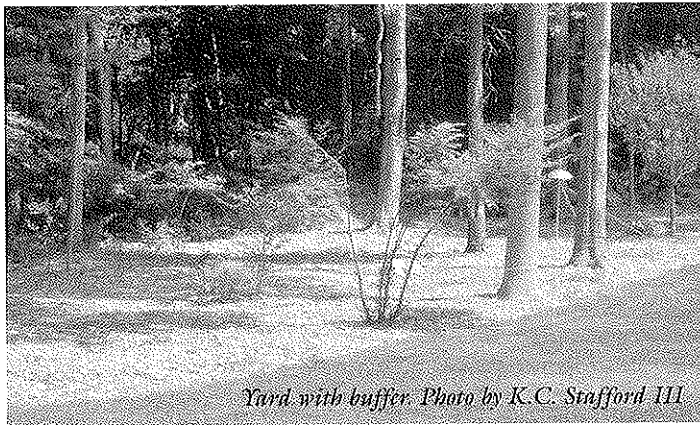


Summer, Fall, Winter,

Minnesotans like to joke that we have two seasons: Winter and Road Construction. I suggest we rename the second season Deer Tick Season. Deer tick season runs from last thaw to first frost, roughly April through November. This season coincides with some of our most joyful outdoor activities (gardening, hiking, bird watching) and our most loathed (yard clean-up, brush clearing, raking). Partaking in these pleasures and chores places us directly in the path of deer ticks, which carry Lyme disease, a potentially devastating illness, both for your health and your pocket book.

Lyme disease is the fastest-growing vector-borne infectious disease in the county. The following paragraphs are intended to keep you healthy by arming you with vital information for the coming deer tick season. You'll learn how to landscape for a tick-free yard, how to spot a deer tick, and what to do if you get bit.

Landscaping



Yard with buffer. Photo by K.C. Stafford III

Deer ticks get their name from one of their favorite hosts, but they can also be carried by rodents and birds, allowing them to be dispersed almost anywhere. When not attached to a host, they prefer to hang out in shady, wooded areas, clinging to shrubs and tall grasses, waiting for their next meal ticket to pass by – possibly you or a member of your family. With this in mind, clearing the perimeter of your property is the first step to keeping ticks at bay. The Tick Management Handbook suggests clearing out shrubs and ground cover from the edge of your property and installing a three-foot buffer of gravel or wood chips. The buffer will keep you from brushing against the taller grass or shrubs while mowing. If you have a jungle gym or other yard furniture, install it as far from the wooded area as possible, and consider spraying the area with an insecticide that kills ticks.

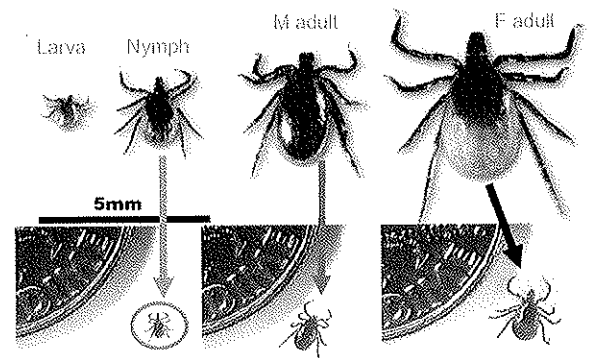
Grass should be kept mowed; deer ticks that make their way onto a shorn lawn, especially if it is in a sunny

patch, are likely to dehydrate without shade to protect them. To discourage deer from meandering into your yard, consider a deer fence or deer-resistant plantings. Ask your local nursery for suggestions on native, non-invasive plants that are distasteful to deer. To kill deer ticks on mice and other small rodents, set out toilet paper tubes filled with permethrin-soaked cotton balls that mice carry back to their nests, killing all ticks in the horde. If your pets are like mine, they will think these tubes are fun to play with, so put them where your pets and children cannot reach them.

Now that winter is over, you can discard the full body armor in favor of lighter, more skin-revealing attire, right? I leave it up to you to weigh the discomfort of covering your skin with clothing against the potential health risk of covering your skin with insecticide. Many people compromise by using a combination. Bug spray containing 30-40% DEET is recommended by the Tick Management Handbook for tick bite prevention. Keep in mind that coverage should be thorough; ticks will simply crawl to a spray-free zone on your body to feed. Clothing can also be made tick-repellant with the use of permethrin. The chemical bonds to clothing and can provide another layer of protection that kills ticks on contact. It can last on clothing and other outdoor gear (tents, furniture, etc) for several weeks, through at least one washing. You can find information on Minnesota-manufactured tick repellent products at buggspray.com.

Tick ID

However you choose to enjoy your day in the great outdoors, be sure to end it with a thorough tick check. Gather pets and other family members and make a game of it. Here's what you're looking for:



1 in 3 deer ticks in Minnesota carry the bacteria that cause Lyme disease, *Borrelia burgdorferi*; in high-risk areas, it's 2 in 3. Some ticks also carry other infections, such as bartonella, babesiosis, and human anaplasmosis, which complicate an already complex disease.

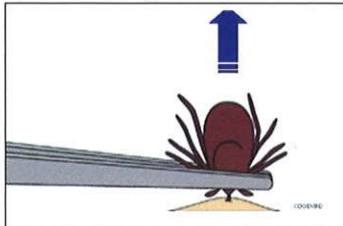
and Tick Season

By Monique Dubos

Monique Dubos is a freelance journalist; she serves on the Minnesota Lyme Action Support Group Board of Directors as a communications and public relations specialist.

If you find a tick, don't freak out!

With a pair of tweezers, grab as close to the skin as possible and pull straight out. Don't do anything to irritate the tick; twisting it or using a lubricant such as petroleum jelly or nail polish remover can cause it to spit, which is exactly what you



DON'T want to have happen. Place the tick in a plastic bag or jar to take to your doctor.

I've Been Bitten, Now What?

If you have been bitten by a deer tick, go immediately to your family physician to request a dose of antibiotics. If you don't have the evidence (the tick), you will need to tell your doctor where you were when you got bit and describe the culprit. Doctors in Lyme-endemic areas may not need to be told twice that you have been exposed to the disease. However, hundreds of Minnesotans report that they have difficulty convincing doctors that the threat of Lyme is real and that timely and appropriate treatment is required to prevent the illness. I only say this to prepare you to be persistent in requesting antibiotic therapy to keep Lyme or a co-infection from manifesting.

Dr. Elizabeth Maloney, a family physician who has extensively studied Lyme disease and now educates health-care practitioners on this topic, recommends that anyone bit by a deer tick, especially in the high-risk areas of Minnesota, request 20 days of 100mg doxycycline, provided they are able to safely take that medication. Studies in mice have shown that Bb survive shorter treatment times, such as the single oral dose of doxycycline that is recommended in prevailing guidelines. This antibiotic and dosage is not recommended for children under 8 or pregnant women; amoxicillin may be appropriate in those cases.

Dr. Maloney cautions against guessing how long the tick was attached. Some studies suggest that a deer tick must be attached for at least 24 hours to transmit Bb. However, if the tick has fed on something or someone else before it bites you, it could already have Bb in its saliva and transmit it to you immediately. Some doctors believe that if you don't have a rash at the bite site, you haven't been infected. Not necessarily! Only 70% of people who get Lyme disease ever develop a rash. Incidentally, the most common Lyme rash is oval and uniformly colored; the bull's eye pattern occurs in only 10-



Photo by Brent Flint

20% of all Lyme rashes. Above all, you must not agree to "wait and see." Once the flu-like symptoms of early Lyme disease appear, rash or no, you have missed the opportunity to ward off the disease. Stick to your guns, and don't leave the doctor's office without the prescription.

For more information on Lyme disease and prevention, visit:

Minnesota Lyme Action Support Group:
www.mlasg.com

International Lyme and Associated Disease Society:
www.ilads.org

Lyme Disease Association:
www.lymediseaseassociation.org

While deer ticks are found across Minnesota, ticks in the colored swath have been found to have high incidence of *Borrelia burgdorferi* (Bb), the bacterial cause of Lyme disease.

Sources:

"Tick Management Handbook"
<http://www.cdc.gov/ncidod/dvbid/lyme/resources/handbook.pdf>

"Challenge to the Recommendation on the Prophylaxis of Lyme disease"
http://www.ilads.org/lyme_disease/written_testimony/5%20Maloney-Prophylaxis.pdf

"Active Infection: Clinical Definitions and Active Persistence"
http://www.mlasg.com/files/Active_Infection_Clinical_Definitions_and_Evidence_of_Persistence.pdf

