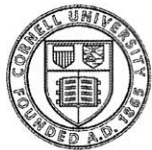


HOME GROUNDS FACT SHEET



Cornell University
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Ticks and Control

by Min-Tsung Yeh, DVM, Ph.D.

The three most common ticks found on Long Island include deer ticks (*Ixodes scapularis*), the American dog tick (*Dermacentor variabilis*) and the lone star tick (*Amblyomma americanum*). They may be found from spring to fall depending on species and lifestage. They are commonly found along animal runs where numbers of questing ticks congregate on paths, in fields, in parks, and in wooded areas.

These three ticks readily bite man. A fourth tick, the brown dog tick (*Rhipicephalus sanguineus*) generally lives indoors. Although it readily parasitizes dogs, it rarely bites man and does not breed in the woods or in open country.

Adult and nymphal ticks have four pairs of legs. Larval ticks have only three pairs of legs. Tick mouthparts are adapted for piercing the skin and sucking blood from the host. The body of the tick, especially the adult female, can become very large and distended when engorged with blood, giving it the appearance of a gray, swollen raisin.

Lyme disease is now the most prevalent tick-borne illness on Long Island. The disease is vectored to humans by deer ticks. Since it was first documented in Connecticut in 1975, Lyme disease has spread from Suffolk County into Nassau County, parts of New York City and along the Hudson River Valley.

In 1995, the Westchester County Department of Health received reports from physicians treating patients for confirmed cases of Human Granulocytic Ehrlichiosis (HGE), a bacterial infection with flu-like symptoms. Although this disease has not yet been confirmed on Long Island, it is yet another reason for residents to avoid tick bites. HGE infections can be fatal, especially if treated with the wrong kind of antibiotics. Deer ticks can also carry a protozoal pathogen which causes babesiosis. Fortunately, it is rarely lethal.



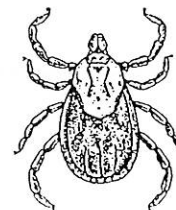
Ixodes scapularis

Deer Ticks

This tick is also called the black legged tick. It congregates along paths, trails and roadways. Adult males usually do not bite. The adult female has a somewhat tear-drop shape and is relatively small. The dorsal shield, extending down into the back from the head, is black, while the body is reddish-brown. The nymphs and female adults can bite humans and transmit Lyme disease, HGE, and babesiosis. Usually, adult ticks are abundant during spring and fall, while nymphal ticks are abundant during the summer. Lyme disease is primarily transmitted by the nymph stage, probably due to their inconspicuous size. This means they will likely go unnoticed until 24 or more hours have passed following attachment. This is the window needed for greatest likelihood of disease transmission. Larvae are smaller, but rarely carry the Lyme disease bacteria. Adults can transmit the disease but their size means they are more likely to be removed early on. They are also active during cooler times of the year when outdoor activity by humans is not as great. White footed mice are the primary reservoir where ticks acquire the Lyme disease bacteria.

American Dog Ticks

These are the largest and most common tick in our area. There is a strong visible contrast between the whitish, patterned dorsal shield and the dark brown body. This tick is a danger as well as a nuisance for it transmits Rocky Mountain spotted fever and occasionally tularemia (rabbit fever). Adult ticks are abundant in spring and early summer.



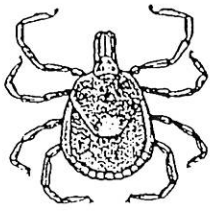
Dermacentor variabilis

B-2-10 TTY reviewed 1/03

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*Amblyomma
americanum*

Lone Star Ticks

This was once primarily a southern tick, but has now spread north onto eastern Long Island. Lone star ticks occur in woodlands and the edges of woody areas as well as in grassy habitats. They have a wide variety of hosts including wild and domestic animals, birds, and

man. All three life stages attack man. Females are distinct due to a metallic-looking star on the rear of the dorsal shield and an overall chestnut brown color. These ticks are suspected vectors of Rocky Mountain spotted fever and erlichiosis. Lone star ticks may be abundant in mid-summer.

Brown Dog Ticks

Although this tick is not a vector of human disease, it does vector the protozoal pathogen causing malignant jaundice in dogs. The brown dog tick occurs worldwide with dogs as principal hosts, although it will attack many other animals. Adults are usually less than 5 mm long by 2 mm wide. They hide in cracks and crevices, under carpets, inside upholstered furniture and behind baseboards where females lay their eggs. Each successive stage of the next generation will seek a canine host, feed, drop off and resume occupation of one of the hiding places previously mentioned.

Integrated Pest Management (IPM)

Considerations

IPM is a common sense approach to pest control and plant care. It employs a number of measures to prevent, control or reduce plant problems. These include using resistant plant varieties, proper plant selection and placement, good aftercare and biological and/or mechanical controls. As a last resort, after all other remedies have been explored, a pesticide* that is least toxic to people and natural predators, can be considered. Prior to using any pesticides, plants should always be monitored for the degree of infestation and a sensible control measure considered.

* A pesticide is a substance that kills, or attempts to kill, a particular pest, e.g. **insecticide**, **fungicide**, **herbicide**, etc.

Controls

Walk in the center of trails, away from branches, brush and tall grass. If you do venture into tick habitats, wear a long sleeved shirt tucked into long pants with cuffs tucked into socks. Wear closed shoes, and light colored clothing for easier tick spotting. A commercial tick/insect spray with 25-30% DEET content may provide some protection. Spray clothing, especially from knees to cuffs, without getting any on bare skin. Inspect your pets. Transfer from pets to owners is a major route of tick travel. Inspect clothing, and brush off garments after returning from outings.

Check your body for ticks immediately. Ticks commonly attach to the back of the neck, to the scalp, in the arm pits, the groin, and behind the knees. However, all areas should be checked. If you find a tick that is attached, you might want to consult a physician. If this is not practical, remove the tick carefully. Grasp it with fine tweezers by the head, not the body, and gently pull it straight out. Be sure mouth parts do not remain embedded. Do not crush the tick. For identification, place the tick in a plastic bottle or securely sealed in plastic wrap with a bit of damp paper towel and submit it to the local health department for identification.

In the landscape, keep brush and tall grass to a minimum. This will not only cut down on questing space for the ticks themselves, but it will also reduce habitat for white footed mice that serve as Lyme disease reservoirs. Reduce plantings that attract deer or erect fences or use bars of strong smelling bath soap suspended from trees or bushes along the perimeter of your property as a deer repellent. Cut back low growing branches on trees or shrubs to further reduce habitat. Ticks need moisture to survive so improving light and air circulation will reduce humidity which will reduce plant diseases as well.

For more information contact:

- The Nassau County Department of Health
(516) 571-2006
- Lyme Disease Hotline
(516) 427-8272