



## **It's Tick Season in Wayland:**

### **Keep Yourself Safe from Ticks and Tick-Borne Illnesses**

Ticks are found all around New England, especially in wooded areas like Wayland. While many people may find a tick on themselves, only a small proportion of those will develop a tick-borne illness like Lyme Disease. This flyer explains the facts about how to avoid ticks, what to do if you find one on you, what symptoms can indicate that you may have an illness related to a tick bite, and how to maintain your yard to reduce tick habitats.

There are multiple tick species and tick-borne illnesses transmitted in this area. These include Anaplasmosis, Ehrlichiosis, and Babesiosis and an emerging disease, Powassan virus. Since Lyme Disease is by far the most common, and can be the most subtle, this flyer will concentrate on Lyme as the example but the information below applies to preventing and treating all tick-borne diseases mentioned above.

#### **Preventing Tick Bites**

Ticks are found in wooded and bushy areas near the ground; they cannot jump or fly. They are attracted to body heat and carbon dioxide (in the breath we exhale). They transfer to people when we brush against a tick.

##### *In your yard:*

- MOW your lawn and keep it short. Trim back brush and low hanging branches.
- REMOVE leaf litter, wood piles, fallen branches, trash and debris; all of which attract ticks.
- MOVE bird feeders to low traffic areas; seed and suet attract wildlife that carries ticks.
- CONSIDER installing a deer fence or use plantings that deer do not like.

##### *On walks:*

- AVOID wooded and brushy areas with high grass and leaf litter.
- WALK in the center of trails. Keep paths and trails mowed wide.

##### *Protect Yourself:*

- WEAR long sleeves and pants, and a cap/hat, pull socks over trousers. Use a lint brush to check for and remove ticks.
- USE repellent that contains 20 percent or more DEET, picaridin, or IR3535 on exposed skin for protection that lasts several hours. DEET products should not be used on infants under 2 months of age.
- USE products that contain permethrin on clothing. Treat clothing and gear, such as boots, pants, socks and tents with products containing 0.5% permethrin. It remains

protective through several washings. Pre-treated clothing is available and may be protective longer. Helpful information can be found at: [www.tickencounter.org](http://www.tickencounter.org).

- READ the repellent label carefully and follow the product instructions.
- PLANT-DERIVED products are available for use as repellents. Limited information is available regarding how well these products work and how safe they are.
- PROTECT pets 12 months a year with a tick product. Use fences to create pet safe zones.

### **Find and Remove Ticks from Your Body**

- Bath or shower as soon as possible after coming indoors (preferably within two hours) to wash off and more easily find 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. Ticks can ride into the home on clothing and pets, then attach to a person later, so carefully examine pets, coats, and day packs.
- Tumble dry clothes in a dryer on high heat for 10 minutes to kill ticks on dry clothing after you come indoors, additional time may be needed.
- If the clothes require washing first, hot water is recommended.
- If the clothes cannot be washed in hot water, tumble dry on low heat for 90 minutes or high heat for 60 minutes. The clothes should be warm and completely dry.

### **Removing a Tick**

Should you find a tick attached to your skin, there's no need to panic. There are several tick removal devices on the market, but a plain set of fine-tipped tweezers will remove a tick quite effectively.

- Use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
- 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.

- After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub, or soap and water.
- 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.



Avoid folklore remedies such as "painting" the tick with nail polish or petroleum jelly, or using heat to make the tick detach from the skin. Your goal is to remove the tick as quickly as possible—not wait for it to detach.

### **Lyme Disease Basics**

- Lyme Disease is caused by the bacteria *Borrelia burgdoferi* which is found in small woodland animals like mice, raccoons, chipmunks, squirrels, and deer.
- It has the potential to be transmitted to humans through deer ticks which have first come into contact with one of the above creatures prior to attaching to a human.
- A tick must be attached to a human host for **48 hours** to transmit Lyme Disease to that person.
- Rapid removal of the tick will decrease the risk of transmission of Lyme Disease (and any other tick-borne illnesses).
- Deer ticks must be between the size of a poppy seed and a sesame seed before they attach to a person to be able to transmit Lyme.
- Engorged deer ticks (which have fed on a human and have the potential to transmit disease) are the size of an apple seed.

### **Early Signs and Symptoms of Lyme Disease: (3 to 30 days after tick bite)**

- Call your doctor if you have any questions or concerns about potential symptoms.
- Fever, chills, headache, fatigue, and swollen lymph nodes.
- Arthritis-painful, swollen joints (occurs in approx. 30% of people with Lyme)
- Erythema migrans (EM) rash aka (Bulls-eye Rash) :
  - Occurs in approximately 70 to 80% of infected persons
  - 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 (30 cm) 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 after tick bite) – Please note that these symptoms do not occur frequently.**

- Severe headaches and neck stiffness (2.8%)
- Additional EM rashes (Bulls-eye rashes) on other areas of the body
- Arthritis with severe joint pain and swelling, particularly the knees and other large joints (30% of patients)
- Facial palsy (loss of muscle tone or droop on one or both sides of the face) (8% of patients)
  - Intermittent pain in tendons, muscles, joints, and bones
  - Heart palpitations or an irregular heart beat ([Lyme carditis](#)) (1% of patients)
  - Episodes of dizziness or shortness of breath (1% of patients)
  - Inflammation of the brain and spinal cord (2-3% of patients)
  - Nerve pain (4-5% of patients)
  - Shooting pains, numbness, or tingling in the hands or feet (4-5% of patients)
  - Problems with short-term memory

**Laboratory Diagnosis**

- Determining if a person has Lyme Disease is generally done based on symptoms, with laboratory testing performed only if the diagnosis is not otherwise clear.
- Unfortunately, there is not one perfect blood test for Lyme Disease, so physicians may have to perform a stepwise approach to looking for evidence of Lyme Disease with more than one test.
- There are high rates of both false positive (the test says you have Lyme Disease but you really do not) as well as False Negatives (the test says you don’t have it when you really do).
- Therefore, it is important to work alongside your healthcare provider if you feel you may have Lyme Disease.

## **Treatment**

- Antibiotics are standard treatment for Lyme Disease.
- The vast majority of people have their symptoms resolve after taking their prescribed course of antibiotics.
- Generally, for children less than 8 years old, the preferred antibiotic is Amoxicillin, though if a child is allergic to penicillin or has more advanced Lyme Disease another antibiotic may be chosen.
- For those aged 8 years and up, generally doxycycline is the antibiotic of choice, unless a person has an allergy to it or more advanced disease.

## **Prophylaxis/ Prevention after Tick Bite?**

- Prophylaxis (or prevention of a potential infection after a tick bite) is an option in some cases, but certainly not always recommended.
- If you are going to consider prophylaxis, calling immediately after finding the tick is important, as prophylactic antibiotics are most effective when started shortly after the tick bite is noted.
- In children under 8, there is no widely accepted antibiotic that has been shown to prevent Lyme Disease.
- It is always best to discuss the issue of prophylactic antibiotic with your health care provider to determine what may be best for your own scenario.

## **Resources:**

- Centers for Disease Control and Prevention: [www.cdc.gov/Lyme](http://www.cdc.gov/Lyme), <https://www.cdc.gov/ticks/index.html>
- Tickencounter, The University of Rhode Island, Thomas Mather, Ph.D.:  
[www.tickencounter.org](http://www.tickencounter.org) (includes services for tick testing), permethrin fact sheet.
- Mass Department of Public Health: [www.mass.gov/dph/tick](http://www.mass.gov/dph/tick), MDPH tick repellent (fact sheet),  
<https://www.mass.gov/service-details/tick-borne-disease-information-for-the-public>

Information in this press release was compiled by Marni Roitfarb, MPH, MD, former Wayland School Physician, with assistance from Ruth Mori, MSN, RN, Wayland Public Health Nurse, Julia Junghanns, Wayland Director of Public Health, and Susan Green, Chairperson of the Board of Health.

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