

# Tick Talk !

## Lyme Disease Educational Materials for Elementary Schools (Grades 3, 4, and 5)

**This program on Lyme Disease consists of three parts:**

- I. Background Information for Teachers (Pages 1-3 of this document)
- II. Educational Activities (Pages 4-5 of this document, plus activity sheets which can be downloaded separately)
- III. "Tick Talk:" A PowerPoint Presentation aimed at Elementary School Students (must be downloaded separately)

**Please review Parts I and II prior to showing the "Tick Talk" slides.**

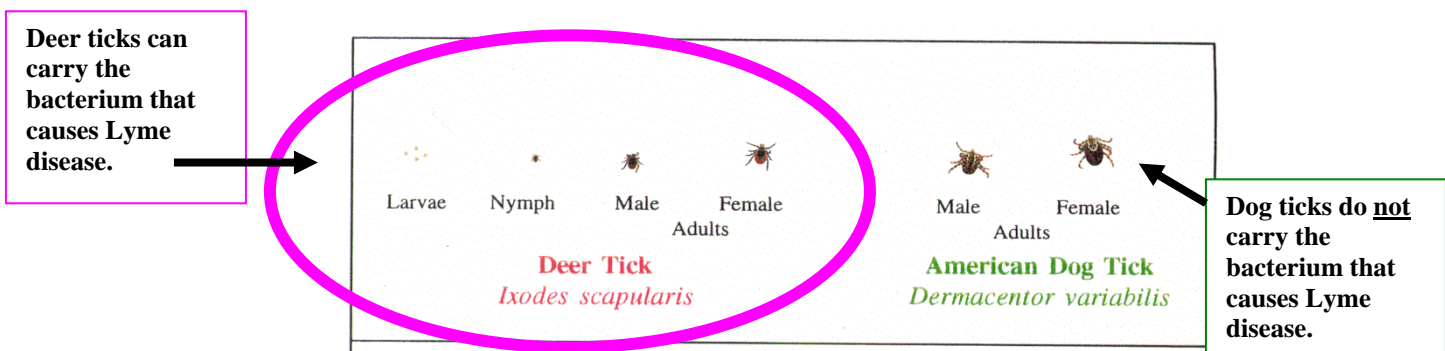
*Note: If you would like more information, please call the Division of Epidemiology and Immunization, Bureau of Communicable Disease Control. Our health educators and epidemiologists are available to help you become more comfortable with the topic of Lyme Disease before you begin using the educational materials in your school.*

### Part I: Information about Lyme Disease for Elementary School Teachers

Lyme disease is the most commonly reported tickborne disease in Massachusetts and children between the ages of 5 and 9 have the highest reported rates of Lyme disease. By learning how to limit their exposure to deer ticks, children can reduce their risk of infection.

The **deer tick**, which is very small, carries the bacteria that cause Lyme disease. **Deer ticks** go through three life stages as they develop: larva, nymph, and adult. Nymphs and adults can transmit Lyme disease, while larvae cannot. Nymphs are approximately the size of a poppy seed, and adults are about the size of a sesame seed.

**American dog ticks** do not carry Lyme disease, however they do carry other less common diseases, so they should be avoided as well.



Ticks usually live in brushy or wooded areas. They can be active at any time of the year when the temperature is above freezing. Ticks do not jump or fly, but grab onto a potential host that comes into direct contact with them. Usually, a tick must be attached to someone for at least 24 hours to be likely to transmit Lyme disease. Not all ticks carry the bacteria that cause Lyme disease. The **deer tick**, which is very small, can carry the bacteria. (A **deer tick** can become infected by feeding on the blood of an infected mouse.)

Early Lyme disease has symptoms that usually occur between 3 and 30 days after a tick bite. A person infected with Lyme disease may get an expanding rash that looks like a bull's eye, but this is not always the case. They may also experience flu-like symptoms such as fever, fatigue or aching muscles.

Lyme disease can be treated effectively with antibiotics. People should contact their doctor if they experience any of the symptoms listed above, especially if associated with recent tick exposure. It is important that treatment be started early.

If Lyme disease is not treated early, an infected person may develop more serious joint, heart or neurological problems.

The single most important thing that can be done to prevent Lyme disease (and other diseases spread by ticks) is to check your body for ticks every day after coming in from brushy or wooded areas. Ticks most often attach in the armpits, hairline, groin, legs, thighs, or in and behind the ears. Ticks are small, but they can be seen and felt on the skin. Ticks should be removed as soon as possible using a pair of fine point tweezers, grabbing the tick as close to the skin as possible, and pulling straight out with firm and steady pressure. Alcohol, gasoline, petroleum jelly, or a hot match should never be used to remove a tick.

Other ways to prevent Lyme disease include:

- Avoid brushy, wooded areas where ticks usually live.
- Stick to main pathways or the center of trails when hiking.
- Wear long-sleeved light colored shirts and long pants tucked into socks. This helps keep ticks away from your skin and makes them easier to see.
- Use insect repellents that contain DEET on exposed skin and/or products that contain permethrin on your clothing. Choose repellents with DEET concentrations of 30% or lower for adults and children over 2 months of age. (Products containing DEET should not be used on children under 2 months of age.). Higher concentrations of DEET

provide protection for a longer duration, but do not provide more protection. Individuals who are concerned about exposures to chemicals should use the lowest concentration of DEET that provides protection for the length of time they will be exposed to ticks. After returning indoors, wash treated areas with soap, and launder treated clothing before reuse.

The following strategies can be used to reduce the number of ticks living around your home:

- Keep grass cut short
- Remove leaf litter and brush
- Prune low lying bushes to let in more sunlight (Because ticks prefer a moist habitat, they can dry out quickly in the sun.)
- Use plants around your home that do not attract deer
- Use deer fencing (for yards greater than or equal to 15 acres)
- Keep woodpiles off the ground and away from the home
- Keep the plants around stone walls cut short

**Remind Your Students—  
“You can Prevent Lyme Disease by Keeping Ticks Off Your Body!”**

## **Part II:** **Lyme Disease Activities for Elementary Schools** **(Grades 3, 4, and 5)**

### **Goal:**

To increase student's knowledge regarding the transmission, symptoms, treatment, and prevention of Lyme disease.

### **Objectives:**

After viewing the presentation on Lyme disease ("Tick Talk") and completing the activities and homework assignments, students will be able to:

- Describe the transmission of Lyme disease;
- List steps to take to prevent Lyme disease (with a focus on doing a tick check everyday); and
- Recognize symptoms of Lyme disease.

### **Educational Activities Included in this Curriculum**

***Tick and Lyme Disease Paragraph*** – Have students write a paragraph on what they know about Lyme disease before beginning the presentation and activities listed below. Students can later review their paragraph to see how much they have learned about ticks and Lyme disease.

***"Tick Talk" presentation*** – This presentation can be shown in PowerPoint or printed on overhead slides. It focuses on the basic facts about ticks, Lyme disease transmission, Lyme disease symptoms, and ways to prevent Lyme disease.<sup>1</sup>

***Tick Bulletin Board*** – After the Tick Talk presentation, ask students to design a bulletin board on ticks and Lyme disease for your classroom or school hallway. Students can draw pictures of ticks, tick habitats or proper ways to dress when playing in wooded or grassy areas.

***Tick Word Search*** – Four different word searches incorporate vocabulary related to Lyme. Select the one that seems most appropriate for your students' vocabulary level.<sup>2</sup>

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<sup>1</sup> *What you should know about Lyme Disease* by Karen E. Baird, M.A. and Scott W. Brown, Ph.D. (University of Connecticut) was used as a reference for this presentation.

<sup>2</sup> Word search handouts courtesy of the Barnstable County Department of Health and the Environment and the University of Connecticut.

**Find the Hidden Tick Message** — Give students a copy of an encoded message about ticks and have them use the code to figure out the secret message.

**Tick Search and Color** — Students are given this picture of a family walking in the woods and asked to search the picture for hidden ticks. Students should circle the tick when they find it. Students can also color the picture at home or in class. This activity reinforces what students will have learned about places to find ticks.<sup>3</sup>

**Homework Assignment: Draw Your Backyard or Neighborhood Park, and Draw a Tick**

- Students are asked to draw their own backyard or a nearby park and circle three or more things that could be changed to make the area safer. (You can send a fact sheet or brochure home so the child can work on the drawing with the help of a parent or guardian.) They should bring the drawing back the next day. A classroom discussion about ways to prevent tick bites can follow. Ask students if they found anything that can be changed in their backyards to reduce the number of ticks.
- Give students the handout entitled “Draw a Tick” and ask them to complete it as homework. These can be cut out and used in a display about Lyme Disease for the entire school on a bulletin board.

**Schoolyard Tick Walk** — Walk around the schoolyard or playground with your students. Ask students to point out safe places to play versus places where ticks might be. After the schoolyard tour, lead a discussion on safe places to play and walk to school.

**Additional Materials are available for download on the Massachusetts Department of Public Health website: <http://www.mass.gov/dph/epi>**  
**You may also order materials by calling 617-983-6800.**

**These include:**

- Preventing Diseases Spread by Ticks (a brochure with detailed information and pictures—for grownups)
- Tick ID card – can be photocopied and distributed
- Lyme Disease Fact Sheet in English, Spanish, and Portuguese

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<sup>3</sup> Rita Mitchell, RN, public health nurse from Barnstable County Department of Health and the Environment developed the Tick Search and Color picture.