Prevent tick bites

Prevention of Lyme disease and other tick-borne diseases starts with reducing your exposure to tick bites. Tick-borne diseases generally occur during the summer months when ticks are most active. To prevent these illnesses you must prevent tick bites. Use the following personal protection measures to prevent tick bites:

- Avoid tall grass and overgrown areas.
- When hiking stay in the middle of trails.
- Consider using insect repellent.
- Tuck pant leg into socks.
- Wear long-sleeved shirts and closed shoes.
- To see the ticks easier for removal, wear light-colored clothing.
- Examine yourself, your children, and pets for ticks when returning indoors.
- Shower using a washcloth or puff to remove any unattached ticks when you come indoors.
- Talk to your veterinarian to find out how to protect your pets from tick bites.

You can prevent tick-borne illness. Use personal protection methods.

Check yourself, your children, and pets for ticks

A single bite from an infected tick can give you any of the diseases mentioned in this brochure. It is also possible to become infected with more than one disease.

To remove a tick, use tweezers and grasp the tick’s mouthparts as close to the skin as possible.

Pull the tick with steady pressure in an upward motion. When the tick has been removed, wash the area of the bite with soap and water and cover with an antiseptic.

Write on the calendar the date you removed the tick and the part of the body from which it was removed.

Should you experience any symptoms of any diseases mentioned in this brochure within the timeframe indicated, contact your physician to be evaluated.

Prompt tick removal is the key to preventing tick-borne illness. Prompt treatment is the key to preventing serious illness.

Lyme Disease and Other Tick-borne Diseases

From left to right: The deer tick adult female, adult male, nymph, and larva on a centimeter scale.

Actual centimeter scale.

Lyme Disease and Other Tick-borne Diseases

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Rocky Mountain spotted fever (RMSF) is the most severe and most frequently reported rickettsial illness in the United States. Rickettsia are closely related bacteria found worldwide. It has been reportable in Connecticut since 1980. Although physicians have been reporting RMSF longer than the other tick-borne illnesses in Connecticut, an average of only 3 cases are reported annually to the DPH.

**Rocky Mountain spotted fever** is caused by *Rickettsia rickettsii*. Unlike the previously mentioned tick-borne diseases in Connecticut, RMSF is transmitted by the *Dermacentor variabilis*, the American dog tick.

**Symptoms** of RMSF include sudden onset of fever, headache, muscle aches, and/or fatigue. Nausea, vomiting, or rash may be present in some cases, although many people infected will not become sick. Illness can range from mild to potentially life threatening. Symptoms occur 7-21 days after the tick bite. Laboratory findings may include thrombocytopenia (decreased number of blood platelets), leukopenia (a decreased number of white blood cells), and/or elevated liver enzymes in the blood. Ehrlichiosis may be confused clinically with Rocky Mountain spotted fever (RMSF); however, absence of a prominent rash is a good indicator it is not RMSF. As with Lyme disease, this disease is also treated with antibiotics.

**Treatment** of any tick-borne disease should begin as soon after infection as possible. If you are bitten by a tick, remove the tick as soon as possible using tweezers and pulling with steady pressure. Do not yank the tick. Wash the area of the bite with soap and water, and put an antiseptic on it. Write on the calendar the date you removed the tick and the part of the body from which it was removed. If you experience any of the symptoms previously mentioned for any of the tick-borne illnesses, contact your physician as soon as possible. It will be important for your physician to have a complete history of your exposure to ticks. If you experience an expanding red rash and cannot see your physician right away, take a picture of the rash and bring that picture with you to the physician. Early treatment is the key to prevent severe illness.

HGE is caused by bacteria called *Anaplasma phagocytophilum*. These bacteria are transmitted through the bite of the same tick that causes RMSF.

**Symptoms** of HGE generally include sudden onset of fever, headache, muscle aches, and/or fatigue. Nausea, vomiting, or rash may be present in some cases, although many people infected will not become sick. Illness can range from mild to potentially life threatening. Symptoms occur 7-21 days after the tick bite. Laboratory findings may include thrombocytopenia (decreased number of blood platelets), leukopenia (a decreased number of white blood cells), and/or elevated liver enzymes in the blood. Ehrlichiosis may be confused clinically with Rocky Mountain spotted fever (RMSF); however, absence of a prominent rash is a good indicator it is not RMSF. As with Lyme disease, this disease is also treated with antibiotics.

**Babesiosis** is caused by a one-cell parasite of the red blood cells called *Babesia microti*. The parasite can be seen within red blood cells when viewed under a microscope.

**Symptoms** of babesiosis may include fever, chills, muscle aches, fatigue and jaundice secondary to hemolytic anemia (destruction of red blood cells). These symptoms may appear 1-4 weeks after the bite. While most people will not become ill, babesiosis can be a potentially severe and sometimes fatal disease. Babesiosis is treated with a combination of medications which usually include quinine and/or clindamycin.

**Co-infections** are possible through the bite of an infected deer tick. This means, you can become infected with Lyme disease and ehrlichiosis, and/or babesiosis with one bite of an infected deer tick. The only way to prevent these diseases is to prevent tick bites.

**Treatment** of any tick-borne disease should begin as soon after infection as possible. If you are bitten by a tick, remove the tick as soon as possible using tweezers and pulling with steady pressure. Do not yank the tick. Wash the area of the bite with soap and water, and put an antiseptic on it. Write on the calendar the date you removed the tick and the part of the body from which it was removed. If you experience any of the symptoms previously mentioned for any of the tick-borne illnesses, contact your physician as soon as possible. It will be important for your physician to have a complete history of your exposure to ticks. If you experience an expanding red rash and cannot see your physician right away, take a picture of the rash and bring that picture with you to the physician. Early treatment is the key to prevent severe illness.