

The Black Legged Or Deer Tick And Lyme Disease

Our recommendations when a tick bites you:

Remove the tick promptly, **call your physician**, and bring the tick to the health department for identification and testing. There are two services available – one is free, but results take 3 to 6 weeks. The other service costs \$35.00 and will take 3 to 5 business days for results.

The Rest Of The Story

The organism causing the disease:

Borrelia burgdorferi

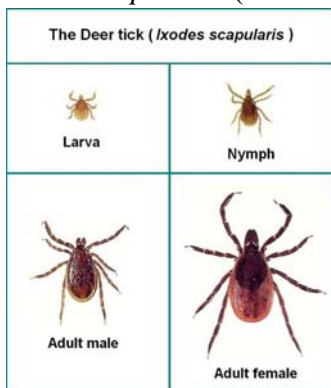


- Immediate treatment using a single dose of Doxycycline is extremely effective.
- A 4-week course of antibiotics is recommended if started more than 72 hours after the tick is removed.
- Untreated the infection can spread to joints, the heart, and the nervous system.

The tick that can give us the disease:

The deer tick is the most prevalent source in Stamford

Ixodes scapularis (all 4 life stages shown)



Infection varies by life stage and time of year

- The adult female (bottom right) carries *Borrelia burgdorferi* on an average 35% of the time.
- The adult male (bottom left) is infected 25% of the time
- The nymph stage (top right) is about 18% infected
- The larva generally cannot carry *Borrelia burgdorferi*

When do I NOT have to worry about ticks?

When temperatures are below freezing, ticks are not active, otherwise – watch out!

- Females are most active from the time it is above freezing to June (35%+ infected).
- Nymphs are active from April to August (18% infected).
- Larvae are active from May to September (no infection).
- Females become active again in October till it gets cold again, but will be active anytime it is above freezing.
- **Yes, August, September and the beginning of October are Lyme disease tick minimums!**

The reservoir for the disease:

How does *Borrelia burgdorferi* find its way to the tick?

The White Footed Mouse



The larva and nymph stage primarily feeds on small mammals and when infected the white-footed mouse carries and transmits the disease the remainder of its life (about 3 years).

So what part do the deer play?

- They are bitten and carry the ticks that can transmit Lyme disease.
- They do not carry and do not transmit Lyme disease to ticks.
- They provide a host for the ticks to live on



2006 Tick information for Stamford, CT:

Of 444 submissions, 219 were tested (that means that they were engorged with blood and were not larva). 58 were positive for *Borrelia burgdorferi*, the organism that causes Lyme disease (26.5%).

2006 Lyme disease information for Stamford, CT:

56 cases of Lyme disease were reported; in 2006 Lyme disease diagnosis was based on Doctor observed symptoms, not blood tests.

6 suspected cases of Lyme disease were reported, a positive blood test without observed or reported symptoms

2006 Other tick borne diseases in Stamford, CT:

58 cases of Ehrlichiosis were reported, 4 suspected cases of Ehrlichiosis were reported

4 confirmed Babesiosis cases, 6 probable Babesiosis cases, 61 Babesiosis-like illnesses were reported.

Lyme disease - symptoms

From the CDC website

The first sign of infection is usually a circular rash called erythema migrans or EM. This rash occurs in approximately 70-80% of infected persons and begins at the site of a tick bite after a delay of 3-30 days. A distinctive feature of the rash is that it gradually expands over a period of several days, reaching up to 12 inches (30 cm) across. The center of the rash may clear as it enlarges, resulting in a bull's-eye appearance. It may be warm but is not usually painful. Some patients develop additional EM lesions in other areas of the body after several days. Patients also experience symptoms of fatigue, chills, fever, headache, and muscle and joint aches, and swollen lymph nodes. In some cases, these may be the only symptoms of infection.

The Rash (erythema migrans)



- Not all persons get the rash and the rash might not be noticed if it occurs in the scalp or back.
- If you get the rash, it is a very strong sign that you have been infected with Lyme disease.
- If you don't get the rash, it DOES NOT mean that you do not have Lyme disease.

Untreated, the infection may spread to other parts of the body within a few days to weeks, producing an array of discrete symptoms. These include loss of muscle tone on one or

both sides of the face (called facial or “Bell’s palsy), severe headaches and neck stiffness due to meningitis, shooting pains that may interfere with sleep, heart palpitations and dizziness due to changes in heartbeat, and pain that moves from joint to joint. After several months, approximately 60% of patients with untreated infection will begin to have intermittent bouts of arthritis, with severe joint pain and swelling. Large joints are most often effected, particularly the knees. In addition, up to 5% of untreated patients may develop chronic neurological complaints months to years after infection. These include shooting pains, numbness or tingling in the hands or feet, and problems with concentration and short term memory.

Lyme disease – diagnosis

Lyme disease is diagnosed based on symptoms, physical findings (e.g., rash), and the possibility of exposure to infected ticks. Most recommended tests are blood tests that measure antibodies made in response to the infection. These tests may be falsely negative in patients with early disease.

Lyme disease - treatment

Talk to you physician, but recommendations include:

- A single 200 mg dose of Doxycycline may be offered for adults and children 8 years and older if a tick is engorged and treatment is started within 72 hours of the time that the tick was removed.
- Otherwise most cases of Lyme disease can be treated successfully with 4 weeks of antibiotics.

Prevention

Steps to prevent Lyme disease include:

- Using insect repellent when outdoors – a DEET based repellent is recommended
- Wearing light colored clothing, long pants tucked into the socks and long sleeve shirts
- Checking yourself for ticks after every time outdoors
- Removing ticks promptly
- Landscaping to prevent mice from having a living space, boarders which are inhospitable to ticks.
- Integrated pest management.