What is Lyme Disease?

Lyme disease is a bacterial infection spread by the bite of an infected blacklegged tick. Lyme disease can affect the skin, joints, nervous system and/or heart.

When detected early, Lyme disease can usually be treated with antibiotics. If left untreated, it can result in serious health problems.

How is Lyme Disease Spread?

- The type of tick responsible for spreading Lyme disease in New York is the blacklegged tick.
- Not all ticks carry the bacteria that causes Lyme disease; they become infected after feeding on an infected animal, such as mice or other small mammals.
- You cannot get Lyme disease from another person or an infected animal.
- Transmission times for Lyme and other tick-borne diseases vary, and the sooner a tick is removed, the lower the risk of infection. It is important to always check for ticks after spending time outdoors.
- Blacklegged tick nymphs are the size of a poppy seed and adult ticks are the size of a sesame seed. Both can transmit Lyme, as well as other tick-borne diseases.

Note: Transmission time is a current topic of debate, but some pathogens are transmitted in minutes, others hours. Err on the side of caution: the sooner the better.

What About the Lone Star Tick?

In recent years, the Lone Star tick, a southern species, has been detected in parts of New York. Females have a white spot on their back. It does not transmit Lyme disease, but can spread similar illnesses such as Southern Tick-Associate Rash Illness (STARI) or Ehrlichiosis.

Is There a Tick Season?

Ticks can be active all months of the year when temperatures are above freezing. However, most tick encounters occur from April through November. Their preferred habitats are wooded areas and adjacent grasslands. Lawns and gardens at the edges of woods may also be home to blacklegged ticks. Ticks may feed on wild animals such as mice, deer, birds and raccoons, but domestic animals such as cats, dogs and horses can also carry the ticks closer to home.

What Are the Symptoms of Lyme Disease?

Lyme disease is often hard to diagnose because the symptoms are usually non-specific (fever, fatigue) and similar to those of other common illnesses. Symptoms may occur shortly after being bitten by a tick, but may be so mild that they often go unnoticed. Some people notice a rash after experiencing a tick bite, but many do not.

Many tick-borne microbes also cause disease symptoms of varying severity. Babesia is a parasite that causes headaches, recurring fevers, and anemia. Symptoms of Anaplasma include fever and extreme fatigue. Powassan is a virus that can cause encephalitis in a small subset of those infected. These diseases can be life-threatening.

What to look for:

- Flu-like symptoms such as fever, headache, muscle aches, joint pain, and swollen glands, particularly during times like summer, when colds and flu are uncommon. Severe symptoms such as heart arrhythmias/chest pain or meningitis can also occur.
- High fever and profound fatigue may accompany infections caused by other tick-borne microbes.
- Although a skin rash following a tick bite is a known sign of Lyme disease, many people diagnosed with Lyme disease report never seeing a rash at all. If a rash at the site of a tick bite is observed, it may appear as a solid, expanding red rash, it may look like a bull’s eye, or it may take other forms.
- Left untreated and even in some people who received treatment for Lyme disease, symptoms such as fatigue, headaches, migrating joint pain, numbness, tingling or burning sensations are known to occur.

How Can I Safely Remove a Tick?

If you DO find a tick attached to your skin, do not panic; plan to remove the tick in a safe and effective way.

To best remove a tick that is firmly attached:

- Use fine point tweezers.
- Grasp the tick near its head, as close to the skin as possible, and pull away gently to remove the whole tick without crushing it.
- Place the tick in a small container of rubbing alcohol to kill it.
- Clean the bite wound with rubbing alcohol or hydrogen peroxide.
- Monitor the site of the bite for the next 30 days for the appearance of a rash. If you develop a rash anywhere or flu-like symptoms, contact your health care provider immediately.

How Can I Prevent Ticks from Biting?

Ticks do not jump or fly onto their victims. They wait on vegetation and cling to animals and humans as they brush by. While there is no way to protect yourself 100 percent from encountering a tick while in an infested area, there are some steps you can take to reduce your risk:

- Stay on the center of trails and paths – don’t brush against vegetation if you can avoid it.
- Wear long pants and long-sleeved shirts, and tuck the legs into your socks or boots. This helps keep ticks from reaching your skin.
- Wear light colored and tightly woven clothing. This makes it easier to see ticks.
- Use repellents that contain 20% or more DEET on the exposed skin for protection that lasts up to several hours. Parents should apply this product to their children, avoiding hands, eyes and mouth.
- Products containing Picardin and IR3535 can also serve as effective repellants.
- Products that contain permethrin can be used to treat boots, clothing and camping gear. Always follow product instructions.
- Check yourself, your children and pets at least once per day for ticks. A tick is so small it can easily go unnoticed. Pay special attention to the backs of knees, behind the ears, the scalp, armpits and back.
What Should I Do if I Think I Might Have Lyme Disease?

See your doctor immediately and tell him or her of your suspicions, especially if you have found a tick attached to your skin, or if you were in an area where ticks are present. Since Lyme disease can mimic other illnesses, this information can help your doctor make a diagnosis.

Is There Treatment for Lyme Disease?

Depending on the type of tick-borne infection a person has, a specific medicine will be given. All medical personnel agree that early diagnosis and treatment is critical in preventing a serious later-stage disease and potentially chronic illness.

Can Ticks Carry Other Diseases?

Ticks may also carry ehrlichiosis, anaplasmosis, Powassan virus, and/or babesiosis, as well as others. These other tick-borne diseases produce many of the same symptoms as Lyme disease. However, they tend to cause higher fevers than Lyme disease. These diseases can be fatal, especially in the elderly and those with weakened immune systems.

Anaplasmosis and ehrlichiosis are caused by bacteria and can be treated with certain antibiotics, which are also effective against Lyme disease. However, babesiosis is caused by a malaria-like parasite, while Powassan is a virus and cannot be treated in the same way.

The more familiar dog tick, which is larger than the black-legged tick, may carry Rocky Mountain Spotted Fever. Fewer than 50 cases are reported annually in New York State. It, too, is highly responsive to antibiotic treatment.

What is Being Done About Lyme Disease?

The NYS Senate Task Force on Lyme and Tick-Borne Diseases is working with other agencies and institutions to learn more about tick ecology and the risk of the disease following tick exposure. The State has also funded research aimed at identifying the pathogens that ticks carry in regions across the state and passed legislation aimed at significantly increasing prevention and awareness efforts to better protect New Yorkers.

Protect Your Pets

Ticks can infect dogs and cats, too. Also, their fur can act like a “tick magnet,” carrying ticks inside your home. Consult with your veterinarian about tick-protection for your pets.

Information provided by:
New York State Department of Health
Cornell University
Centers for Disease Control and Prevention (CDC)
Mayo Clinic
Johns Hopkins Medicine