

What Parents Need to Know About Children and Lyme Disease



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With the arrival of warmer weather also comes tick season, and with it the threat of Lyme disease. Did you know that Suffolk County is in the heart of one of the country's highest risk areas? Parents, especially, need to be aware of the risks of tick-borne disease in children. Dr. Saul Hymes, Director of the Lyme and Tick-Borne Disease Center at Stony Brook Children's, offers his best advice.

What is Lyme Disease?

Lyme Disease is a bacterial infection transmitted by the bite of the Ixodes scapularis tick. In acute infections, it can cause days of headache, fevers, rash and muscle aches. More severe cases can progress to a Bell's Palsy (facial paralysis) or meningitis. Untreated, it can lead to heart problems, arthritis, and even long-term neurologic and/or rheumatologic conditions. Other illnesses carried by ticks local to Long Island include Rocky Mountain Spotted Fever, Babesiosis, Anaplasmosis and Ehrlichiosis, Tularemia and STARI.

Is Lyme disease a problem for children?

Overall, Lyme disease is a growing problem for Suffolk County, with as many as 5,000 to 6,000 cases a year. The Centers for Disease Control estimates that there are approximately 300,000 cases annually across the country, although only 10 percent get reported. This means that awareness is low, and that many people may not be receiving prompt or appropriate treatment. When Lyme disease goes undiagnosed, especially in children, there can be serious complications. However, know that treatment is extremely effective, especially if started early.

What should I do if my child has a tick bite or I suspect that they have Lyme disease?

Seek medical treatment from an expert. Symptoms that may alert you to possible Lyme disease infection include rash and flu-like symptoms in the early stages followed by joint pain or neurological problems.

Where do I find experts in Lyme disease?

At the Lyme and Tick-Borne Disease Center at Stony Brook Children's Hospital. This new center, staffed by members of the Division of Pediatric Infectious Diseases, provides multidisciplinary, comprehensive diagnosis, treatment and management of Lyme and other diseases transmitted by ticks. There's an advantage to having your child treated by an infectious disease expert like the ones at Stony Brook's Center. They are all board-certified pediatricians, with specialty training in pediatric infectious diseases. They have expertise in treating all types of pediatric infectious diseases, including Lyme disease, and are up to date on all relevant tick disease-related treatments and research. They remain current on the latest guidelines, and bring a level of experience to their patients that can make a difference in both common and hard-to-diagnose cases.

How does Stony Brook's Lyme Disease Center work with children?

After a tick bite, or if symptoms of Lyme disease are suspected, our team can perform a complete medical history, appropriate screenings and laboratory tests, a physical exam, tick identification, follow-up management and referrals to other pediatric medical experts, if needed.

Most important, we take time with each child. We understand that every case is different, and symptoms show up in children differently so we help you sort it all out. We also keep in close contact with your family doctor or referring physician so that everyone who cares for your child stays in the loop.

What else does the Center offer?

When the symptoms of Lyme disease began emerging in the population, the test to confirm Lyme disease was invented by a Stony Brook microbiologist. So as long as there has been Lyme disease, Stony Brook has been involved. Because Suffolk County has been an epicenter for the disease since the beginning, Stony Brook has dedicated resources to understanding the disease process, investigating causes and treatments, and developing evidence-based best practices. Lyme disease, quite simply, is one of our areas of expertise. In fact, our Lyme laboratory has such high-quality testing that even hospitals in the city send their samples to us. Also important to note: Because this is a children's hospital-based center, the Lyme Disease team has access to the full resources of Stony Brook. This includes specialists from the Pediatric Rheumatology, Pediatric Orthopedics, Pediatric Cardiology and Pediatric Neurology Departments, along with sophisticated diagnostic technology, neuropsychiatric evaluations, social work and other supporting services. The point is, we are able to deliver a comprehensive approach in one place, close to home.

For more information about Stony Brook Children's, call (631) 444-KIDS.

If you are curious about a certain medical topic and would like to learn what an expert thinks about it, let us know. Although we cannot offer individual medical advice in this column, we'd be happy to choose our next topic from among your suggestions. From arrhythmias to zoster virus, we have top specialists in virtually every area of medicine who can answer your questions. Email us at MedicalExperts@stonybrookmedicine.edu or write to: Medical Experts at Stony Brook, 188 Belle Mead Road, East Setauket, NY 11733-9228. If you need a physician, call HealthConnect® at (631) 444-4000.

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Lyme Disease

Lyme Disease is an infection caused by a spiral-shaped type of bacteria called *Borrelia burgdorferi*. There are many other species of *Borrelia*, some of which cause human infections.

According to estimates from the Centers for Disease Control (CDC), Lyme disease may cause up to 300,000 cases yearly. Most of these infections are unrecognized, or are recognized late, so testing and diagnosis are crucial. However, over-testing, over-diagnosis, and over-treatment can also occur.

How can you sort this all out and get your child the best care, from diagnosis to treatment? The best way to begin is to become informed.

Transmission

"How is Lyme transmitted?"

Lyme disease is transmitted by the bite of a tick—here in the Northeast it is the deer tick, *Ixodes scapularis*. Many people believe that transmission is quick and easy—it is not. The tick must feed on a person for at least 24–36 hours to transmit the bacteria.

"What if I pull a tick off my child, is there anything I can do?"

First, if it is not a deer tick, you don't need to be worried about Lyme. If it is, but has only been on for only a short time, you also don't need to worry. Unfortunately, with children, it can be difficult to know exactly how long a tick has been feeding; and identifying them at home is not always easy.

The Lyme laboratory at Stony Brook performs tick identification and also time-of-attachment calculations on any tick brought to them. Call (631) 444-3824 for more details.

If the tick is a deer tick and has been attached for longer than 24 hours, it may still be possible to prevent Lyme with a dose of oral doxycycline, which our doctors at the Lyme Center have considerable experience using even in children under 8 years of age.

The Disease

"How will I know if my child has Lyme disease?"

Lyme disease tends to present in phases. Early Lyme presents as an acute illness with fever, muscle and joint aches, and in 20–30% of cases the classic target-like rash. In addition to these, one of the more prominent symptoms is headache. You can think of acute Lyme as similar to a very bad flu. If Lyme is treated properly during this phase, there should be no more symptoms.

If it is not diagnosed and treated, middle- and late-phase Lyme can spread and cause other symptoms: