Take a bite OUT of LYME

LYME DISEASE AND You!

Facts and information you should know about Ticks and Lyme Disease

What is a tick? Ticks are not insects but are arthropods more closely related to mites, spiders, scorpions, and harvestmen. There are about 80 species of ticks in the United States (~ 865 species worldwide). However, only about 12 or so in the U.S. are of major public health or veterinary importance with a few others that occasionally attack humans.

What is Lyme Disease? Lyme disease is a multisystem bacterial infection caused by a type of spirochete (“spiro-oh-keet”) named Borrelia burgdorferi (Bb). Spirochetes are bacteria with a spiral or corkscrew-type shape. Lyme disease is then transmitted to humans and animals by the bite of an infected tick. Lyme disease bacteria can infect any organ of the body including the brain, heart, central nervous system, and joints. The pathogen was named in honor of the discoverer Willy Burgdorfer.

What is a ticks life and infection cycle? Ticks, like many mite species, are obligate blood-feeders, requiring a host animal for food and development. Ticks have four stages in their life cycle: egg, the 6-legged larva (seed ticks), 8-legged nymph and adult, (male or female). Larvae and nymphs change to the next stage after digesting a blood meal by molting or shedding the cuticle. Most of the ticks mentioned in here have a 3-host life cycle, whereas each of the three active stages feed on a different individual host animal, taking a single blood meal. Larvae feed to repletion on one animal, drop to the ground and molt to a nymph. The nymphs must find and attach to another animal, en- gorge, drop to ground and molt to an adult. The adult tick feeds on a third animal. A replete or engorged (blood filled) female tick will produce a single large batch of eggs and then die. Depending upon the species of tick, egg mass deposited can range roughly from 1,000 to 18,000 eggs. The larvae and nymphs generally feed on small to medium-sized host rodents, mainly the white-footed mouse, while adult ticks feed on larger animals like deer. People acquire Lyme disease mainly from the nymph stage tick because they are active during the time of year when people are in their ecosystem, such as walking through brush or tall grass. Because the nymph is the size of a small freckle or poppy seed, it often is not detected and remains attached from 36-48 hours, the period that is required to transmit infection. As the tick feeds, spirochetes escape from the salivary gland into the skin of the human host.

How do you get Lyme Disease? The Lyme disease bacterium, Borrelia burgdorferi, normally lives in mice, squirrels and other small animals. It is transmitted among these animals and to humans through the bites of certain species of ticks. In the northeastern and northcentral United States, the black-legged tick (or deer tick, *Ixodes scapularis*) transmits Lyme disease. Not all ticks are infected, and the infection rate depends on area and vary from place to place.

Can Lyme Disease be spread other ways? Researchers believe that other biting insects such as mosquito’s, flea’s and biting flies maybe able to transmit Lyme disease as well. It is also mentioned that Lyme disease can be transferred from mother to baby in the womb as well as through breast milk. Sexual transmission is also an open subject. Everyone knows Lyme disease is a distant cousin to Syphilis which is sexually transmitted and the jury is still out on this one.

References:


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This brochure is informational only and should not be substituted for seeing a Lyme disease literate doctor.
Can I tell if I have Lyme Disease? The classic rash described as a “bull’s-eye” may only occur or have been seen in as few as 30% of cases (many rashes are in body hair and indiscernible areas and go undetected). More recent studies have shown that the “bull’s-eye” is no longer the most common rash associated with a Lyme-infected tick bite. Solid red rashes of varying shades, lesions that ooze or turn blackish and non-circular or oval shapes have since been attributed to Lyme disease. The rash is sometimes warm to the touch and rarely painful. Treatment in this early stage is critical. If left untreated or treated insufficiently, symptoms may creep into one’s life over weeks, months, or even years. Lyme disease is often referred to as “The Great Imitator” because it mimics so many other diseases. With symptoms present, a negative lab result means very little as they are very unreliable. The diagnosis, with today’s limitations in the lab, must be clinical.

Many Lyme patients were first diagnosed with other illnesses such as Juvenile Arthritis, Rheumatoid Arthritis, Reactive Arthritis, Infectious Arthritis, Osteoarthritis, Fibromyalgia, Raynaud’s Syndrome, Chronic Fatigue Syndrome, Intestinal Cysts, Gastroesophageal Reflux Disease, Fifth Disease, Multiple Sclerosis, Scleroderma, Lupus, early ALS, early Alzheimers Disease, Crohn’s disease, Ménières Syndrome, Raynaud’s Syndrome, Sjogren’s Syndrome, Syringomyelia, Colsis, prostateitis, Psychiatric disorders (bipolar, depression, etc.), Encephalitis, Sleep disorders, Thyroid disease and various other illnesses which can make diagnosis difficult, resulting in delayed diagnosis, and thus improper treatment.

What are the Stages of Lyme Disease?

Stage One consists of an initial skin rash at the site of a tick bite, but sometimes elsewhere on the body. Stage Two is characterized by a flu-like illness of fever, muscle aches, and fatigue. Stage Three involves serious neurological, cardiac, and arthritic complications.

The second stage of Lyme disease usually involves an illness of fatigue, muscle aches, and fever that is easily misdiagnosed as the flu. Stage Two is sometimes termed “disseminated infection” because it represents the spread of the Lyme organism past its initial battle with the immune system in the skin (producing the EM rash) to more distant areas and systems. It may fall under this flu-like ailment may pass, easily forgotten as a common viral infection. According to the CDC (Centers for Disease Control and Prevention), about 200,000 new Lyme disease cases are reported each year, although many more may go undiagnosed.

Lyme disease is a chronic illness whose symptoms can be highly variable and difficult to diagnose. The disease can affect many body systems, including the immune system, brain, heart, muscles, joints, skin, and nervous system. The symptoms of Lyme disease can range from mild to severe and may include:

- Fatigue
- Headache
- Muscle or joint pain
- Fever
- Rash

Can Lyme Disease be treated? The treatment for Lyme disease involves a combination of antibiotics and supportive care. Early-stage Lyme disease can usually be treated successfully with antibiotics, while late-stage or chronic Lyme disease may require more intensive therapy and management. It is important to seek medical attention as soon as possible if you think you may have been exposed to a tick that may carry the Lyme disease bacteria.

Can Lyme Disease go away on its own? In some cases, Lyme disease may disappear without treatment. However, this is rare and most cases require medical intervention.

Can Lyme Disease be cured? Yes, Lyme disease is treatable if caught early. However, some cases may require ongoing treatment. It is important to follow up with your healthcare provider to ensure complete recovery.

Can Lyme Disease cause permanent damage? In rare cases, Lyme disease can cause permanent damage to the heart, brain, nervous system, or other organs. This is more likely if the disease is not treated promptly or if it is left untreated for a long time.

Can Lyme Disease cause infertility? Yes, Lyme disease can cause infertility in men and women. It can affect the reproductive system, causing difficulties with pregnancy or infertility.

Can Lyme Disease cause seizures? Yes, Lyme disease can cause seizures in some cases. This is more likely if the disease affects the nervous system.

Can Lyme Disease cause death? In very rare cases, Lyme disease can be fatal. This is more likely if the disease is not treated promptly or if it is left untreated for a long time.

Can Lyme Disease cause immune deficiency? Yes, Lyme disease can cause immune deficiency in some cases. This is more likely if the disease affects the immune system.

Can Lyme Disease cause cancer? No, there is no known link between Lyme disease and cancer.

Can Lyme Disease cause stroke? Yes, Lyme disease can cause stroke in some cases. This is more likely if the disease affects the nervous system.

Can Lyme Disease cause kidney failure? Yes, Lyme disease can cause kidney failure in some cases. This is more likely if the disease affects the kidneys.

Can Lyme Disease cause blindness? Yes, Lyme disease can cause blindness in some cases. This is more likely if the disease affects the eyes.

Can Lyme Disease cause hearing loss? Yes, Lyme disease can cause hearing loss in some cases. This is more likely if the disease affects the ears.

Can Lyme Disease cause memory loss? Yes, Lyme disease can cause memory loss in some cases. This is more likely if the disease affects the brain.

Can Lyme Disease cause weight loss? Yes, Lyme disease can cause weight loss in some cases. This is more likely if the disease affects the digestive system.

Can Lyme Disease cause hair loss? Yes, Lyme disease can cause hair loss in some cases. This is more likely if the disease affects the scalp.

Can Lyme Disease cause numbness? Yes, Lyme disease can cause numbness in some cases. This is more likely if the disease affects the nerves.

Can Lyme Disease cause chest pain? Yes, Lyme disease can cause chest pain in some cases. This is more likely if the disease affects the heart.

Can Lyme Disease cause mouth sores? Yes, Lyme disease can cause mouth sores in some cases. This is more likely if the disease affects the mouth.

Can Lyme Disease cause vomiting? Yes, Lyme disease can cause vomiting in some cases. This is more likely if the disease affects the digestive system.

Can Lyme Disease cause diarrhea? Yes, Lyme disease can cause diarrhea in some cases. This is more likely if the disease affects the digestive system.

Can Lyme Disease cause respiratory symptoms? Yes, Lyme disease can cause respiratory symptoms in some cases. This is more likely if the disease affects the respiratory system.

Can Lyme Disease cause swelling? Yes, Lyme disease can cause swelling in some cases. This is more likely if the disease affects the limbs or other body parts.

Can Lyme Disease cause joint pain? Yes, Lyme disease can cause joint pain in some cases. This is more likely if the disease affects the joints.

Can Lyme Disease cause muscle pain? Yes, Lyme disease can cause muscle pain in some cases. This is more likely if the disease affects the muscles.

Can Lyme Disease cause fever? Yes, Lyme disease can cause fever in some cases. This is more likely if the disease affects the body temperature.

Can Lyme Disease cause fatigue? Yes, Lyme disease can cause fatigue in some cases. This is more likely if the disease affects the energy levels.

Can Lyme Disease cause skin rash? Yes, Lyme disease can cause skin rash in some cases. This is more likely if the disease affects the skin.

Can Lyme Disease cause lymphadenopathy? Yes, Lyme disease can cause lymphadenopathy in some cases. This is more likely if the disease affects the lymph nodes.

Can Lyme Disease cause nosebleeds? Yes, Lyme disease can cause nosebleeds in some cases. This is more likely if the disease affects the nasal cavity.

Can Lyme Disease cause headaches? Yes, Lyme disease can cause headaches in some cases. This is more likely if the disease affects the brain.

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