



Lyme Disease Symptoms Everyone Should Know

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October 2012 - Lyme disease is an infection attributable to bacteria called a spirochete, clinically named *Borrelia Burgdorferi*. Anyone can get this infection from the bite of an infected deer tick. Lyme disease symptoms mimic many other diseases. The infection may affect any organ of the body, including the brain and nervous system, joints and heart. Therefore, it is important to see a lyme literate doctor who is educated about the disease immediately after getting bit by the tick to get the proper diagnosis and treatment.

Lyme Disease Symptoms

The bacteria enters the body where the tick bites. The bacteria then spreads deep into the skin, causing a reddish bulls-eye rash and flu-like symptoms. As the disease develops, the joints and muscles, heart and brain are affected.

The Three Stage Progression of Lyme Disease

1. Localized bulls-eye rash and manifests with skin inflammation.
2. Early disseminated phase. In this second phase, the heart and nervous system are affected
3. Late phase is characterized by arthritis, brain inflammation and neurological symptoms

Phase 1 – Day 3 to day 30 post tick bite.

1) Rash

In this initial phase, within days to weeks (the average is about 7 days) of the tick bite, the affected part of the skin develops a round spot of redness. The skin is not raised, and in the center there is a clear area that gives the appearance of a bull's eye. This skin lesion is known as erythema migrans or EM.

This rash gradually expands in the next few days, growing up to 12 inches (30 cm) across. It typically feels warm to the touch, and most often doesn't itch or cause pain. These skin lesions can affect any area of the body.

In about 50% of cases, people remember the tick bite. About in a 25% of cases, there is no visible rash on the skin. The redness resolves in some cases, without treatment, in three to four weeks. However, the bacteria is spreading throughout the body.

2) Flu-Like symptoms

Some people may get general flu-like symptoms in addition to a rash. In others, these symptoms may be the only evidence of infection. In these cases, Lyme disease mimics influenza and other common viral illnesses. These general, flu-like symptoms include chills, fever, fatigue, headache, muscle aches and swollen lymph nodes.

Phase 2 Early disseminated stage (days to weeks post-tick bite) 1)

Flu-like symptoms Flu like symptoms may continue to persist and become worsen. Fatigue, chills, fever, headaches, muscle aches, and painful, inflamed joints are common. In some cases, people have a backache, nausea or vomiting, sore throat and swollen glands. Your doctor may palpate your spleen and notice it to be enlarged. All these symptoms may come and go, however, there is a feeling of illness and weakness that is perceived continuously. Again, these symptoms mimic common viral infections, particularly when there is no associated rash, which makes the diagnosis of Lyme disease sometimes difficult to make.

2) More Rashes

More EM skin lesions may affect other areas of the body in nearly half of people with Lyme disease.

3) The nervous system is affected in about 15% of people

Bell's palsy may occur. Bell's palsy is a neurological condition affecting the facial nerve. Typical symptoms include loss of muscle tone and weakness on one or both sides of the face. These problems may last for months. Initially, Bell's palsy may start with a mild weakness to a total paralysis within hours to days. The person finds it difficult to smile, to make facial expressions or to close the affected eye(s). There is a facial droop and pain can be perceived in the jaw or behind the ears. The taste sensation is decreased, and also changes in the amount of tears and saliva occur. In some cases, a headache is present and can be severe.

b) Nerve pain (shooting pain) and weakness may develop in other places and may also persist longer and affect the day to day activities and sleep.

c) Meningitis Meningitis is the inflammation of the membranes that cover the brain and spinal cord. Typical signs and symptoms of meningitis include extreme headache, and neck stiffness and fever. Other symptoms associated with meningitis are vomiting and nausea, confusion, difficulty concentrating, sleepiness, sensitivity to light and even seizures.

In newborns and infants, meningitis manifests with symptoms such as high temperature, frequent crying, extreme sleepiness or becoming easily irritated, poor eating, a bulge from the smooth spot on top of a baby's scalp, neck tightness and convulsions.

Meningitis can be a life-threatening problem and for that reason, it needs urgent medical treatment.

4) Heart problems Around 8% of people infected with the *Borrelia burgdorferi* spirochete will develop irregular heartbeats (arrhythmias), inflammation of the heart tissue (myocarditis) and inflammation of the sac that surrounds the heart (pericarditis). These conditions will cause a variety of symptoms including chest pain, palpitations, light-headedness, or even fainting. Heart complications are also serious and have to be treated promptly.

5) Arthritis

Lyme disease is usually associated with discomfort and inflammation of the one or more joints, most commonly the knees. The arthritis symptoms of lyme disease may mimic many other forms of inflammatory arthritis and can also become chronic.

A number of these symptoms may disappear over the next weeks to a few months, even with no treatment. Nevertheless, insufficient treatment can cause complications, as described in phase 3.

Phase 3

This delayed, disseminated period takes place months and even years post tick bite. Approximately 60% of individuals who did not receive treatment might have off and on bouts of arthritis, seen as an intense pain and swelling.

Approximately 5% of people who go without treatment may acquire chronic neurological problems months to years following the infection. The lyme disease symptoms associated with phase 3 are nerve type shooting pains, numbness or tingling in your hands or feet, suddenly difficulties with memory and speech. Many people manifest depression and anxiety associated with Lyme disease.

Post Treatment Syndrome

About 10 to 20% of individuals treated with antibiotics for this disease will continue to have fatigue, pain, or joint and muscle aches for up to 6 months post treatment. This condition is called "chronic lyme disease," or "Post treatment Lyme disease Syndrome" and you should talk to your lyme literate doctor to find out what to do for symptom relief.

If you are having lyme disease symptoms, talk to your lyme literate doctor as soon as possible. As you can see, many symptoms are not specific so it is difficult to diagnosis without the proper laboratory tests. And because this disease is prevalent across the United States and throughout the world, everyone can be affected.

