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*Please forward to your friends and family!*

**Lyme Disease-Acute-Chronic and Coinfections**  
**The Facts of What You Can Do and What You Can Expect!**

Lyme disease was first observed in 1975, as a cluster of children and adults residing in the Lyme Connecticut area, were experiencing uncommon arthritic symptoms. This was linked in 1977 to a tick born transmission for the bite of (black-legged) tick *Ixodes scapularis*. In 1982 the bacterium that caused Lyme disease was discovered to be a spirochete known as *Borrelia burgdorferi*.

This is the most common tick born disease in the Northern Hemisphere, affecting 300,000 people a year in the United States and 65,000 people a year in Europe. However, the European version is caused by *Borrelia afzelii* and *Borrelia garinii*. The greatest concentration of case are found in the following states CT, DE, ME, MD, MA, MN, NH, NJ, NY, PA, RI, VT, VA, WI. However Lyme disease does not occur nationwide, but is concentrated in the northeast and upper Midwest.

Additional factors should be remembered are the coinfections that are deer tick transmitted could be a problem for patients with acute or chronic forms of Lyme disease: these are *Bartonella*, *Babesiosis*, and *Ehrlichiosis*.

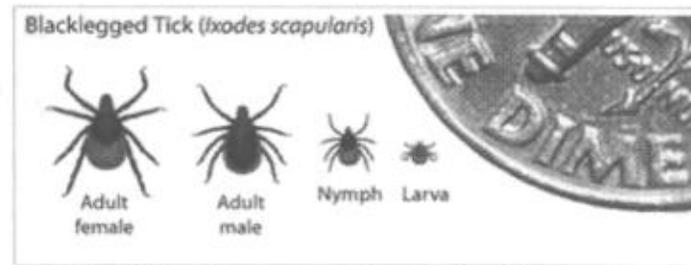
The deer tick known as *Ixodes scapularis* which is the vector of this infection to humans and animals is indigenous to northeast/mid-Atlantic/upper mid western states. The larval deer ticks are active in August and September but these ticks are pathogen-free. The tick become infected with the pathogens when they are in the larvae or (nymphs) stages when they take the blood meal for infectious animal host. They will molt over the winter and emerge in May as poppy-seed sized nymphal deer ticks. Most cases of Lyme disease are transmitted from May through July when active. Adult-stage deer ticks become active in October and remain active through the winter when the ground is not frozen. The female blood-engorged survive the winter in fallen leaf litter and will lay some 1,500 or more eggs near late May or Memorial Day. The eggs will hatch in July and start the life cycle again. The tick will feed three times during its life cycle, which runs about two years.

Next come diagnosis and treatment for Lyme disease. Early diagnosis is important, however it could take a month or longer before the blood laboratory testing to be positive. This is a two step process suggest by the CDC, this would show the evidence of antibodies against the Lyme bacteria which is *B. burgdorferi*. The first step is "EIA" (enzyme immunoassay) or rarely, an "IFA" (indirect immunofluorescence assay). If negative the second test is done which is more sensitive this is called "Western Blot Test". I can order these test from any blood lab for you. However the antibiotic treatment has to be done by your Medical doctor. I believe it to be a good idea if you kept the tick and even if the blood tests have been done to use one of two antibiotics as a prophylaxis. Those antibiotics are usually amoxicillin or doxycycline (Vibramycin), for the early stage Lyme disease. In the chronic form these two mentioned can be used, but there are numerous other antibiotics that are used such as cefotaxime (Claforan), Ceftriaxome (Rocephin), cefuroxime (Ceftin), erythromycin (Erythrocin), penicillin and tetracycline.

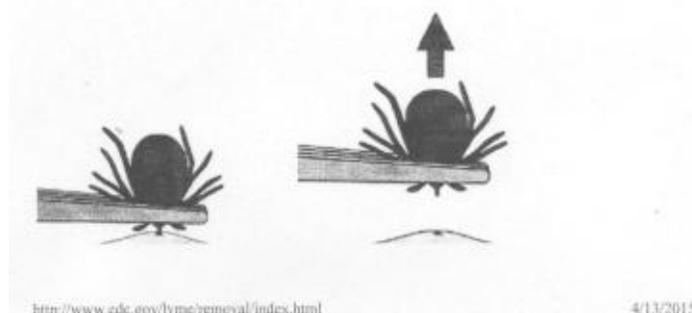
You can suspect you have Lyme disease if you are fortunate enough to have the characteristic rash that is a "bull's-eye". However about 25% of people do not develop a rash. The early symptoms may include fever, headaches and feeling tired. If left untreated or undiagnosed, loss of the ability to move one or both sides of the face, joint pains, severe headaches wit neck stiffness, or heart palpitations. Chronic symptoms for can be much worse with debilitating arthritis, it can cause heart block which effect the rhythm of the heart, and it attach the nervous system both brain and spinal cord, when this occurs it become a form of meningitis or encephalitis. In rare cases it could even lead to death.

Another interesting fact about the tick is that after it bites and attaches to its host, it must remain there for 36 to 48 hours, before the bacteria are spread. Early detection of at tick bite and removal are very important in preventing the infection. Removing the tick is important use a fine-tipped tweezers and grasp the tick as close to the skin as possible. Pull upward with a steady pressure, and don't twist or jerk. Remember the deer tick is extremely small you might need a magnifying glass to see it properly. I would suggest that the tick be placed in a glass bottle or small sealed sandwich bag. The tick can be examined at a lab to see if it is infected. Clean the skin and use some antiseptic to prevent infection.

At this point in this newsletter I thought it would be a good point to bring in my experience in treating Lyme disease patients. I started seeing patients with this disorder in greater numbers about thirty years ago and have treated at least 300 cases. Currently I am treating 20 active chronic Lyme's cases. The most import fact patients must remember is that currently there are no permanent cures for the chronic form of Lyme. Patient with chronic Lyme disease are desperate for answers and help and all of them have sought out experts in the field most of them are medical doctors in many specialties, other than infectious disease, such as internal medicine, cardiology and neurology. Almost all do not except insurance and many will not even give you a bill that could be given in for insurance reimbursement. Let me say again you have to live with the problem and treat the relapses. Chiropractic/Applied Kinesiology method will keep relapses to a minimum and prevent over utilization of antibiotics.



Avoid folklore remedies such as using heat to make tick detach or painting the tick with nail polish or petroleum jelly. Remove the tick as quickly as possible and don't wait for it to detach.



An old adage an “ounce of prevention is worth a pound of cure” fit this situation perfectly, by avoiding direct contact with ticks. This is done by avoiding wooded and bushy area with high grass and leaf litter. Also walking in the center of trails is helpful. Using repellents that (DEET) and wearing clothing in are were tick contact is possible. The clothing should cover all exposed skin if possible long sleeves and pants that have elastic at the ankle or tuck into boots if you are in the woods.

At home other things to do should be bath or shower as soon as possible when coming in from outdoors. Check skin for ticks under arms, around ears and inside the belly button, behind the knees, between the legs, around the waist and especially the hair.

Also remember to examine your outer wear and pets. Ticks have been known to ride into the home on clothing and pets. Another good idea is to wash out door clothing and tumble dry the clothing for an hour at high heat to kill any ticks.

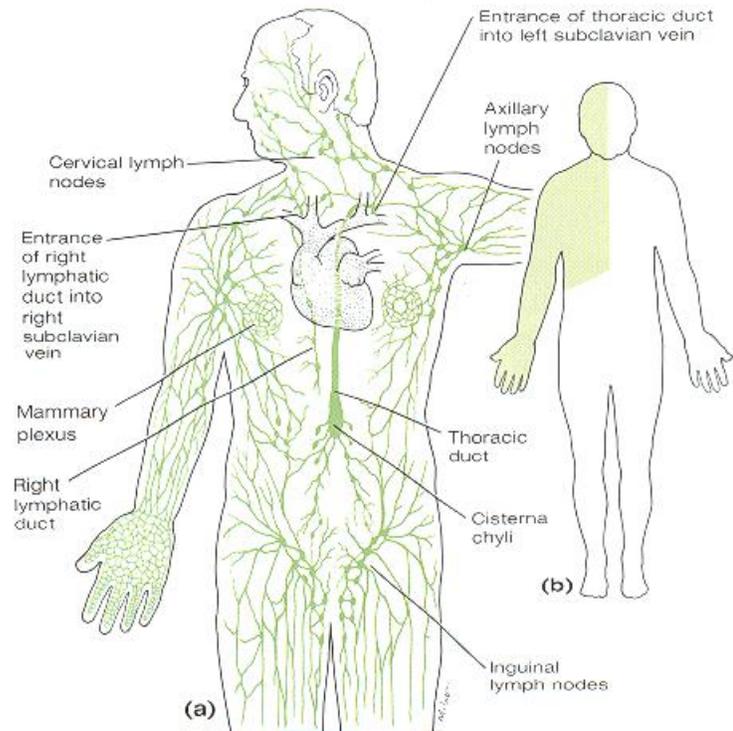
Protecting your home and property from ticks, by using a wood chip barrier three feet wide and keep fire wood piles and chip barrier away from home. Maintain a 9 ft. barrier of lawn between the wood chips and areas such as patios, gardens and play sets. Remember that deer ticks will also be carried by animals that live in the wild beside the deer we have birds, squirrels, ground hogs, skunks, foxes and especially field mice that can easily get into your home so put out traps and watch for signs such as defecation in pantry areas.

If Lyme disease is caught and treated early there is a very good chance you will have a complete recovery. That does not mean that if you're bitten again you will have any protection for getting re-infected, because you don't build up immunity to this infective agent. With the chronic form of this disease the patient will suffer many relapses requiring antibiotics to bring it under control. Unfortunately when antibiotics are used it causes the body's natural system to be less effective in handling any type of infection, bacterial or viral. Therefore the less you need antibiotics the more likely you will have relapses.

Here is where Chiropractic and Applied Kinesiology services will help you maintain good health and less the likelihood of relapse. Most important is keeping the immune system working properly. A rhetorical question for you is what makes up the body's immune system? The immune system is made up of what is termed "Endoreticular System", composed of the Lymphatic system, Spleen, Liver, Thymus, and (WBC) white blood cells specifically neutrophils, eosinophil, monocytes and lymphocytes. Specialized cells of the lymphatic system are macrophages that can migrate to areas of infection to destroy the invading bacteria and virus these cells include Kupffer cells of the liver, Splenocytes from the spleen, Dust cells of the lung and Microglia of the spinal cord and brain and Histocytes of the loose, connective tissues.

These cells must work in conjunction with other organs of the body such as your diaphragm, and muscle system. The diaphragm is the main muscle of breathing which creates negative and positive pressures in the thoracic and abdominal cavities along with the Cistern Chyli, also known as the "axillary heart" that pumps the lymph throughout the body. This action is assisted by your skeletal muscles that squeeze the lymph and move along this system.

The following illustration (F19.35) on the following page, show the lymphatic system with all the component parts. Note drawing (b) show the right thoracic duct drainage and (a) shows the left thoracic duct drains both legs, pelvis and the entire left side of body. The entire lymphatic system empties into the right subclavian veins which drain the blood from both upper extremities and carries back to the heart. A small muscle that sits above the subclavian veins can change the lymphatic return for the entire body and this can be a common cause of reoccurring infections especially in the throat, ear and sinus areas. This muscle is known as the pectoralis minor.



F19.35

Nutritional support for the organs that have been effected by the infective agent, this will include increase levels of vitamin C, B-Complex, tissues that are derived from organs of the endoreticular system, Liver, Spleen, Thymus gland, and probiotics are essential to restore the flora of the GI tract, which should prevent relapses.

Structural care will be given to correct subluxation, fixation patterns as well as the modular distortion patterns of Roll-Pitch-Yaw, which effect the diaphragm movement and improve lymphatic system flow return. To help you understand this problem better, my I suggest some previous Health Bulletin/Newsletter, #9- shows you the diaphragm #24- effect of posture on the your body, #47- vaccines programs. My web page has all of these listed in PDF format that you can read. Go to paulsprieser.com and go to the home page tool bar and click on patient information the newsletter will appear by number and title on the right hand side of the page.