LYME DISEASE

THE ENEMY WITHIN

What is Lyme disease ?

Lyme disease is an infection caused by the bacteria known as **Borrelia Burgdorferi .** This bacteria appears to be spiral in shape and is referred to as **spirochetes.** Spirochetes have been found in human body fluids such as genital secretions, saliva, and breast milk. They also thrive in human organs and tissue. Lyme bacteria can be sexually transmitted, passed onto a fetus, or transferred to a baby through breast milk. Blood transfusions should also be considered as a possible mode for transmission. Several different species of ticks can transmit Lyme disease. The **deer tick,** which can be the size of a pin head, is one such species. Ticks can be found in **yards, wooded areas, and tall grass.** Some believe that mosquitoes, gnats, biting flies, and other vectors may also be transmitting Lyme disease.

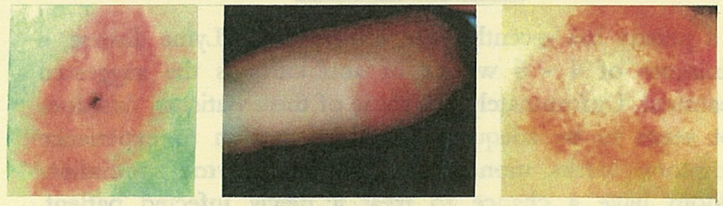
Co-Infections

Often, Lyme disease is not the only infection transmitted by a tick. Lyme bacteria can co-exist with other serious infections such as **Babesiosis, Bartonella, Ehrlichiosis and Anaplasmosis in both (monocytic and granulocytic forms), Tularemia, and Rocky Mountain Spotted Fever (RMSF).** A Lyme-literate physician would not only test for Lyme disease but also order tests to rule out co-infections. Certain co-infections require different treatment and can be the cause of **continued symptoms** after being treated for Lyme disease.

Testing

The **Western Blot Test** is one of the more popular tests used to detect Lyme disease. Still, fewer than **50%** of those infected will show a positive test result. Therefore, Lyme disease should be based on a **clinical diagnosis** if a patient has significant symptoms but does not test positive for the disease. The average doctor does not know how to interpret the Western Blot and will rely on CDC guidelines for help. It is **very important** to know that the CDC's epidemiologic case definition is intended for **surveillance purposes only** and not for use as a diagnostic resource or treatment marker. In other words, physicians **should not** use CDC guidelines as a tool for diagnosing or treating Lyme disease.

Bulls-eye rash,or erythema migrans – The "bulls-eye" rash is the most characteristic (but not the only marker) of Lyme disease. Many Lyme patients will **never** have this rash. The bulls-eye rash, if it occurs, will usually appear **2 - 31 days** after the infection. Both the rash and flu-like symptoms will often go away without treatment. **DON'T CELEBRATE !** This could mean that the disease has entered a **dormant phase.** Often stress, both physical and/or mental, will awaken Lyme disease symptoms.



The " **bulls-eye rash"** is usually round with a central clearing and may vary in size. It is often over an inch in diameter and can appear at the bite site and elsewhere on the body. Sometimes the rash will disappear and return several weeks or months later. Keep in mind that **not all** Lyme disease rashes look like the typical bulls-eye rash. **PLEASE TAKE A PICTURE OF ANY RASH THAT FORMS AFTER A SUSPECTED TICK BITE AND SEE A LYME - LITERATE PHYSICIAN RIGHT AWAY !!!**

Symptoms

Early symptoms may include **" flu-like"** symptoms such as aches and pains in the muscles and joints, a low-grade fever and/or fatigue. It is **VERY IMPORTANT** to understand that Lyme disease affects each person differently. Remember, some patients don't recall having a bite, the rash, or flu-like symptoms. The following is a list of **some** of the symptoms resulting from Lyme disease and co-infections. If you are infected, you may experience **one, several, or almost all of the following symptoms:**

Musculoskeletal System

- Joints may crack and creak and may feel like they are slipping and sliding out of place. Joint pain and/or swelling that travels. Migrating arthralgias, arthritis, and heel pain. Stiff and/or achy neck, back, joints, etc.
- Muscle pain/aches, cramps, burning, inflammation.
- Twitching of facial and/or other muscles, fasciculations.
- Restless or sleepy legs.

Neurological System

- Headaches (persistent & severe), strange head sensations, pressure or tight feeling in the head, popping sensations in the head. Squeezing sensations that seem to migrate.
- Forgetfulness/memory loss (long or short term), mental confusion, leaving tasks unfinished, getting lost, difficulty concentrating **(brain fog),** repeating same story to same person over & over again (repetitiveness), hallucinations.
- Encephalitis (brain swelling), brain damage.
- Speech difficulty, seizures, stroke symptoms, meningitis, numbness & tingling sensations, weakness and/or partial paralysis, Bells Palsy (facial paralysis), light-headedness or dizziness, poor balance, problems with depth perception, difficulty walking, tremors. Writing numbers and/or letters backwards, word block, loss of reflexes, neuralgias (intense burning sensations or stabbing pains caused by irritation of or damage to a nerve), hyperacusis (sensitivity to sound), formication (creepy,crawly sensations), coma & sometimes death.

Psychological Effects

- Mood swings, irritability, unusual depression, blues, panic and/or anxiety attacks, aggression, rage, insomnia (unable to sleep) or sleeping too much. Obsessive – compulsive behavior, suicidal thoughts, feelings of hopelessness, paranoia, mood changes, personality changes, psychotic episodes, bipolar symptoms, mental deterioration.

Reproduction Involvement

- Miscarriage or premature birth, still birth, irregular menstrual cycles/menstrual problems, testicular pain, swollen testicles, loss of sex drive (libido).

Cardiovascular/Respiratory & Circulatory Problems

- Heart palpitations, skipped beats, murmurs, valve pro-lapse, tachycardia (fast heartbeat), arrythmias, heart block, heart attack,sinus node problems, irregular heartbeat, myo-carditis, pericarditis, endocarditis, enlarged heart, episodes of slow heart rate, chest pains & other heart abnormalities.
- Bronchial infections, breathlessness, shortness of breath, labored breathing, feelings of suffocation.
- Circulation problems.

Various symptoms

➢ **EXTREME FATIGUE, exaggerated response to alcohol & sweets,** night sweats, chills, fever, hair loss, sore throat, swollen & painful lymph glands, cough, hoarseness, weight gain, weight loss, anorexia, urgent need to lie down, difficulty swallowing, difficulty eating, jaw pain, chemical sensitivity, allergic reactions, heartburn, gray complexion, nodules under the skin, multiple rashes and/or hives, skin dryness, bladder problems, sensitivity to noise, hearing loss, ringing in the ears (tinnitus), sensitivity to light (especially flashing lights), drooping eyelids, conjunctivitis, optic neuritis, blurry or double vision, floaters, stomach pain, diarrhea and/or constipation, nausea, vomiting, sleep apnea, abdominal cramps, lack of bowel noises and/or elimination, diaphragm spasms, fainting, liver infections, elevated liver enzymes, enlarged spleen, hot flashes, vertigo, pelvic pain, loss of smell/taste, phantom smells, air hunger, hearing things, auditory processing problems.

Prevention

When participating in outdoor activities, take the following precautions :

* Perform frequent and thorough tick checks.
* Wear light color clothing. Tuck pant legs into socks.
* Use Deet products & **permethrin** as tick repellants.
* Place clothes in dryer 30 minutes to kill ticks.
* Take soapy showers after being outdoors as this should wash off unattached ticks.

How do I remove a tick?

1) Using fine-point tweezers, grasp the tick as close to the skin as possible. If tweezers are not available, protect your fingers with rubber gloves. **Don't squeeze or grasp the tick with bare fingers. Don't burn the tick. Do not apply any substance to the tick.**
2) Gently pull the tick straight out.
3) Place tick in a small air tight container with a moist cotton ball. Label with patient's name, address, & the date tick was removed.
4) Wash your hands. Disinfect the bite site and the tweezers.
5) Call a **Lyme-literate doctor** immediately.
6) Have tick identified/tested by a lab, health dept. or a vet.

Listed below are a few tick-testing labs. Call the lab of your choice for shipping instructions and fee information:

* **University of Connecticut Veterinary Medical Diagnostic Laboratory**	**(860) 486-3738**
* **IGenex Labs, Palo Alto, Ca**	**(800) 832-3200**
* **MDL Labs, Hamilton, N.J.**	**(877) 269-0090**

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Treatment options

If a person has recently been infected with Lyme disease, a minimum of **4 - 6 weeks** of antibiotics is the suggested treatment. Unfortunately, for some of these patients, this does not seem to be adequate. They will go on to experience symptoms weeks, months, or years later. **Lyme specialists** seldom have a chance to treat a newly infected patient. Instead, many of their patients have seen numerous physicians and have been misdiagnosed or under-treated for years. They often present a multitude of debilitating symptoms. In these cases, a few months of a single antibiotic is just not enough. Lyme doctors will treat their patients using many different antibiotics for **several weeks to several years** depending on how long the person may have been infected. Both **oral & IV antibiotics** are often used as part of the treatment protocol. Lyme bacteria is capable of taking on a cyst form that makes it **very difficult** to kill. Therefore, drugs like **Flagyl or Tinidazole** are prescribed to destroy this bacteria in its cyst form. Other treatment options may include: herbal treatments, hyperbaric chamber therapy, natural/homeopathic remedies, and rife & coil machines.

****** Note: Physicians and patients should be aware that use of steroids such as prednisone may worsen a patient's physical condition if they have an underlying infection such as Lyme disease.***

What is a Herxheimer Reaction?

Herxheimer reactions may be the **scariest** thing a Lyme patient will ever experience. There is a saying amongst Lyme patients going through antibiotic therapy – **You must feel a lot worse before you can feel a lot better !** Herxheimer reactions occur when Lyme bacteria dies and releases toxins. At this point, the patient normally experiences exaggerated symptoms. Some of these symptoms already existed but now they are worse. Some symptoms will be brand new. Remember, this is a good sign. **HANG IN THERE !!!** Since tests for Lyme disease are not always reliable, Herxheimer reactions are an indispensable clinical tool for Lyme–literate physicians. Herxheimer reactions are so important that any therapy that does not produce these reactions may cause the physician to question an initial diagnosis of Lyme disease.

The Great Imitator

People infected with Lyme bacteria often present many different symptoms to their doctors. Unfortunately, many medical conditions share the same symptoms. The following are just a **few** such conditions that Lyme disease can imitate:

Multiple Sclerosis(MS),Parkinson's disease, Anorexia Nervosa, Lou Gehrig's disease or Amyotrophic Lateral Sclerosis (ALS), Fibromyalgia, Alzheimer's, Chronic Fatigue Syndrome (CFS), Autism, ADHD, and Lupus.

Need more information on Lyme disease ?

The National Capital Lyme & Tick-Borne Disease Assoc.
website: *www.natcaplyme.org*

Turn the Corner Foundation
website: *www.turnthecorner.org*

Andy Abrahams Wilson's MUST SEE documentary :
"Under Our Skin" website: *www.underourskin.com*

International Lyme and Associated Diseases Society
website: *www.ilads.org*

Dr. Joseph J. Burrascano Jr. Advance Topics In Lyme Disease
http://www.lymediseaseresource.com/BurrGuide2008.pdf

"Cure Unknown" - Excellent book by Pamela Weintraub

Jemsek Specialty Clinic of SC *www.jemsekclinic.com*

Lyme Net – Lyme Disease Network *www.lymenet.org*

National Lyme Report *www.nationallymereport.com*

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website: *www.youtube.com* Type in > **Lyme disease**

Lyme Disease Association
website: *www.lymediseaseassociation.org*

**** The above resources were used to create this brochure.***