

Serious Nature of Lyme Neuroborreliosis Warrants Further Research, Study Says

The 2020 study, published in Annals of Neurology, addresses the clinical outcomes of Lyme neuroborreliosis (meningitis, cranial neuritis, and radiculoneuritis).

DENVER, COLORADO, UNITED STATES, October 5, 2021 /EINPresswire.com/ -- A [2020 study published in Annals of Neurology](#) provides new insights into the clinical outcomes, controversy, pathogenesis, and polymicrobial infections associated with Lyme neuroborreliosis and post-treatment Lyme disease syndrome.

The Centers for Disease Control and Prevention (CDC) has defined post-treatment Lyme disease syndrome (PTLDS) as the presence of symptoms that include cognitive dysfunction, fatigue, fibromyalgia-like pain, and depression. The number of patients with this syndrome may be as high as 10%. The syndrome has shown to be able to persist in some patients for anywhere from six months after treatment to a period of years.

To date, there is no consensus as to the cause or treatment of post treatment Lyme disease syndrome. Some risk factors for PTLDS have been identified and include being a female, long pretreatment period, high mononuclear cell infiltrate in the CSF, and onset of symptoms before termination of antibiotic therapy. PTLDS is most common in patients with neuro Lyme or Lyme neuroborreliosis (LNB).

When a tick bite occurs, Lyme disease bacteria enters the body through the bloodstream or the lymphatic system. From there, it looks for tissue in which it is most comfortable. When the



Linden Botanicals Phyllanthus niruri (Chanca Piedra) Tea

bacterium enters through the lymphatic system, it has easy access to wreak havoc on the central nervous system.

Classic Lyme disease symptoms will appear in the body before the bacteria spreads throughout the body and triggers the neurological effects of the secondary symptoms of neuro Lyme. Symptoms of neuro Lyme often include nerve pain, numbness, double vision, and facial palsy, but also memory loss, headaches, anxiety, depression, and brain fog.

Early detection and treatment of Lyme disease is not only key to recovery but also crucial in preventing the spread of bacteria into multiple systems in the body. Because it can be difficult to detect and diagnose neuro Lyme and post-treatment Lyme disease syndrome, it is sometimes misdiagnosed as Multiple Sclerosis or Parkinson's Disease. Approximately 10-15% of patients with untreated Lyme disease will develop neurologic manifestations.

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*Michael Van der Linden,
Owner of Linden Botanicals*

“I battled Lyme disease for almost four years,” says Linden Botanicals owner Michael Van der Linden. “I suffered from severe neuro Lyme symptoms, including headaches, depression, and brain fog. I wrote our [Lessons from the Darkness](#) e-book to document what I learned.”

Fortunately, many people who contract Lyme disease are effectively treated with antibiotics. Occurrence of Lyme disease is often best treated if detected at an early stage with an antibiotic dosage within a time period of 10 to 14 days.

However, long-term antibiotic therapy may provide little to no benefit to patients with post-treatment Lyme disease syndrome. PTLDS, often known in lay terms as “chronic Lyme disease,” may be a complication of neuroborreliosis. and carries the negative impact of excessive antibiotic therapy. Alternatively, a lack of awareness of the



Linden Botanicals Owner Michael van der Linden on a Tea Sourcing Trip in the Peruvian Amazon

important signs and symptoms associated with Lyme disease can delay the treatment process, which in turn can result in the development of chronic manifestations of untreated Lyme disease, including Lyme neuroborreliosis and post-treatment Lyme disease syndrome. When the disease is left untreated, it could have a significant impact on essential body organs or systems that include the heart, joints, and nervous system.

Why some patients experience Lyme neuroborreliosis and post-treatment Lyme disease syndrome is not well understood. Two possibilities are that PTLDS results from a persistent but difficult to detect infection or that *Borrelia burgdorferi* can trigger an “auto-immune” response causing symptoms that last longer than the infection.

“My battle with Lyme disease is the reason I started Linden Botanicals,” Van der Linden says. “Our first product was *Phyllanthus niruri* herbal tea from the Peruvian Amazon due to the plant’s antiviral, antibacterial, and anti-plasmodial properties. Our *Phyllanthus* FAQ and our [Lyme Disease Resources](#) provide a lot more information.”

In 2020, the CDC reported that the annual Lyme disease caseload could be ten times higher than reported in previous years. New CDC estimates suggest approximately 476,000 people, vs. 30,000-40,000 people, contract Lyme disease each year in the United States. However, this revised official count, driven by laboratory tests, may



Phyllanthus niruri (Chanca Piedra) extracts sold by Linden Botanicals



Phyllanthus Niruri and Health Made Simple Offerings from Linden Botanicals



Linden Botanicals Owner Michael van der Linden on a Phyllanthus niruri Sourcing Mission in Peru

still underplay the public health problem.

Lyme disease is an infectious disease caused through the bite of infected black-legged ticks that transmit the bacterium *Borrelia burgdorferi* (and in certain cases the bacteria *Borrelia mayonii*) into a human body. These ticks may be infected by their feed, which can include infected deer, mice, or birds.

About Linden Botanicals: Linden Botanicals sells the world's healthiest teas and extracts, including *Phyllanthus niruri* and *Cistus incanus*. These teas and extracts provide support for immune health, stress relief, energy, memory, mood, kidney health, joint health, digestive health, inflammation, hormonal balance, and detox/cleanse. Visit www.LindenBotanicals.com to shop the online store, get hundreds of valuable health tips and resources, and download the free Lessons from the Darkness e-book, which chronicles Michael Van der Linden's four-year battle with Lyme disease.

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