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Lyme Disease Often Missed as a Cause of CFS

LYME DISEASE IS CAUSED BY A SPIRAL shaped bacteria (spirochete) called *Borrelia burgdorferi*. It can be transmitted by ticks, but also by mosquitoes. The spirochetes have been called “the great imitators” because they can mimic virtually any disease, which is why they are often misdiagnosed. Anyone with chronic illness and especially those with chronic fatigue syndrome and fibromyalgia need to consider Lyme disease as the cause.

Patients with chronic Lyme disease most commonly have fatigue, joint and muscle pain, sleep disorders and cognitive problems (brain fog). In addition, infection with *Borrelia* often results in a low grade encephalopathy (infection of the brain) that can result in depression, bipolar disorder, panic attacks, numbness, tingling, burning, weakness, twitching and is associated with neurological disorders such as multiple sclerosis, dementia such as Alzheimer’s disease and amyotrophic lateral sclerosis (ALS or Lou Gehrig’s disease). In addition, this infection often results in hormonal deficiencies, abnormal activation of coagulation and immune dysfunction, which potentiate the symptoms. Patients with chronic Lyme disease often complain of “strange” or “weird” symptoms that cannot be explained even after going to numerous doctors and often results in the patient being told that it must be psychological. Patients are often told that they are hypochondriacs and are referred to psychiatrists and counselors.

Because the symptoms are so variable, patients are usually not even considered for testing or treatment. Even if testing is done, however, standard testing will miss over

90% of cases of chronic Lyme disease. The standard testing is an immunoassay test of IgG and IgM antibodies and then a Western blot for confirmation. The problem is that these tests were designed to detect acute Lyme disease and are very poor at detecting chronic Lyme disease. In addition, doctors (infectious disease, internists, family practice, etc) most often use the Center for

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Disease Control (CDC) criteria to define a positive test. This criteria was never meant to be used for diagnosis, but rather for epidemiological surveillance (tracking data). If one uses an expanded Western blot with revised requirement criteria for diagnosis, studies have demonstrated an improved sensitivity of detection and a low false-positive rate.

There are also a number of coinfections that are commonly transmitted along with the Lyme bacterium, including Bartonella, Babesia, Ehrlichia and others. There are also different species in different parts of the

country, making testing difficult and insensitive. As with *Borrelia*, the coinfections have a very high percentage of false-negative results (test negative despite infection being present).

Treatment of chronic Lyme disease can also be very problematic as the *Borrelia* bacteria can transform from the standard cell wall form to a non-cell wall form (l-form) and also into a treatment resistant cyst. Standard antibiotic treatments are only effective against the cell wall form and are ineffective against the L-forms and cystic forms that are usually present in chronic Lyme disease. Consequently, the usual 2-4 weeks of intravenous or oral antibiotics can be of little benefit. Even the use of longer courses of oral or intravenous antibiotics for months or years can be ineffective as well if used as the sole major therapy. A multi-system integrative approach can, however, dramatically increase the likelihood of successful treatment. This includes using a combination of synergistic antibiotics that are effective against the l-forms and cystic forms, immune modulators, directed anti-Lyme nutraceuticals, anticoagulants, hormonal therapies and prescription lysosomotropics (medications that increase the effectiveness and penetration of antibiotics into the various forms of the *Borrelia* spirochete). To adequately detect and treat chronic Lyme disease, physicians must understand that standard testing will miss the majority of these patients and standard treatment will fail the majority of time. One must undergo more specialized testing and treatment to achieve success in the majority of these patients.