

UNLOCKING LYME, by William Rawls, MD,
Book Report by David G. Schwartz, MD, Part I
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Dr. Rawls, a survivor of chronic Lyme himself, looks at it a little differently from how many of us have perceived it as a bacterial invader that has to be eliminated. Many doctors have tried with long term use of antibiotics to eradicate the organism, usually without much success. He sees that the challenge is to support the immune system and the body's general health so that the microbe can be suppressed to the extent that there are no longer any symptoms.

He looks at Lyme not as “the wolf at the door,” but rather like “a cupboard full of rats.”

Dr. Rawls had developed chronic Lyme after having a stressful period of time with losing sleep, being on obstetric call, and having had a poor diet, etc. He followed Stephen Harrod Buhner's protocol, reducing inflammation, enhancing the healing systems of the body, repairing damaged tissues, restoring normal immune function, using herbs with direct anti-microbial effects, and cleaning up his lifestyle. With that, he recovered his health.

It is seldom one organism, *Borrelia burgdorferi*, the Lyme spirochete, that is involved, but usually several other microbes. His strategy is to wear the organisms down and to eliminate them slowly with herbs, one organism at a time, much as you would deal with a cupboard full of rats.

The author addresses many myths and misunderstandings about Lyme, and explains that Lyme is linked with many other chronic conditions, such as fibromyalgia and chronic fatigue syndrome. He discusses the limited usefulness of testing for specific microbes, and the limitations of antibiotics, and he stresses the need for a comprehensive holistic protocol.

Lyme is not actually new. The chronic sickness that people in Lyme, Connecticut, described by Willy Burgdorfer in 1981 was a new manifestation caused by an old organism, a spirochete then given the name *Borrelia burgdorferi*. Physicians had been describing the “bull's eye” rash, called erythema migrans, for hundreds of years, but people seldom got sick from it. *Borrelia* species have been found inside the bodies of ticks trapped in amber for 15-20 million years. This spirochete is extremely adaptable, infecting many species, including ticks, insects, mammals, birds, and reptiles.

Forensic scientists and anthropologists discovered a well-preserved 5,300 year old human mummy in a glacier. An autopsy in 2011 revealed the genetic signature of *Borrelia burgdorferi*. He did not die of Lyme disease, but from an arrow in the back. He was not debilitated, as he was traversing treacherous, high mountain terrain in the European Alps.

For this microbe to survive, it needs mobile hosts to be bitten by many ticks, the more the better. “A severely debilitated host is a sign of an imbalanced host-microbe relationship. It suggests that the host's immune system has been unnaturally compromised.” This is unusual. A majority of the time, the organism lives in the host quiescently without symptoms in the host, and we really do not know how many people harbor the organism. I would add that this would probably classify this *Borrelia* as a parasite, that is, something that feeds on the host and provides to the host no benefit, but can cause harm. There may be many more people than we currently estimate that harbor this spirochete, due to inaccurate testing and lack of investigation. So we cannot classify *Borrelia burgdorferi* as a newly emerging microbe. For a general discussion of stealth microbes, see last month's article about Plague Time, by Paul Ewald.

For an ancient bacterium that has been causing low grade, asymptomatic infestation in humans for thousands of years, to suddenly cause widespread, debilitating illness, suggests an imbalance in nature, not a change in this organism that has been adapted to humans for so much of history. Factors unique to the modern world are making people vulnerable to this sickness. People's immune systems are changing, and I would suppose that environmental toxins, poor food choices, unhealthful lifestyles, and who knows what other factors in modern living could be messing with our immune balance.

All ticks carry microbes, and the probability is high that they have *Borrelia*. Infestation with *Borrelia* starts when the tick bites. The saliva of the tick contains chemical messengers that tell the immune system of the animal or human bitten to back off. When the blood enters the tick, *Borrelia* microbes inside the tick assess the blood to see which animal this is, and the *Borrelia* alters its genetic profile to adapt to the environment inside the body. Since our human ancestors were well acquainted with *Borrelia*, our immune systems are well prepared to fight them off. So the next trick of the *Borrelia* is to get out of the blood stream as soon as possible, as the immune system is "hot on their trail." What do they do? They burrow into connective tissue in various places and into brain tissue. During this process, there may be some acute symptoms for a week or so, like a mild case of the flu, but more likely than not, there will not be any symptoms.

So then, the microbe bides its time, living in low concentrations, and waiting for another tick to bite. It wants to turn the host into a mobile *Borrelia* – dispensing machine, not to make the host sick. An overwhelming infection would be counter productive. When a tick bites the animal, chemicals in the saliva of the tick sends the "all aboard" signal to the *Borrelia* in deeper tissues to come out and get into the tick.

In a well-adapted host like the white-footed mouse, illness almost never occurs. Humans are a little less well adapted.

Borrelia is probably the most sophisticated and clever of all the stealth microbes. It can shift its genes to adapt to any environment within the host, with different strains in different tissues. It can modify its surface protein almost continually to keep the immune system guessing. It can curl up inside outer membrane sheaths and form antibiotic resistant dormant forms, sometimes called *round forms* or *persister cells*. When under assault by the immune system or antibiotics, they shift from spirochete form to round form (also called *cysts*). When that happens, symptoms improve, but after the assault is over, they come out again. I would suppose that is why some Lyme practitioners use antibiotics intermittently, to try to catch them in the spirochete phase.

How and why do symptoms occur? The organism must scavenge nutrients from the host. It manipulates the immune system to make cytokines, inflammatory molecules, in order to break down tissues to release nutrients, instead of using cytokines to kill the spirochetes. They prefer collagen-rich tissues, like joints, brain, eyes, muscles, and skin. The circulating cytokines, manipulated to release nutrients from connective tissue, cause fatigue symptoms. The amount of symptoms correlate with the amount of cytokines, not the number of spirochetes, which usually are relatively low in number. That is one reason it is hard to test and diagnose, because it's hard to find them.

A healthy immune system can destroy or suppress the *Borrelia*. The immune system and the microbe are constantly trying to "one up" the other, as this has been going on for thousands of years, but the immune system has a slight edge in the tug-of-war, which often ends in a stalemate, so that harm does not occur, symptoms do not occur, and the microbe has been marginalized.

But if the immune system is weakened for any reason, the *Borrelia* gets the upper hand and can cause further immune suppression, leading to a vicious cycle of immune compromise and infection, and chronic illness. Having infection with several other microbes simultaneously further weakens the immune system's advantage in the fight.

Most people with chronic Lyme don't remember a tick bite or acute Lyme symptoms, and many have not had a positive test. None of the tests available are very reliable. Until they get sick with chronic Lyme, they have been asymptomatic carriers. It is practically impossible to know how many people are asymptomatic carriers. So there could be multitudes of people who could come down with chronic Lyme if their immune systems are compromised.

That is what happened to the author. He did not remember a tick bite. He was healthy until the major stresses of obstetric call and a less than healthful lifestyle weakened his immune system, and the *Borrelia* got the upper hand, until he succeeded in restoring his health through a long period of treatment. The longer a person has chronic Lyme, the more difficult the recovery process.

Many other tick-borne microbes travel along with *Borrelia* and likewise cause stealth infections. Many of these can cause similar symptoms to Lyme even if Lyme is not present.

Mycoplasma, *chlamydia*, and *Bartonella* are fairly common, and a large portion of the human population carry these organisms without symptoms, and they can cause symptoms like Lyme, when the immune defense are weakened. Other co-infections spread by ticks are not so benign, and need to be treated aggressively with antibiotics. *Babesia* can destroy red blood cells like Malaria. *Rickettsia rickettsii* causes Rock Mountain Spotted Fever, with high mortality without treatment. *Ehrlichia* can cause high fever, headache, confusion, and muscle and joint pain, and *Anaplasma* can cause acute illness, but not quite so severe as these others. These pathogens most often do not cause chronic illness, but can cause relapses of acute illness. They are not stealth pathogens like Lyme. They hit with frontal assault. Nothing sneaky about them.

The author rates several organisms according to virulence, the ability to cause disease, with Ebola at maximum virulence, followed by HIV and Malaria. The least virulent would be normal flora, and next up the virulence scale would be the common cold, then next, these stealth pathogens, *Borrellia*, etc. I'm guessing that SARS Cov-2 is in the middle along with Hepatitis C, Syphilis, and pneumonia. SARS-1 and MERS would be much higher on the scale. Generally the more virulent the pathogen, the less likely one is to encounter it, and then when they are less virulent, the more common they are, and the more easy they are to catch.

Dr. Rawls addresses the assaults on our immune systems that come with modern life. More people are getting chronic Lyme disease, not because they are getting more tick bites, but because chronic immune dysfunction is getting worse. "We are complacent with these modern immune-disrupting factors because they are *connected to things that make life easier and more comfortable*."

These are plenty of food, temperature-controlled environments, less need to do heavy physical labor, artificial lighting disrupting sleep, so many things made from plastic, and others. I could add many more things to the list, including pollution, fast living, materialism, etc. These things affect every system in the body, but especially the immune system.

So, guess what? Dr. Rawls, in treating Lyme patients, *pays more attention to reducing these system disruptors than to killing the spirochetes.*

These system disruptors play a role in nearly all chronic diseases. He discusses 7 of the disruptors: unnatural food, toxin overload, chronic emotional stress, physical stress (prolonged inactivity), energy stress (cell phones, microwave towers, electrical devices, etc.), oxidative stress (diets deficient in antioxidants), and microbiome imbalance.

The cluster of Chronic Fatigue and Immune Dysfunction Syndrome (CFIDS), fibromyalgia, adrenal fatigue, mixed connective tissue disorder, myalgic encephalitis, etc., all have poorly defined causes and diagnoses, and uncertain treatments. Could many of these people have chronic Lyme and other stealth infections? Links have been made between Mycoplasma and rheumatoid arthritis, chlamydia with multiple sclerosis, Alzheimers with Borrelia (and other microbes), ALS with Borrelia (and other microbes), and autoimmune diseases in general with a variety of stealth microbes. There's no proof of any of this yet, but there is a good probability that there are causal connections, and that they can not be proven by Koch's Postulates or any other form of solid proof, because of the obscure, insidious nature of the infections that are so slow growing, and the sequestering of organisms in deeper tissues, that make testing so unreliable. Refer to last month's article on Paul Ewald's work and his discussions of stealth pathogens.

Why did all of a sudden many new cases of Lyme disease occur in Lyme, Connecticut and surrounding areas? It may have been simultaneous infection with Borrelia and Rickettsia Helvetica (the Swiss agent identified by Dr. Willy Burgdorfer in 1978). He found positive tests for this Rickettsia in the blood of people with Lyme in Connecticut. Both microbes had been present in North America, but it was unusual to have the two together. *This co-infection may have been the tipping point for so many people becoming ill.*

Then of course, the 1970's was the dawning of the age of chronic immune dysfunction, and the embracing of fast food, fast cars, and a fast pace of living. These things may also have been a contributing trigger for this to occur. I remember treating a patient who had Lyme disease, with intravenous high dose vitamin C. I emphasized the need for *moderation* in life activities. She replied, "That word is not in my vocabulary!" I notice that our society does not give high praise for people who live in moderation, as Confucius or the Buddha may recommend. I remember Dr. Jacob Teitelbaum, expert on Chronic Fatigue Syndrome, saying that most of his patients are over-achievers.

How a person gets sick and how it manifests in symptoms depends on 3 factors: 1. which different system disruptors come together to disturb the immune function, 2. the individual's genetic makeup, 3. the total species and strains of microbes the person has picked up over time.

Many chronic diseases have a similar cluster of symptoms which are nonspecific, and with a lot of overlap, and a label of fibromyalgia or chronic fatigue syndrome is given, because nothing else fits. Tests for other known disease are negative. So they are *syndromes*, not real diagnoses, and therefore hard to design specific treatments for them, because there are no clear targets to aim for. The patient often ends up often feels like being treated like a second class citizen.

When Lyme disease is considered as a diagnosis, testing is unfortunately inadequate, often unhelpful, and most people don't require extensive testing to get well anyway. A holistic approach to addressing system disruptors and to improving function of all systems of the body is the best approach.

The author further discusses the following issues: gathering information about the condition, symptoms such as fatigue, joint pain, insomnia, brain fog, body aches, etc., and checking body functions such as pulse, bowel function, temperature, etc., how to use the medical system, and laboratory assessment. Most laboratory tests should be for checking general health, such as blood counts, blood chemistry, lipids, Vitamin D, iron, urinalysis, tests for immune dysfunction, hormone testing, mycotoxins, and environmental pollutants.

Tests for the stealth microbes themselves are usually pretty unproductive. A quotation from a Lyme specialist, Mike D. Maddox is appropriate: “*B. burgdorferi* doesn’t like to come out into the open, so checking blood, CSF, and SF is like looking for cockroaches in the middle of the highway.” Dr. Rawls goes into more detail about the various types of testing and what they can and cannot do.

A holistic recovery plan includes: controlling symptoms, suppressing the microbes, controlling inflammation, restoring normal immune function, repairing damages, and restoring hormone balance.

Antibiotics are appropriate for early acute Lyme, shortly after a tick bite, and a single dose as prophylaxis if the tick has been attached for more than 36 hours. Also for acute severe illness likely to be *Rickettsia*, *Ehrlichia*, or *Anaplasma*, antibiotics for 30 days. But the mainstay of antimicrobial treatment for chronic Lyme is herbal.

He discusses the main benefits of herbal therapy and their advantages over chemical antibiotics when considering stealth infections. Plants have broad spectrum antimicrobial properties against bacteria, fungi, viruses, etc. All plants have some of these faculties because, being stationary, they can’t escape these attackers, and they need to have these phytochemicals to protect themselves. Plant medicines are anti-inflammatory, immune modulators (balancing), anti-cancer, antioxidant, hormone balancing, anti-fatigue, detoxifying, stress resisting, and protecting against radiation damage.

How else are herbs superior to antibiotics? Most herbs have low potential for toxicity. Many herbs support beneficial bacteria in the gut and suppress harmful microbes. Herbs can affect intracellular microbes. Multiple herbs create synergy against microbes. Herbs can enhance immune function, and microbes very rarely develop resistance to plant medicines because the herbs have multiple actions affecting bacteria simultaneously. All of these things antibiotics cannot do. See my article in the archives on the book by Stephen Harrod Buhner, [Herbal Antibiotics](#).

Dr. Rawls discusses choosing various herbs and their formulations. He generally recommends the Buhner protocol. He then details the Core Protocol, and then protocols for addressing symptoms, tissue repair, dealing with pain, aspects of essential support for gut restoration, addressing mold and mycotoxins, hormone balance, etc.

For someone with chronic Lyme, it is recommended to get this book and to study it. I do plan to review the treatment plan in Part II, next month, but to get most benefit, it would be best to study the book directly. It is very readable, thorough, and written in a straightforward and in an easy to understand form, though somewhat repetitious, which in itself helps to reinforce the learning. It is a refreshing discussion of very practical therapies that can help people recover, and for many, this is a new approach.