

UNLOCKING LYME by Dr. William Rawls, Part II, Book Report
by David G. Schwartz, M.D.
April 27, 2021

In Part I, we looked at a basic overview of Lyme and co-infections and their relationship with the human immune system. Part II summarizes Dr. Rawls' recommendations for evaluation and treatment. He gives detailed information about self-assessment, general health, diet, lifestyle, toxin exposure, etc., measuring body symptoms and functions. He discusses best use of the medical system, recognizing that conventional primary care providers can provide evaluation and treatment of acute symptoms and can help rule out immediate and life-threatening problems.

When visiting a doctor, being specific with questions, being brief and organized, not trying to "one-up" the doctor, or to show off knowledge, is an important reminder, but the patient has the final say as to what tests and treatment are chosen. For treating chronic Lyme, consider "Lyme-literate" practitioners, integrative, functional, and naturopathic doctors, chiropractors, acupuncturists, massage therapists, energy medicine, and health coaches.

Routine conventional testing such as blood counts, blood chemistry, urinalysis, etc. are appropriate for evaluating general health and for ruling out other conditions. Other tests outside the routine of general medicine to check for other issues contributing to chronic illness may be the comprehensive stool analysis, food sensitivities testing, tests for toxins, hormones, and immune function (NK cells, CD 57 function, etc.).

Testing for the microbes themselves is less useful, unless looking for acute infections, for a more virulent co-infection that may need antibiotics, or for high blood titers of Epstein Barr Virus (EBV) or cytomegalovirus (CMV), which could indicate a recurrence of an acute infection.

Testing for *Borrelia* is often not helpful because there may be several species involved that the test does not cover. False negatives and false positives also occur frequently. The spirochetes may be in too low numbers to be detected (as it happens with most stealth infections). Often immune suppression occurs in chronic infection, keeping antibody production too low to show up on tests.

So the author details testing for various organisms by a variety of laboratories in a whole chapter, but he assures the reader that it is most likely not necessary to know about all those testing methods for getting well. He quotes a Lyme specialist, Mike P. Maddox as saying, "*Borrelia 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 a busy highway."

The essential features of treatment are controlling symptoms, suppressing the stealth microbes, controlling inflammation, restoring immune function, repairing damage, and restoring hormone balance.

The therapies are generally of three types, symptomatic, restorative, and heroic. Heroic therapies are only for when the person is so severely debilitated that the more toxic therapies such as antibiotics, steroids, and oxidative and electrical therapies could be helpful. Symptomatic therapy is temporary, with herbs or drugs. Restorative treatments are the mainstay of comprehensive long term treatment, and herbs are the foundation for that.

Dr. Rawls gives details on common dosages of antibiotics for the various organisms, but he warns about the hazards of antibiotics. They disrupt the normal flora and beneficial gut bio-films, leading to overgrowth of yeast and other pathogens, they can damage the mitochondria (which are derived from bacteria), and they favor the emergence of antibiotic resistant organisms, because the stealth microbes grow slowly, and the antibiotics work best on rapidly reproducing organisms.

He gives an overview of herbal medicine, which has been used successfully for thousands of years, and which now has scientific evidence for their many effects. They have broad spectrum antimicrobial action, anti-inflammatory, immune modulating, antioxidant, hormone balancing, detoxification, stress resistance effects, and more. All plants have anti-infective and antioxidant properties that are vital to their survival because they can't move out of the way of various assaults. They have to defend themselves while stationary.

Medicinal plants may have hundreds or thousands of natural chemicals that suppress microbial function in many different ways. This is what we need for stealth infections, as the plant medicines have very low long term toxicity. Antibiotic resistance is very low because of the multiplicity of actions the plants have. The herbs support beneficial microbes in the gut by suppressing overgrowth of pathogenic bacteria, fungi, viruses, yeasts, etc. Multiple herbs used simultaneously have synergistic effects.

Dr. Rawls uses Stephen Harold Buhner's protocols, which have been successful for 15 years, since his book Healing Lyme was published in 2005, and now a new edition in 2015 adds more to the protocol. In 2014, Dr. Rawls combined these herbs into multi-ingredient supplements, because the herbs in the protocol have multiple sources. He emails patients daily for 6 months. So far 75% of the people report some improvement, and 50% have significant improvement. The more one adheres to the protocol, the faster the recovery. The protocol is a starting point, and then it often has to be individualized for each person. He generally starts with low doses and gradually increases the doses. People on anticoagulant drugs or transplant drugs need to be cautious and to work with their prescribing practitioners in those situations, and to know that in pregnancy, safety information is scanty. Many people have digestive system imbalances and may not tolerate the herbs very well at first, and they may need a gut restoration program first.

Japanese knotweed (*Polygonum cuspidatum*), is a mainstay of the protocol, with exceptionally broad spectrum antimicrobial activity, with actions against *Borrelia*, *Mycoplasma*, *Candida*, fungi, *Bartonella*, and viruses, with bio-film disrupting capabilities. It is avoided during pregnancy, and caution is advised in the presence of anticoagulant therapy.

Andrographis paniculata has action against Lyme, viruses, bacteria, and parasites. It enhances immune function, is heart and liver protective, and helps in restoration of the gut. About 1% of people will have hives, a higher percent than with most herbs. It has had numerous clinical trials demonstrating its effectiveness against viruses.

Cat's Claw (*Uncaria tomentosa*) has been used widely for Lyme and modulates the immune system, reducing inflammation and increasing Natural Killer (NK) cells, especially CD57, which is often low in Lyme disease. It also helps heal the G. I. tract.

Chinese skullcap (*Scutellaria baicalensis*) is a potent synergist, enhancing the effect of other herbs. It is immunomodulating, protective of nerve tissue and liver function, is a primary herb for

Mycoplasma and Bartonella, and it acts against Chlamydia. At high doses, it may have G. I. Side effects.

Garlic (*Allium sativum*) with stabilized allicin has been successful against Lyme and Babesia, has broad-spectrum antibacterial activity, including against MRSA (methicillin-resistant staphylococcus aureus), and is antiviral, anti-fungal, and anti-parasitic. It has many cardiovascular benefits as well.

Sarsaparilla (*Smilax glabra* and *medica*) binds the endo-toxins that are released from dying bacteria, has antibacterial and anti-fungal actions, works also on other spirochetes along with *Borrelia*, and it is synergistic with other herbs. It is commonly used in Lyme protocols and has anti-inflammatory, immune enhancing, and antioxidant effects. It is generally well tolerated.

The following adaptogens have strong immune modulating effects. *Cordyceps sinensis* protects mitochondria and is very helpful for the fatigue, and it also has antiviral and antibacterial properties. *Reishi* (*Ganoderma lucidum*) is a mushroom with outstanding immunomodulating and antiviral actions. It is heart and liver protective and has anti-fatigue properties.

Eleutherococcus senticosus has remarkable anti-stress protection, supports adrenal function, modulates immune function, and it has antiviral and antibacterial properties. It is well tolerated, except that people with fibromyalgia have to take small amounts, because it can be stimulating to the nervous system.

Supplements recommended include multivitamins and minerals. N-acetyl cysteine (NAC) is antioxidant, inhibits cytokine cascades, is lung antioxidant, breaks down bio-films, and protects liver and nerve tissue. Along with Vitamin C and alpha lipoic acid, it raises glutathione levels. Glutathione itself is essential for phase II detoxification in the liver, is antioxidant, protects mitochondria, and increases T-lymphocytes. As a supplement, I recommend the liposomal form for much better absorption than plain glutathione, although it tastes horrible.

Alpha lipoic acid protects liver and nerve tissue and is antioxidant. Vitamin C has a multitude of benefits, including antioxidant and antimicrobial activity. Coenzyme Q₁₀ is an important antioxidant for the mitochondria, especially protective for heart muscle. Vitamin D is essential for normal immune function. Getting sunshine in the warmer months and supplementing with D₃ according to blood levels is recommended.

Supplements to reduce cardiovascular inflammation and to enhance blood flow, common with chronic pain: Japanese knotweed, pycnogenol or grapeseed extract. Omega-3 fatty acids. Hawthorne is especially nourishing to heart muscle, and milk thistle is highly protective of liver cells. Protecting against chronic yeast overgrowth with herbs and nystatin can be important.

Dr Rawls says that most people will see improvement within 2 months, and many have restored normal health in 6 months. The more consistently people take the herbs, the faster the results.

It is very important for getting to know the quality of the herbs purchased. A reliable supplement company will insist on third party testing of raw materials coming from the farmer, checking for identification, purity, potency, and the presence of heavy metals and other pollutants. This gives a "Certificate of Analysis" (COA). This is more important than certified organic, because most herbs don't need pesticides anyway, and organically grown herbs could come from areas with high air pollution.

Besides the COA for the raw materials, there should also be testing of the manufacturing process itself, in several steps, to ensure consistency in ingredients. This is usually called “Good Manufacturing Practices,” (GMP). The company should have all this information either on the bottle or available in the website. Also, the common name and the botanical name as well as quantity or strength should be listed.

Poor quality products sold by less scrupulous companies often escape inspection by the FDA and the FTC, and the more reputable companies are harder hit by inspections because they are more visible. The FDA harasses supplement companies under the guise of protecting the consumer, when they are actually sometimes more concerned with protecting the pharmaceutical industry, which would like to see the competition eliminated, and who heavily influence the FDA and the FTC.

The author has tips about taking supplements, like being organized, having the supplements visible in one place, not trying to remember take them more than 2 times per day, starting slowly with only one capsule at first, and over days or weeks building up to full dosage, depending on each person’s individual sensitivities.

Sometimes before improvement, symptoms may get worse, as when microbes die and release toxins (Herxheimer reaction), and in that case, reduce the dosage and build up gradually. Be persistent and patient with the process, and stay with it for the long haul.

If pregnant, or on anticoagulant drugs, or have other unusual medical conditions, it is prudent to consult with a provider that understands these situations (Most MD’s may not know how to advise.), and do some special literature search into these situations before proceeding.

Adverse reactions are not common, but when one does occur, it is most likely stomach discomfort or nausea. Many people with chronic Lyme already often have digestive problems and may have to do a gut restoration protocol first before starting the antimicrobial herbs. Minor stomach upset may be helped by starting with a much smaller dose, drinking ginger tea, avoiding other teas and coffee, and eating steamed cabbage. My recommendations would be to take marshmallow root or deglycerrhizinated licorice (DGL) chewable tablets, which soothe and protect the sensitive linings of the esophagus, stomach, and intestines.

The core protocol provides support for restoring balance of immune system and other systems, and for reducing inflammation. Sometimes, however, if runaway inflammation is severe, advanced support is needed. Also additional measures may be needed to rebuild connective tissue, to restore brain and nerve health, and to help with sleep, anxiety, depression, and pain.

Regarding inflammation, stealth microbes often ride along with white blood cells to deliberately cause more inflammation by inducing white blood cells to pump out cytokines. The microbes’ goal is to use inflammation to break down collagen (connective tissue), so that nutrients can be released for the microbes to feed upon them.

Antioxidants in foods and supplements can reduce the damage caused by inflammation. A diet rich in vegetables is alkalizing, which also reduces the damage. Vegetables and omega-3 fatty acids promote anti-inflammatory prostaglandin production. Processed grains, meat, and dairy can drive the pro-inflammatory prostaglandins. Turmeric (with a little black pepper for absorption) ginger,

Boswellia serrata (Frankincense) and devil's claw (Harpagophytum procumbens) block one of those inflammatory prostaglandins, cyclo-oxygenase.

Protein-digesting enzymes, like bromelain, if taken without food, can be absorbed to remove inflammatory debris and immune complexes. Inflammation can promote coagulation (clotting) and fibrin coating of blood vessels that can block absorption of nutrients. Nattokinase breaks down fibrin and can reduce abnormal clotting.

The primary tissues affected by inflammation in chronic Lyme includes joints, ligaments, muscle, brain, eyes, skin, and heart. All these organs are held together structurally by collagen. Borrelia and mycoplasma target collagen, so protecting and rebuilding collagen is essential. Green leafy vegetables, cucumber, salmon (wild Alaska), eggs, celery, and olives can protect collagen. Bone broth, gelatin, collagen supplements, silicon, horsetail, and glucosamine can help rebuild damaged collagen.

These microbes, especially Borrelia and mycoplasma, also target brain and nerve tissue to consume the fat, including the myelin, that covers and protects nerves. The following help to protect or rebuild nerve tissue: Eggs, which have lecithin and choline, coconut oil that has medium-chain triglycerides (MCT'S), the mushrooms - lion's mane, chaga, reishi, and cordyceps; ashwaganda, bacopa, DHA (an omega-3), and lavender, rosemary, and lemon balm essential oils.

Many people with chronic Lyme and some other chronic conditions have mast cell hypersensitivity. Borrelia stimulates mast cells to produce histamine, which mediates allergic reactions. Nonsedating antihistamine drugs can be helpful if severe reactions occur, but I would also add that quercetin, bromelain, and stinging nettles have strong antihistamine actions. In my experience, some people that have mast cell activation syndrome (MCAS) also have to avoid certain foods that trigger reactions, and they may have to take a long time to recover from this syndrome.

Other things that support the immune system are stress reduction, exercise, CBD oil, and low dose naltrexone (LDN) by compounded prescription. If all else fails and runaway inflammation is still rampant, anti-inflammatory drugs may be needed as a last resort.

For insomnia and depression, he mentions some supplements and herbs, and I would also recommend reading my articles on "Sleeping Better," and "A New Paradigm in Mental Health." He also recommends cranial electrical stimulation (CES).

For pain, besides drugs, when necessary, he lists corydalis, Rauwolfia serpentina, passion flower, turmeric, Boswellia, essential oils rubbed onto joints, CBD oil, transcutaneous nerve stimulation (TENS), and acupuncture. I would also add willow bark, Jamaican dogwood, California poppy, and for nerve pain - St. John's Wort. Essential oils have to be mixed with a carrier oil to avoid burning the skin. Some of these are frankincense, ginger, white birch, lavender, peppermint, helichrysum, and German chamomile.

When all else fails, some heroic measures may be needed, in a small minority of situations. Some of these are synthetic antibiotics or antivirals, colloidal silver, hyperbaric oxygen and other oxidative therapies, the Rife machine, whole body hyperthermia (which has been used historically for syphilis, another spirochete), pulsed electromagnetic field therapy (EMF), and earthing (connecting directly with the earth, barefoot, etc.) I think this latter is something that everyone should be doing when possible to do safely, barefoot on cement floor or the ground, not a heroic therapy.

He addresses setbacks and relapses, which occur with everybody, but it is important to realize that they are temporary, and that further on in recovery, they become less common. It is important to look for causes of relapse, such as poor nourishment, toxins, emotional stress, physical stress, radiation, microbiome imbalance, inadequate sleep, allergic reactions, acute viral infections, and complacency, and then to take measures to reduce those things.

Other factors that impede recovery are digestive dysfunction, toxin overload, mold and mycotoxins, adrenal and other hormone dysfunctions, and lack of exercise. He writes two long chapters on the digestive system and gut restoration program, and also for molds. All of that is too long for summarizing here. I recommend reading in the archives, [Break the Mold](#), for problems with mold. If mold illness is not addressed, recovery from Lyme is not likely.

This article may give a good overview and some guidance on getting started with recovery, but for any reader with chronic Lyme, it is recommended to have this book as a source during the long recovery process, and to have a Lyme literate health care practitioner to assist in this endeavor. This is the most comprehensive and practical book on Lyme that I have encountered so far.