

This is an excerpt from the book, **INSIGHTS INTO LYME DISEASE TREATMENT: 13 LYME LITERATE MEDICAL DOCTORS SHARE THEIR HEALING STRATEGIES**, by **Connie Strasheim**. [Learn more about the book by clicking here.](#)

## • CHAPTER 2 •

**Steven Bock, M.D.**  
*RHINEBECK, NY*

### **Biography**

Dr. Steven Bock has been practicing complementary and progressive medicine for over thirty years. He has treated the Lyme disease complex for over twenty-five years, utilizing the ILADS approach, by combining complementary with integrative medicine. He attended New York Medical College and received his M.D. in 1971. He became board certified in Family Practice in 1977, and holds a certification in Acupuncture, as well. Dr. Bock is Co-Founder and Co-Director of the Rhinebeck Center. He is a Diplomate of the American College of Family Practice, the American Academy of Acupuncture and the American Academy of Anti-Aging Medicine. He has been a member of International Lyme and Associated Diseases Society (ILADS) for the past twelve years, and has served for two years as a board member. Dr. Bock's medical practice merges traditional medicine with alternative and complementary medicine, and combines acupuncture, homeopathy, herbal, functional, nutritional and environmental medicine into an integrated medical model for optimal wellness. *Stay Young the Melatonin*

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*Way* was Dr. Bock's first book, and was published in 1995 by Dutton. He has also co-authored two books with his brother, Kenneth Bock, M.D., entitled *Natural Relief of Your Child's Asthma*, published in 1999 by Harper Collins, and *The Germ Survival Guide*, published in 2003 by McGraw-Hill. Nancy Faass, MSW, MPH participated in the latter work. Dr. Bock has written for local and national newspapers, and lectured locally and nationally. He has appeared on local and national media including the ABC news show, 20/20, as well as other radio and television programs.

### **The History of My Practice**

I started my career in family practice using traditional medicine; however, my practice quickly became more integrative, involving nutrition and the treatment of allergies and chronic conditions such as chronic fatigue syndrome and chelation therapy for cardiac issues. That was about twenty-nine years ago (I have been in practice for over thirty years). Then, about twenty-five years ago, I started using acupuncture and Chinese medicine in my practice, at the same time that I started seeing a lot more patients with chronic fatigue syndrome. These people had symptoms of joint pain, cognitive dysfunction and fatigue, as well as other typical CFS symptoms. Some of them had tested negative for Lyme disease but their symptoms resembled those of Lyme and when I would give them antibiotics, they would improve. At that time, however, I was very "anti-antibiotic", preferring to give my patients herbs and natural remedies for their symptoms, and they would often become symptom-free from allergies and other ailments with such remedies. (I now believe, however, that in the case of Lyme disease, antibiotics are absolutely necessary).

Not long thereafter, I began to treat patients for Lyme disease, and it all started with a woman who was an advocate for one of the early Lyme disease support groups. She came into my office, put her chart down in front of me, which included information from three different Lyme disease conferences, and said, "Here, read this. I have decided that you are going to be my doctor." I thought that

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was an interesting introduction into the field. Since then, I have treated many cases of Lyme disease.

Over the past twelve years and as mentioned in my biography, I have also been a member of ILADS (International Lyme and Associated Diseases Society). It used to be that the doctors in this organization took an antibiotics-only approach to treating Lyme disease. Now, most Lyme-literate practitioners agree that an integrative treatment approach to Lyme is necessary and that the disease can't be treated with antibiotics alone.

Finally, about seven or eight years ago, I become board certified in anti-aging medicine, so I now also utilize a lot of functional endocrinology including natural hormone replacement in my practice, which is an integral part of treating the Lyme disease complex.

Currently, my practice is about 50% Lyme disease cases and 50% other conditions.

### **Changing the Paradigm of "One Disease, One Medicine"**

I had a very interesting case a couple of months ago. A patient who had previously been admitted to the hospital for polyarthrititis came into my clinic. She was taking a medication called methotrexate, which is, I believe, a very dangerous arthritis drug that suppresses the immune system. She was also on prednisone. Suspicious that she had Lyme disease, I gave her some nutrients and started her on an antibiotic regimen. Meanwhile, her rheumatologist monitored her progress with me. After finishing the antibiotics, she was 95% better. Her doctor wrote a letter to me, stating that although he wasn't familiar with my protocol and believed that my practices were unorthodox, he was grateful that his patient was better. So whenever this sort of situation happens, I think it's good, because it makes practitioners reassess their approach to treating patients. It's really hard to change the medical community's paradigm of; "one disease, one medicine," but fortunately, it's falling by the wayside as

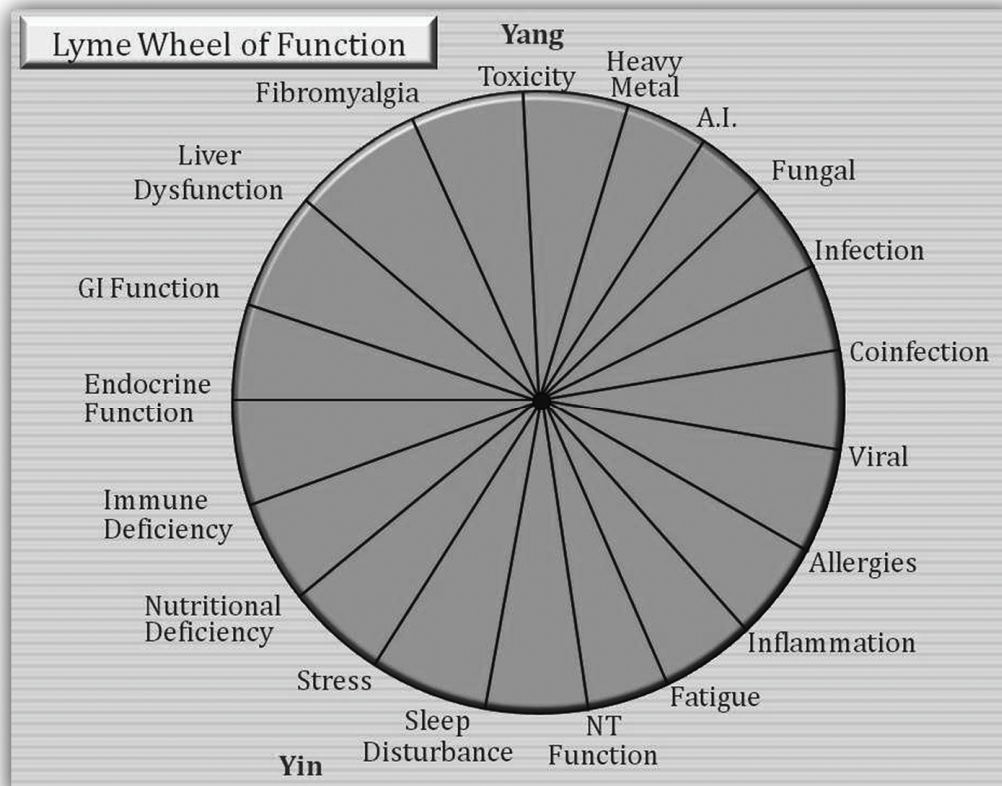
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more and more doctors realize that in cases of chronic disease, it isn't the best approach.

### **Treatment Approach**

I like to compare my patients and their medical problems to a wheel with many spokes. The wheel represents their entire health, whether physical, psychological or spiritual, as well as their bodily stressors, including infections, hormone dysfunction, immune problems, and other issues.

### **The Lyme Healing Wheel**



\* This healing wheel is used with the permission of Dr. Bock.

The Lyme disease healing wheel can be described in terms of yin and yang, which is a concept in Chinese medicine that describes how seemingly opposite forces are interconnected and interdepen-

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dent in the natural world, and give rise to one another in turn. This concept lies at the heart of many branches of classical Chinese science and philosophy, including medicine. On one side of the healing wheel is “yin” and on the other side is “yang.”

To fully understand this concept requires a study of Chinese medicine, but basically, there are conditions of illness that display predominantly yin qualities, and others yang (although this is somewhat of a simplistic analogy). When formulating a protocol for a particular patient, I consider which conditions are “excessive” (yang) and which are “deficient” (yin) in that patient. This in turn provides a template that I use to determine how to get rid of the “bad” in the body, or how to add things to it that it’s deficient in. The template also shows me how to prioritize these problems. So for instance, a patient might have hormone problems, insomnia, nutritional and immune deficiencies, all of which belong to one side of that person’s wheel (yin), as well as fibromyalgia, toxicity, fungal infections, Lyme disease and co-infections, which belong to the other side of the wheel (yang).

In my consultations with patients, I also try to determine what the basic trigger for all of their problems was, by taking a linear history of their symptoms. I might ask them questions such as, “When was the last time that you were well? What happened five years ago when you first got sick? Were you under stress? Was your adrenal function low, or were you hiking in Cape Cod?”

People come into my practice with physical complaints, and there are many components to their illnesses, such as immune system dysfunction, inflammation and toxicity, just to name a few. I must address all of these in order to discover what they need to be optimally well in their life. So that’s my treatment approach.

Lately, I have been seeing a lot of patients who have been to different specialists for their physical complaints; neurologists, internists, rheumatologists, infectious disease specialists and so on, and most have been told that their tests are negative and that

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nothing is wrong with them. So they are not being validated in their complaints, and as a result, I am noticing that in addition to physical problems, they have no confidence, and fear that they have mental problems or are going crazy. So I also have to support them emotionally, which might involve sending them to a practitioner to help them to deal with the emotional aspect of their illness.

### **Emotional Strategies for Healing**

One of the practitioners that I often refer my patients to does a type of therapy called Core Energetics or “path work.” The primary purpose of this therapy is to get patients to release past emotional blocks so that their truest self (their core) can emerge.

Core Energetics is based upon the idea that we have all learned to constrain our life force and inhibit our emotional and creative potential, and because of this, we have lost touch with our essence. When certain emotions have been disowned because of early life prohibitions against feeling, the energy of these emotions gets “trapped” in the body. The therapy releases these trapped feelings through different means, including physical activities that involve movement and breathing, dialogue, energy work and the power of relationship. Core Energetics works on five levels: the body, emotions, mind, will and spirit. More information on this therapy can be found on the Internet at: [www.coreenergetics.org](http://www.coreenergetics.org).

The great thing about Core Energetics is that the practitioner can go really deep to discover what is derailing patients’ immune systems. I find this therapy to be particularly helpful when patients start sabotaging their treatment, (as sometimes happens) because Core Energetics can get them to look at the reason why they are doing this. But it isn’t like talk therapy; rather, it’s a psycho-spiritual discipline that gets to the root cause of emotional problems.

In addition to Core Energetics, I recommend meditation for my patients’ emotional and spiritual healing, because it can help them to relax and think about the things that they want to do to heal. I

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may also recommend that they see a behavioral or stress management practitioner, or clinical psychologist.

### **The Patient as a Vessel in a Sea of Toxins**

When patients tell me that they have been to a lot of doctors, and, let's say, for example, that they have headaches, fatigue, PMS and abdominal pain, the first thing that I do is try to get them to stop thinking in terms of the paradigm, "one disease, one drug." I draw a vessel on a piece of paper to help illustrate this point and tell them, "Let's say that you are a sea vessel, and the sea represents life's stressors. As you go through life, the water from the sea leaks into your vessel, affecting your physical and emotional well-being. You don't want the level of water inside your vessel to get too high over time. You want to keep your vessel strong and powerful, but if there are a lot of stressors (sea water) that build inside that vessel; toxins, infections, poor diet, etc., then the water level inside of your vessel slowly rises, until it one day reaches its limit and overflows. And then you get symptoms, such as gastrointestinal disturbances, PMS, and so on. The Western model of medicine dictates that you take a remedy to stop the symptoms, kind of like a shield, but you can't do that because at this point, your vessel is already overflowing. Instead, you must take a comprehensive, holistic approach to healing in order to lower the water level inside your vessel."

People with Lyme disease may be full or semi-full vessels, but they may also be vessels that are weak, constitutionally, as well as full, which means that they are both weak and toxic. If I attempt to detoxify such people too fast, they will "overflow" and get worse. My training in acupuncture and Chinese medicine has taught me that some people have weak constitutions, while others have strong ones, and this fact must be taken into account when treating them. Practitioners who don't understand this can be well-meaning and give their weak patients a lot of antibiotics or detoxification remedies, but when they do, it's as if they are opening up these peoples' spigots and before you know it, the vessels that are their patients are sinking.

## **Healing the Body on an Energetic Level**

One of the therapies that I use in my practice involves the Ondamed, which is an electromagnetic pulsed biofeedback therapy device. It uses electromagnetic frequencies to balance the body. According to James Oschman, author of *Energy Medicine*, “Ondamed can monitor the state of one’s physiology and correct imbalances as they arise.” One can get to the body’s underlying dysfunction with this device. It increases energy, helps sleep and relieves pain.

I recommend this therapy to my patients, because besides physical and chemical imbalances, a lot of them have disrupted electromagnetic systems. The body’s electromagnetic system is based on quantum physics, where cells communicate instantly via energy, and when practitioners can tap into their patients’ energy with the Ondamed, fast healing is possible. The chemical system of the body works on a slower level, through physical reactions, such as enzyme secretions, and hormone and neurotransmitter communications. So if I can tap into my patients’ energy with the Ondamed, as well as through other strategies that address energy, such as acupuncture, I find that they heal better on a physical level.

## **Antibiotic Protocol for the Treatment of Lyme Disease Infections**

When it comes to my specific antibiotic protocol for patients, I could say that A, B and C is what I do, but it wouldn’t really be what I do. The information would be incomplete. I practice patient-oriented medicine. I don’t treat Lyme; I treat the patient who has the Lyme.

That said, I tend to follow the ILADS guidelines when prescribing antibiotics, and follow a protocol that is similar to Lyme-literate physicians such as Drs. Joseph Burrascano and Joseph G. Jemsek.

Dr. Burrascano used to tell me that it’s important to treat patients for (approximately) two and a half years with antibiotics, and while



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I now use antibiotics in my practice, the idea of giving them for long periods of time still gnaws at me. I don't like for people to be on antibiotics for two or more years, so while I may start my patients on antibiotics, at some point during their treatment, I may try to switch them to anti-microbial herbs instead. Such herbs may include cat's claw, as well as others. I also use homeopathic remedies in my practice, depending upon the patient's needs.

Patients who are really sick may require intravenous antibiotics. I may put them on a pulsed therapy regimen in which they are required to take high doses of antibiotics for three or four days per week. I vary the protocol according to the patient, however, taking into account a variety of factors. For example, it's important to know whether they have just Lyme (*Borrelia*), or co-infections as well; what doctors treated them with previously, and whether they have already taken a lot of antibiotics. Also, patients may have a problem that is less about Lyme and more about other issues, such as fungal infections or liver dysfunction. I don't have one single way that I treat chronic illness involving Lyme, because every patient is unique.

I always try to use herbs and homeopathy in addition to antibiotics. Sometimes, when I switch patients to herbs after they have been on antibiotics for a certain length of time, they don't respond well to the herbs. I can prescribe them a great regimen, but their illness might be so severe that I have to keep them on antibiotics for the duration of their treatment. If I use herbs, however, I don't usually give them to patients at the same time as antibiotics, unless the herbs are for treating some other aspect of healing, such as inflammation or detoxification. I use other herbs for such purposes, but not the antibiotic replacement herbs such as andrographis, because to use antibiotic herbs at the same time as pharmaceutical antibiotics would be redundant. I mean, why use a small knife to kill the bugs when you have a big gun? So I prefer to use the herbs towards the end of patients' treatment regimens when I am trying to wean them off of antibiotics.

## **Considerations in the Treatment of Infections**

While I may prescribe intravenous antibiotics for some of my patients, as of late, I have probably been less aggressive with the IV's. Generally, I try to discover whether my patients will respond first to oral antibiotics. If they don't, then I may prescribe them IV Rocephin (ceftriaxone), Zithromax (azithromycin) or doxycycline. I may give them two to four grams of one of these antibiotics daily, on a rotating schedule of four days on and three days off. I maintain this schedule so that the body has a chance to clear the toxins that are generated by the treatments. I use a lot of pulsing therapy in my practice, whether IV or oral, especially when treating chronic conditions. I believe that putting patients on antibiotics every day can deplete them and that they can become really toxic. So I might prescribe antibiotics on Monday, Wednesday and Friday, for example, and leave the other days open so that the body has a break and an opportunity to clear the toxins that have been generated as a result of the treatments.

Another factor that I take into consideration when prescribing antibiotic regimens is the pathogen's life cycle, because the Lyme bacteria hide out in the body, and can only be killed when they are reproducing.

About five years ago, there was a biologist who gave a lecture on bacteria at the ILADS conference. He said that bacteria have been around so long that they can adapt to anything, but we tend to think too simplistically about them. And the problem with treating Lyme organisms isn't that they become resistant to antibiotics, but rather, that they develop ways to avoid antibiotics. So pulsing antibiotic regimens can also be beneficial because it's a way to surprise the bugs, because on the days when patients aren't doing treatments, the bugs tend to come out of their "holes" or hiding places, and in doing so, they become susceptible to antibiotics.

Finally, even though I now belong to the camp of those who believe in using lots of antibiotics to treat Lyme disease, I still don't like them, but I feel that they are necessary if patients are to fully heal.

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Twenty years ago, I attended two conferences, one on homeopathy and one on herbal medicine. One herbalist, in his speech to over one hundred herbalists, said, “If you treat Lyme disease, I want you to know that it is important to treat this disease with antibiotics first, and then herbs later.” I liked that he said this, because he was truthful and told a bunch of herbalists, who might normally have advocated herbs for everything, that they needed to use antibiotics for Lyme. Just because a treatment is “alternative,” doesn’t mean that it is what is warranted for a specific condition, especially when it comes to Lyme disease. And I consider myself an alternative M.D., for sure.

### **Clinical Diagnosis of Co-Infections**

Clinical diagnosis of co-infections can be difficult, since all of the Lyme infections, including *Borrelia*, create symptoms such as joint pain, fatigue and headaches which overlap with those of other infections.

That said, I have noticed a few trends. For example, each of the most common co-infections tends to give people a particular type of headache. *Babesia* causes headaches at the top of the head; *Bartonella*, at the front of the head, and *Borrelia*, at the back of the neck. *Ehrlichia* tends to cause severe headaches.

Other telling signs of *Bartonella* include heavy night sweats, weight loss and increased neurological symptoms that are out of proportion to what Lyme (*Borrelia*) alone would cause. As well, those with *Bartonella* might have foot pain and/or enlarged lymph nodes, more so than those who have just *Borrelia*. I have had two patients with *Bartonella* who were both originally diagnosed as having lymphoma, which is a cancer of the lymph glands. One that I had treated for Lyme two years earlier and who was about to go on chemotherapy came to me for an opinion about how to treat her lymphoma. I told her that I suspected that she had *Bartonella* and I asked her for permission to treat it. When I did, her symptoms went away and she ended up never needing chemotherapy. So *Bartonella* can mimic lymphoma; it doesn’t happen often, but it can happen.

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Another telling sign of Bartonella is a snake-like, purple-red vascular rash on the flanks or thighs. It looks like stretch marks, which is important to know if practitioners or those with Lyme are trying to differentiate between rashes. Sometimes, however, diagnosis is intuitive and can only be confirmed after patients take a clinical trial of a remedy and practitioners observe a positive response to that remedy.

When diagnosing my patients' infections, I first examine their clinical signs and symptoms and then do laboratory testing. Unfortunately, labs are not always useful for diagnosing co-infections, so in my practice, the clinical diagnosis is primary. I also give my patients a lot of questionnaires, and ask them to rate their symptoms on scales of 0-5 or 0-10, depending upon the questionnaire. The answers from these questionnaires enable me to identify the particular symptom clusters that are present and consequently, which co-infections. Often, however, I don't fully know what is going on with my patients until I treat them, because they are dealing with so many different problems in their bodies.

### **Considerations in Lab Testing**

Patients will often ask me whether they should do another Borrelia antibody test as they progress with their treatments, and I tell them that antibodies to Lyme can go either up or down during treatment. Follow-up testing doesn't reveal whether patients still have Lyme disease.

One test that I use that is very accurate for determining some patients' progress with treatments is the C6 peptide. It's an ELISA test that is a good, classifiable test for certain people. For those that test negative on this test but still have Lyme symptoms, the test isn't useful, but for those who test positive on it, it can be a good marker for progress during treatments. For instance, if patients score a "1" or higher on the test, then this indicates that they have Lyme disease and that the test will be useful for determining their progress on a regimen. So if a patient scores an eight on his or her test results, for example, and I successfully treat that person for

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Lyme, then that value should go down within a year to normal. (A normal value is .9 or lower). And, in fact, I see this kind of thing happen. Within six months, patients' results often drop from an eight to a four, and after a year, from a four to a one. If they get a re-activation of their *Borrelia*, however, then that number will shoot up to a four again. Unfortunately, this only seems to be a good test for about thirty percent of those with Lyme, but for those who are responsive to it, it's a reliable test.

### **Detoxification**

In general, I treat my patients' gastrointestinal problems first, because these need to be addressed before I can start them on antibiotics. So if they have a lot of GI symptoms, I may give them some form of bentonite medical clay with psyllium to bind up toxins, which, after a couple of days, reduces symptoms of gas and bloating. Then I will start them on a functional detoxification protocol that includes a hypoallergenic rice protein formula that contains nutrients to detoxify the liver, such as NAC (N-acetyl cysteine) and glutathione. This formula also contains watercress and raspberry to upregulate phase one detoxification and balance phase two detoxification, in addition to heavy antioxidants to neutralize toxic by-products that are created when phase two of the liver detoxification process becomes dysfunctional. I might also recommend homeopathic detoxification remedies, especially matrix and cellular remedies for the liver and GI tract, as well as Questran, which is a biliary sequestrant that takes neurotoxins out of the biliary tract into the intestines. On occasion, I may use herbs for purposes of detoxification. I also test and treat for potential problems with methylation pathways.

For the detoxification of heavy metals, I recommend substances such as chlorella, cilantro, DMSA, and EDTA, depending upon the metal and where patients are at in the recovery process. Some practitioners believe that it's important to get rid of metals before treating Lyme infections, but I don't have a set rule about it. I'm not linear in my thinking about this, or any other issue.

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Mold is a major problem for some with Lyme disease and needs to be addressed, along with the other infections. Dr. Shoemaker has a biotoxin theory about mold that is useful, but mold toxins aren't the only kind of toxins that those with Lyme need to worry about. Xenobiotics, heavy metals, and other toxins can be just as, if not more, important. True, some people with a certain genetic HLA profile may be prone to mold detoxification problems, but then there are others for whom mercury, or another type of toxin, may be more important. And mercury, for example, can cause a predisposition to autoimmunity and make Lyme worse because of all the problems that it creates for the immune system.

Finally, other strategies that I use for detoxifying my patients include intravenous Vitamin C and glutathione. Glutathione, in particular, tends to be really depleted in those with Lyme disease.

## **Treating Opportunistic Infections and the Immune System**

I test my patients for opportunistic infections, such as EBV (Epstein-Barr), HHV-6 (human Herpes virus six), Chlamydia and Mycoplasma, because all of these affect the immune system. Unless patients are really symptomatic, however, I don't prescribe antiviral medications, as I am not a big fan of these. I prefer natural treatments and am a big proponent of things like transfer factor for the treatment of viruses, fungi and early-stage Lyme disease. Transfer factor shouldn't be used in cases of chronic Lyme, however, because it stimulates a Th1 response, and people with chronic Lyme often already have an exaggerated Th1 response. Lyme-specific transfer factor can be used in those with chronic Lyme. To support the immune systems of those with chronic Lyme, I might also use treatments that stimulate the B-cells, such as oral immunoglobulins. Or I might work on healing patients' guts, because a lot of the body's lymphocyte (a type of immune cell) system is in the gut, and if there are problems in the gut, then the immune system is affected. So if I heal my patients' guts, I can get improvement in that part of their immune system, because problems in the gut are intimately related to the lymphatic and immune systems.

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The only instance in which I might use regular transfer factor in cases of chronic Lyme is when there is strong evidence that a viral infection is also an important part of the symptom picture; for instance, if a patient has high titers of HHV-6 or EBV.

Other treatments that I recommend in general for bolstering immune system function include mushrooms and Chinese herbs.

### **Treating Hormonal Dysfunction**

Lyme disease affects the hormones, and particularly the adrenal and thyroid glands. About ten percent of Lyme disease sufferers have autoimmune thyroiditis, and Lyme also stimulates other autoimmune processes involving the hormones.

I use a lot of hormones in my practice, because it's important that patients' hormonal systems be supported if they are to fully heal from Lyme disease. After my patient assessment that involves questionnaires and/or testing, I may start by addressing patients' adrenal and thyroid function. I may use traditional lab tests to help determine their thyroid function, but I also look at their basal body temperature, and do iodine testing to see if they are iodine deficient. Iodine plays a really important role in the body's metabolism and in fighting infections. A lot of people with breast or ovarian cysts, for example, are iodine deficient.

Other hormones that I address include pregnenolone, DHEA, estrogen and progesterone in my female patients, and DHEA and testosterone in my male patients.

I use a broad spectrum of natural supplements to treat adrenal insufficiency. I might start off by recommending Vitamins B-6, B-5 and C, and if these prove to be insufficient for restoring adrenal function, then I may recommend herbs. The herbs I use include the Chinese herb rehmannia, which is a kidney herb, as well as ashwaghandha and rhodiola, which are good for those whose nervous systems have been depleted. Cordyceps is also beneficial for the adrenals, and is an anti-aging herb, as well. If herbs don't provide

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satisfactory results, I may then do acupuncture, and if that doesn't do the trick, then I will prescribe physiological hydrocortisone, (not prednisone, which is pharmacological). If patients' adrenal function is low and the natural remedies aren't sufficient, I sometimes get dramatic results with hydrocortisone, if I prescribe doses of 5-10 mg, two to three times a day. With hydrocortisone, theoretically, immune suppression should only occur at higher doses, but I do think that over time, lower doses can suppress the body's innate ability to make cortisol and make it harder for patients to heal down the road. Also, one of the things that practitioners should be aware of when dosing hydrocortisone is that too much can make patients worse. It's vital not to get the dose too high. I have seen, for example, patients get worse after getting just one injection of long-acting Medrol in their backs. (An injection of Medrol lasts two weeks). It makes their Lyme infections go crazy. If practitioners are just boosting their patients' cortisol levels to normal, however, then the cortisol is beneficial to the body, but if the doses bring the levels to above normal, then patients will get worse.

Also, some people are allergic to their own hormones, especially women, who tend to be allergic to their body's estrogen and progesterone. I don't see allergies happen as often with cortisol. To determine whether hormonal allergies are present, I test my patients using allergic extracts of estrogen, progesterone, LH and FSH. For example, I recently had a patient who would get bad PMS and headaches before her menstrual cycle, and when I gave her progesterone, she had a crazy reaction. So I checked her FSH (follicle-stimulating hormone) and LH (luteinizing hormone), which are pituitary hormones. I also tested her progesterone and estrogen and then made up different allergy serums based on that information, for her to take during her cycle whenever she has symptoms. The serums neutralize her body's reactions to her own estrogen and progesterone, thereby facilitating normal immune-hormonal balance.



## **Treatments for Symptomatic Relief**

### ***Insomnia***

I often recommend melatonin for the treatment of insomnia in those with Lyme. Ten years ago, I wrote a book on this hormone and I tend to advocate it because it is physiologic and natural. Other people might just need minerals, such as calcium at night, to help restore their sleep patterns. Yet others might benefit from taking 5-HTP if they are depleted in serotonin and suffer from symptoms of depression. If none of these remedies work, then I might recommend herbs, acupuncture or treatment with the Ondamed device, the latter of which has a sleep program that works really well. If women are perimenopausal, then I may give them progesterone, because it's a relaxing hormone that aids in sleep.

I don't have a set protocol for treating insomnia, however. Instead, I have an extensive menu of remedies, starting with natural substances and which go all the way down to pharmaceutical drugs. So if my patients have tried five or six natural remedies for their insomnia and none have worked, then I might suggest that they try Ambien, for example, and take that for two or three weeks while the other parts of their therapy are taking effect. Doing this keeps them from worrying about being fatigued and unable to sleep. When it comes to insomnia, there is a time for natural remedies, and there is a time for drugs.

### ***Anxiety and Depression***

I often recommend neurotransmitter replacement for the treatment of anxiety and depression in those with Lyme, so instead of giving my patients SSRI drugs to increase their serotonin levels, I might give them 5-HTP, or if they have anxiety or agitation, GABA or L-theanine. I may also use homeopathic remedies, Chinese herbs, acupuncture, or Ondamed frequencies to treat these symptoms.

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### ***Pain***

For the treatment of pain and inflammation, I often do acupuncture on my patients. I also use a variety of different nutritional and herbal remedies to decrease this symptom.

Lately, I have been giving my patients injectable homeopathic remedies for their cervical and spinal pain. I inject these remedies into different points on their bodies, where they work to relieve nerve and muscle pain. Such remedies are also beneficial for relieving arthritis symptoms.

If my patients are taking a lot of antibiotics, I might also compound pain medications in a gel, to save their stomachs from having to endure the effects of too many drugs. One gel that I use has anti-analgesic, anti-inflammatory and muscle relaxant properties, and is made in a lecithin-based ointment that patients can rub on painful parts of their bodies.

Finally, I find that low dose Naltrexone is quite effective for pain relief and for improving immune function. There are a lot of different options for treating pain, and sometimes even analgesics and medications such as Neurontin and Lyrica are necessary.

### **Diet**

I have used nutrition in my practice for over thirty years. Nutrition is the cornerstone and basis for the effective treatment of most conditions that I treat in my clinic, including Lyme disease. Determining the most appropriate diet and supplements for a particular patient is accomplished clinically and through laboratory testing.

First, I test my patients for gliadin antibodies, the presence of which indicates sensitivity to gluten. Gluten can cause innumerable problems in the body, including GI disturbances, fatigue, and peripheral neuropathy. My training and experience have taught me a lot about food sensitivities, and I think that practitioners have to be careful about saying that all people with Lyme disease need to be

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on the same kind of diet, which is why tests for sensitivities and allergies can be important.

Also, I have noticed that the more practitioners restrict their patients' diets, the more frustration and stress that these patients have to manage. This in turn wears them out and negatively impacts their immune systems, so practitioners should take this factor into consideration when prescribing a diet for their patients.

All Lyme sufferers should avoid refined sugar though, because sugar can raise insulin and leptin levels, which in turn can create leptin or insulin resistance. When either of these conditions is present, then people with Lyme have an increased susceptibility to inflammation, which makes their Lyme disease worse.

That said, I think it's important for Lyme sufferers to be able to cheat on their diets every once in awhile. Those who are doing well with their healing might be able to get away with having a dessert once a week, while those who still have a long way to go in their recovery might only be able to indulge in a piece of cake at the occasional party.

Also, drinking coffee taxes the adrenals and also causes inflammation, but if my patients are drinking three cups of coffee per day, I don't want them to get withdrawal headaches to complicate their symptom picture while healing. So I might suggest that they slowly decrease the amount of coffee that they drink every day, until they don't need it anymore. Abrupt withdrawal is not good. I don't want to make patients feel as though they are in a no-win situation.

### **Lifestyle Recommendations for Healing**

I have a patient who can't get emotional or financial support from her loved ones. She has to go through this healing journey all by herself. She works fifteen hours a day, doesn't sleep, periodically stops medications and vitamins, and comes in to my clinic every three to four months, with her body crashing and Lyme disease going crazy. So I recently had a conference with her, her significant

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other, and her parents, to bring up the problems in her life which are preventing her from healing. I told her loved ones that they needed to help her to deal with her disease and the unhealthy decisions that she is making if she is to fully recover. Addressing unhealthy habits is important for healing, as is accessing and dealing with the deeper issues that prevent patients from getting well, such as a lack of emotional or financial support from family members.

Obviously, getting enough rest, doing moderate exercise and getting oxygen into the cells, taking supplements, doing mild physical therapy and eating well are other lifestyle habits that help the body to heal.

Those with Lyme should involve and educate their family and friends about their disease. Most people don't know about Lyme, and patients always come back from doctors' visits with tons of things to do. They have a supplement schedule and therapies that they need to start, but there's always this kind of stress that they are subjected to from friends and family members which makes it difficult for them to carry out their obligations. For example, family members might not believe that their loved ones are sick, or that they really have to do all of the treatments that their doctors have told them that they need to do. They may think that their loved ones can heal in just a few weeks, or they may make unhelpful comments such as, "How is it possible that you can't work?" To friends and family members, the sick person's symptoms are just symptoms, but they don't realize how intense and disabling these can be.

### **Who Are Those that Heal from Lyme Disease and/or Chronic Illness?**

This is a complicated question. I would say that people who have a lot of trauma (and I don't necessarily mean as a result of past abuse) and who are working through a lot of problems have a harder time healing. Their trauma could be related to any number of causes, but in any case, they may be receiving some secondary

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benefit by being sick or in pain as a result of the trauma. The motivations for these benefits, as well as the trauma itself, must be addressed if such people are to fully heal.

Also, those who have had Lyme for a long time and who have low mitochondrial and/or adrenal function as a result may not respond well to treatments. It's hard for me to know whether such factors will be a problem for my patients, however, until I try out and monitor different treatment programs with them to see how they respond.

When I look at the Lyme wheel (as described earlier) and consider the people who have a lot of deficiencies and excesses, or just a lot of "stuff" going on their bodies, then I think that such people might have a harder time healing, too.

Finally, if patients have mold sensitivity and/or a decreased genetic ability to get rid of toxins, this may also hinder their ability to heal.

### **Does Everyone with Chronic Fatigue Syndrome Really Have Lyme Disease?**

First of all, I don't like labels that pigeonhole people into having chronic fatigue syndrome or Lyme disease. I look at illness like the wheel that I described previously, which illustrates that there are a lot of components to disease. Thirty percent of a patient's dysfunction might be due to adrenal problems, for example, or eighty percent of it might be due to immune problems, or twenty-five percent due to infections. In chronic illness, it always seems that there is a certain element of this or a certain element of that involved in a patient's overall symptom picture, but it's not always clear how much each one of those elements is contributing to the breakdown of the body. Our bodies are more complex than just a diagnosis, and sometimes, the only way to know how much Lyme disease is contributing to a person's overall symptom picture is to treat that person.

## **Why Do Some People Gain Weight and Others Lose Weight When They Get Lyme Disease?**

Metabolic testing can reveal whether a person's extracellular water components, such as the lymphatic system or the air outside of their cells, is overburdened with toxins. People who have too many toxins in these areas are those who are prone to weight gain. I put these types of patients on a strong detoxification protocol, in addition to antibiotics.

Those who lose weight tend to be in what I call a "deficiency" category (referring again to the concept of deficiencies and excesses in Chinese medicine). These people tend to have weak adrenals and conditions such as functional hypoadrenia, and hence, are also weak overall. They also tend to have problems with electrolyte balance, and they lose weight because they don't metabolize their food properly. Effectively helping these types of people requires supporting their adrenal glands.

## **The Greatest Challenges of Treating Lyme Disease**

I often tell other health care practitioners that it's their experience with patients which enables them to determine down the road what their patients' problems will be and how to treat these. I coach doctors at conferences, and during these conferences, the doctors learn a lot about how to treat Lyme disease, but then when they go to treat their patients, a lot of different scenarios start happening with their patients' symptoms. Then these doctors, if they have dived deeply into treating Lyme, suddenly don't know what to do next, because there are so many twists and turns with this disease, as well as possible treatment outcomes. They know that their patients have the Lyme disease complex and they may have a general idea about how to treat it, but it's when they really start "going downstream" with their patients that things really start to get tricky. For example, their patients might end up with a certain kind of Herxheimer reaction that requires special attention; they might have thyroid or adrenal problems that suddenly turn up a month down the line, or neurotransmitter imbalances that need to

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be dealt with. A couple of years ago, I gave a lecture called, “Roadblocks in Chronic Lyme”, and discussed the roadblocks that practitioners stumble upon when treating patients with chronic Lyme, so that they might know what to do when certain problems or issues surface during treatment.

### **Why I Love Treating Lyme Disease/Chronic Illness**

One thing that I love about practicing in the areas of complex Lyme disease and chronic illness is that every person who comes in to see me each day is unique, and has an entirely different spectrum of problems, and I enjoy the challenge of treating and helping them to heal from these. My patient visits tend to last for an hour and a half, and often, during those visits, the patients will get a little weepy, because they are grateful to have finally found a doctor who will really listen to them. And I appreciate being able to spend this time with them so that I can help them. Most doctors only get seven minutes with their patients, but my theory is that you can't make a diagnosis when you only spend seven minutes with a patient.

Not long ago, I had a patient with a lot of symptoms, including headaches, joint pain, and weight gain. Lyme affects metabolic function so it isn't uncommon for people to gain weight with this disease. This patient had been to a rheumatologist, who took her medical history on the computer for about five minutes before prescribing her a weight reduction medicine. After that, she went to an internist, who recommended that she do gastric bypass surgery. So when she came into my office, I listened to her, and learned that she had a lot of other problems besides Lyme disease, and that the treatments that the other doctors had recommended that she do were simply “off the wall” and absolutely crazy. Sometimes, I wonder what Western medicine is coming to! In any case, during this patient's visit with me, she was crying with relief because someone was actually listening to her for the first time.

For me, it is awesome to be in the presence of people who suddenly realize that they are not crazy, and that they don't have to be subject to this patriarchal health care system that hands you a drug and

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says, “Just take this. That’s all I can do. Bye, bye.” I love that I am making a difference for people. Do I have more success than some practitioners? Yes, I think so, but medicine is an art. There are difficult cases, and patients can have some healing block that I can’t address, but the thing is, no doctor knows how to fix everything.

When I lecture to doctors, I sometimes draw a circle in my presentations to represent medical information. I then make pie slices in that circle to illustrate what we doctors know and don’t know about medicine. So let’s suppose that twenty or thirty degrees of the pie represents what we know, and another thirty degrees represents what we know that we don’t know. So what does the other 300 degrees of the pie represent? It’s what we don’t know that we don’t know!

There is always going to be a part of the pie that represents information that we don’t know that we don’t know, but I like to practice medicine “being in the question.” Patients bring me new information all of the time, and I tell them, “Thanks. I’m going to do research in that area now.” So my energy isn’t stagnant; it’s always flowing because I am always learning.

### **Last Words**

In summary, I consider it an honor to practice medicine, and to deal with people’s most intimate and complicated issues. In my attempt to make a difference in the practice of treating chronic Lyme disease, this feeling is magnified.

### **How to Contact Steven Bock, M.D.**

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