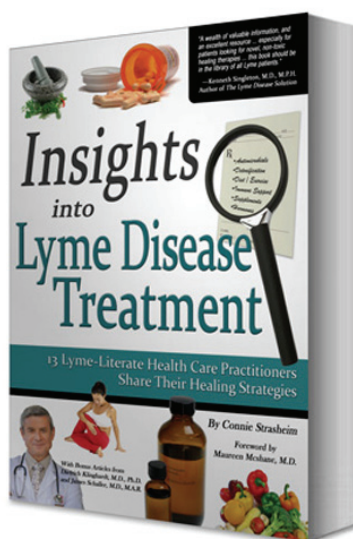


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**Insights Into Lyme Disease Treatment: 13
Lyme Literate Health Care Practitioners
Share Their Healing Strategies**
by Connie Strasheim



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• CHAPTER 1 •

Steven J. Harris, M.D.
REDWOOD CITY, CA

Biography

Steven J. Harris, M.D. has been in private practice since 2001. Dr. Harris is a medical doctor (MD), board certified in Family Practice. His private practice was operated as a sole proprietorship until 2006, after which time he formed a California medical corporation, Pacific Frontier Medical, Inc.

Since 2001, Dr. Harris has focused his practice on the diagnosis and treatment of Lyme disease and other tick-borne co-infections. He believes that chronic, persistent Lyme is an epidemic in the United States, but that there are many effective treatments available to those infected. His approach to Lyme disease incorporates strategies found in conventional, functional and complementary medicine.

Dr. Harris has taken a leadership role in CALDA (The California Lyme Disease Association), a research, patient advocate and education group which has been largely responsible for spearheading

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favorable legislation protecting patients' rights, expanding Lyme disease awareness and fostering continued public health education. Dr. Harris is also an active member of ILADS, (The International Lyme and Associated Diseases Society). This is a professional medical society of physicians and scientists which has become the de facto authority on effective treatment for chronic Lyme disease and is a rational counterbalance to the prevailing opinions of the IDSA (Infectious Disease Society of America), which refutes the existence of chronic Lyme disease. ILADS has focused its efforts on global physician education in order to increase the number of treating physicians available to those with Lyme.

There is currently a huge shortage of treating physicians for those with chronic Lyme disease, particularly on the West Coast. As a result, over the past three years, Dr. Harris has maintained three operating practices in various cities (Malibu, Redwood City and in Dr. Tod Thoring's practice in Arroyo Grande) in order to provide maximum geographic coverage for patients in California, Oregon and Washington. In June 2007, two new practitioners were recruited in order to increase operating efficiency and the size of the practice. Dr. Harris projects that the practice will now have more resources, with the capacity to receive twice as many patients as before.

Healing Philosophy

My healing philosophy is similar to that of Drs. Richard Horowitz, Greg Bach, Joseph Burrascano, Therese Yang and Dietrich Klinghardt. I believe that infections are a significant part of the disease process, but that (in the words of Klinghardt) "impaired physiology, biotoxin load, and immune dysregulation" are what determine the individual flavor of the disease as well as how sick people will be. I look at *Borrelia burgdorferi* (Bb) as one of the significant central processing organisms that make other phenomena, such as biotoxins, inorganic toxins, opportunistic infections, and the like, matter. Many people have other problems along with Bb, such as yeast, mold, viruses and metals, and while these things in themselves can make people sick, when there is no Lyme disease involved, they

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may not have such a profound impact upon the body. When Lyme is involved, however, these corollary factors (which are different than Lyme co-infections) begin to really wreak havoc. It's almost as if Lyme overwhelms the body to such an extent that these factors take on a life of their own. Immune surveillance and detoxification pathways in the liver, kidneys, lymphatics and skin just can't keep up. There are other infections that can cause serious illness, such as Brucella, Mycoplasmas, and maybe even mycobacterium (which causes tuberculosis), as well as others. But biotoxins, Herpes viruses, Epstein-Barr virus and people's lifestyle in general, might not matter as much if Lyme wasn't causing the body to be under so much stress.

When Lyme Disease Isn't the Primary Cause of Symptoms

There are cases of Lyme disease where Lyme isn't primary in the overall symptom picture; for example, in those who have Lyme and autism, although I am never really sure. I find that about one in four autistic kids have Lyme disease, but I don't think that Lyme is usually the primary reason for these kids' autism. It's a contributing factor, but may not be the main reason why they have autism. Also, while it may be important for people who have conditions such as ALS, Alzheimer's and rheumatoid arthritis, in addition to Lyme disease, to treat their Lyme, this doesn't mean that Lyme is their central problem or even causing the majority of their symptoms.

That said, the *Borrelia* organism can go dormant in the body at times, especially if one keeps pounding away relentlessly at the infection. Whenever I see this happen in my patients, I find that heavy metals, mold, a parasite or some other problem often surfaces and temporarily becomes the main (biggest) issue for them. Such issues must then also be treated.

Also, the body can only do so much simultaneous work, so as a physician, I have to pick and choose the problems that I want to treat in my patients at any particular given time. So if *Borrelia* is their core problem, but they present twenty different obstacles to

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treatment, then I might need to first address some of those obstacles, and then afterwards, focus on the *Borrelia*. For example, when patients have significant dental infections, or even structural abnormalities, such as bad TMJ, and if they are really sick, then I find that unless I deal with these other infections or structural problems, then it is very hard to treat their Lyme infections successfully with just antibiotics. So I may recommend, for example, that they have dental work done to deal with anaerobic infections in the mouth and which cause conditions such as osteonecrosis and osteomyelitis. Once these problems are treated, then it's much easier to treat the Lyme infections. Some physicians have an order in which they treat patients' problems, but I don't necessarily believe that there is a cookbook order in which to do things, because each person is unique. I do believe, in any case, that it is important to address those obstacles that interfere with the proper treatment of Lyme infections.

Antibiotic Treatments for Infections

I am a student of many doctors who came before me treating Lyme. I'm trying to stand on the shoulders of giants, but I sometimes think that those giants are standing so high up and doing such amazing work, that it's hard for me to top that.

I don't have a standard protocol that I use for all of my patients. My treatments for Lyme infections generally involve homeopathic, herbal, naturopathic, and sometimes even energy medicine methods, along with a strong pharmaceutical approach. I find that most of my patients need to take some pharmaceutical antibiotics to really knock out the infections. Using alternative methodologies alone makes it much less likely, statistically, that they will get over the disease.

My antibiotic approach is similar to that of Dr. Horowitz's, and includes the use of double intracellular antibiotics, along with cell-wall and cyst-busting drugs such as metronidazole and tinidazole (5-nitroimidazoles) or nitazoxanide. I might also use macrolide and tetracycline drugs, as well as third generation cephalosporins. I

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don't necessarily administer these all at the same time and some I will rotate.

I also aggressively treat co-infections, and while I don't believe that it is mandatory to treat co-infections first, if I have to give my patients IV antibiotics for *Borrelia*, then I will treat their co-infections before I treat their *Borrelia*. With the exception of *Babesia*, antibiotic regimens for co-infections must also be rotated and switched on a regular basis. For *Babesia*, treatments are most effective when patients start with one type of medication and stay on it for a long period of time, and then over time, "stack" other medications on top of that one. Medications for *Babesia* include intracellular and anti-parasitic drugs such as atovaquone (Mepron or Malarone), mefloquin (Lariam), or clindamycin, quinine, nitazoxanide (Alinia), and possibly metronidazole. Using an extracellular phase drug such as primaquin can be useful, too. The most effective way to treat the *Babesia* species, however, is still somewhat up in the air in the medical community.

When patients first come into my office, if I know that they have *Borrelia* but I'm not sure whether they have co-infections, then I will order co-infection tests. In the meantime, I will either wait to treat them or start them on a medication such as Zithromax (azithromycin). Zithromax is a good drug to start with, because if it turns out that patients have *Bartonella*, then Zithromax combines well with rifampin (which is used for treating *Bartonella*). Or if patients have *Babesia*, then Zithromax combines well with Mepron (which is used for treating *Babesia*). Or if their test results show *Ehrlichia*, then doxycycline, minocycline, tetracycline or rifampin can all be added to the Zithromax. If patients end up having only *Borrelia*, then I can combine Zithromax with a cephalosporin or tetracycline drug, or even a cyst buster if it seems that their bodies are hardy and can handle aggressive treatment right away.

I often prescribe parenteral (IV or IM) therapy to patients that have strong neurological symptoms, to those who have been very sick for more than a year, who have gastrointestinal problems, or who can't

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tolerate oral medications. I tend to try oral antibiotics for at least three months, before going the intravenous route. This is because if I hit patients with IV medications too fast, then they may get worse as a result of a severe Jarisch-Herxheimer reaction. This occurs when too much of a toxic load is created in the body and the organs become stressed as a result. IV medications may also perpetuate too much yeast overgrowth. For these reasons, I feel that I might be playing with fire if I start some of my patients off with IV antibiotics.

It can also be difficult to treat patients if they have a lot of co-infections, such as Bartonella, Mycoplasma, Babesia and Ehrlichia, or if they are quite ill with predominant symptoms of one or two of these co-infections. Such patients tend to get very strong reactions to treatments, which means that I can't hit their infections as directly as I would like, because they will get too sick. Doxycycline, in particular, creates this type of scenario, especially in women. So while it may be an effective medication, I don't like to use it in patients that have multiple, or severe, co-infections. Many practitioners like to start with doxycycline because it's cheap and is mostly metabolized in the colon (instead of the liver and kidneys), which means that it's fairly easy on the organs. It also has great activity against Borrelia, Anaplasma and Ehrlichia, and is somewhat effective for treating Babesia, Bartonella and Mycoplasma, but I find that people just "tank" if they take doxycycline when they have a lot of co-infections.

Doing oxidative stress, organic acid, plasma amino acids, RBC elements, mold antibody and stool tests, as well as tests for heavy metals, yeast and other environmental pollutants can help me to get an idea of what problems my patients have besides Lyme infections. Such information also helps me to determine whether they will "crash" on a particular antibiotic regimen.

Blood tests such as the C3A, C4A, CD-57, C3D, C1-Q Immune Complex and even ANA, rheumatoid factor and other immune tests of the like, tell me the amount of inflammation that patients have,

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which also helps me to determine the likelihood of them getting worse on a regimen. Doing a methylation panel and genetic profile can also be useful for this purpose.

A promising new test from Genelix assesses what drugs patients can tolerate, based on their genotype. As well, it measures other functions, such as how well they metabolize, assimilate and methylate. Such information enables me to determine whether my patients have liver detoxification or other problems. If test results demonstrate that they don't tolerate antibiotics very well, for example, then I might refrain from prescribing drugs and instead put them on a detoxification protocol until their ability to tolerate medications increases.

If I suspect that my patients are sensitive to medications, I will start by prescribing them a gentle medication for *Borrelia*, or treat them instead for co-infections, as I watch for signs of "crashing." In the past, I used to hit my patients hard with antibiotics, and they would eventually get better, but they would also have a flare-up or Herxheimer reaction for up to twelve or fifteen months following treatment, and that isn't acceptable to me. When patients already feel bad, they can't feel "more bad" for a year and a half before starting to feel good, especially if there is no promise that they are ever going to feel good in the first place! If patients do poorly on antibiotic regimens, then it means that I need to deal with other problems that they have and which are blocking the antibiotics from being fully effective. Or I might send them to a naturopathic doctor who knows a lot about detoxification, such as Drs. Claire Riendeau, Nicola McFadzean (see Dr. McFadzean's chapter later in this book for more information on her protocol), Susan Marra and Amy Derksen, where they can receive detoxification treatments before I start them again on antibiotics.

Typical Symptoms of Different Infections

Babesia

Since tests don't always reveal whether patients are co-infected, I also rely on clinical diagnoses to determine which infections, besides *Borrelia*, are present and causing problems for my patients. For example, if my female patients aren't menopausal, (I can check hormones to verify this) and have night sweats, flushing, severe pressure-like headaches, violent nightmares or vivid dreams, significant shortness of breath in the absence of another cause, frequent sighing or dry coughing in the absence of cardiac issues, then they may have *Babesia*. To ascertain the diagnosis, I might give them a clinical provocation test, especially if their lab test results are negative. For the clinical provocation, I might ask them to take herbs such as *cryptolepis* or *artemisia*, as I observe their reaction to these. Dr. Tod Thoring in Arroyo Grande makes a *cryptolepis* compound which consists of *cryptolepis*, *smilax*, and *boneset*, as well as a *cryptolepis*, *artemisia* and *teasel* cream, which are quite effective for this purpose. I may also use the herbal formulas *Enula* and *Mora* (NutraMedix brand), or some of the *rizol* oils (BioPure). Positive patient response to any of these can indicate that a parasitic infection is present. I'm not always 100% certain that the parasite is *Babesia*, but the tests help me to better estimate what it is. I will also sometimes do a provocation test in those already known to be infected with Lyme, using hydroxychloroquine and Zithromax, or Flagyl with Zithromax, because *Babesia* responds to these medications, too.

Bartonella

Typical symptoms in those with *Bartonella* and *Borrelia* (unlike the *Bartonella* that results from Cat Scratch disease) include ice pick-like headaches, major photophobia, anxiety or psychiatric issues, and even bi-polar symptoms. Neuropathy, reflex sympathetic dystrophy (RSD) or autism may also manifest, as well as significant cardiac or gut problems. The non-blanching "streaks" that some people find on their skin may also be a telling symptom. Some

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argue that plantar fascial pain is found in both Babesia and Bartonella, but I think that it is more related to Bartonella. In any case, whenever extreme anxiety is patients' overriding symptom and is found in conjunction with neuropathic symptoms, such as burning pain, then I suspect that a Bartonella-like organism is causing these symptoms.

Ehrlichia and Anaplasma

If patients have profound fatigue and severe muscle pain, especially in conjunction with high liver enzymes, low white blood cell counts and fevers, they may have Ehrlichia.

Mycoplasma

Because Mycoplasma is an intracellular organism, it's difficult to test for, but many of my patients have it. Persistent arthritis, especially in one joint that is really swollen, or a rheumatoid arthritis presentation indicate the possible presence of Mycoplasma. In children, major psychiatric problems may also indicate that the infection is present.

Lyme (Borrelia)

People with Borrelia can have all of the aforementioned symptoms, as well as many others, because Borrelia runs the gamut of symptoms. For that reason, those with this infection may feel bad in a number of different ways. Symptoms usually migrate with this infection, however, and/or tend to flare for four to seven days per month.

Also, I think that co-infections like Babesia, Bartonella, and Ehrlichia are generally not important factors in patients' overall symptom picture unless Bb (Borrelia burgdorferi) is present to give them a foothold.

I do find that some of my patients have only Bb, without any other co-infections, especially those that have been sick for more than

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twenty years. Such patients have been living at a lower level of functionality, and may have been suffering from symptoms of generalized pain, fatigue and cognitive issues for a tremendous amount of time. Yet, because their problems tend to be mostly related to pure Lyme disease (*Borrelia*), they are often easier to treat than the co-infected patients.

Other Symptomatic Trends

Another trend that I have observed is that almost all of my patients that have Lyme disease (Bb) along with rheumatoid arthritis, MS (Multiple Sclerosis), Alzheimer's or Parkinson's, are also likely to have Babesia. If I had to guess, I would say that at least a third of all Lyme disease sufferers have co-infections, and possibly more.

Using Herbal Remedies to Treat *Borrelia* and Other Infections

I find that I have the most success treating my patients with herbs when I use them in conjunction with pharmaceutical antibiotics. If I were to recommend only herbs for the treatment of Lyme disease, there would be frequent treatment failures. If I prescribed only antibiotics, then I would have to use more antibiotics than if I had combined them with herbs. I think that herbs really act to heighten the effects of antibiotics, and therefore, I generally formulate a protocol using two to eight anti-microbial herbs, in addition to one to four antibiotics.

Dr. Thoring, whom I mentioned earlier, has come up with a promising herbal tincture, called BLT from Clinical Response Formulas, which contains red root, teasel, boneset, black walnut, lomatium, smilax, and stillengia. I find this product to work really well for the treatment of *Borrelia* and *Bartonella*, and it may also have some activity against *Babesia*.

Other herbs or herbal formulas that I use in my practice include Mora, Enula, Cumanda and Banderol from NutraMedix; cryptolepis from Woodland Essence; the rizol oils Epsilon, My, Kappa,

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Gamma and Zeta from BioPure; and Dr. Zhang's herbal products Circulation P, houttuynia, allicin, artemisia and coptis. I also use a bit of noni on occasion, as well as Borrelogen and Microbogen from David Jernigan, and some of the herbal cocktails from Monastery of Herbs. I may also recommend homeopathic remedies to my patients, such as Bioresource's homeopathic molds, Notatum and Quentans and the homeopathic bacteria, Fermis and Subtilis. Stephen Buhner's recommended herbs, such as andrographis, resveratrol, stephania root, and cat's claw, are likewise important, as are chanca piedra and whole garlic. Garlic is beneficial for those who don't have trouble metabolizing sulfur-containing foods. Finally, I use olive leaf extract and monolaurin or lauricidin for viruses, oregano oil for yeast, and products from Raintree, such as Myco, Amazon C-F and A-F for various other purposes. All of the aforementioned are just the antimicrobial herbs that I use in my practice; there are others that I recommend for supporting the body in the healing process.

Detoxification

Treatments

Before I can detoxify my patients, I have to get their adrenal glands working. I recommend a broad range of adrenal supplements for this purpose, including adaptogens such as rhodiola, Cordyceps mushroom, ashwaganda and Researched Nutritional's Multiplex and NT Factor Energy. Vitamins B-5 and C, magnesium, molybdenum, and adrenal glandular formulas are likewise important. I also sometimes recommend Bezwecken's Isocort, or occasionally, hydrocortisone in low doses.

To address the drainage aspect of detoxification—that is, that which involves opening up the body's detoxification pathways so that toxins can more freely leave the body, I recommend that my patients take Burbur and Parsley from NutraMedix. These are definite staples in my practice. I also use L-Drain and K-Drain from Transformation Products, Bioresource's Mundipur, apo-Hepat, Renelix, Itires and Toxex.

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For liver support, I recommend Liver Extende, which is a sarsaparilla and artichoke complex; Hepol from Projoba and Medcaps DPO from Xymogen, as well as alpha-lipoic acid, glutathione, and other glutathione precursors. Red and green clay, especially Argiletz clay and plain USP grade bentonite, are also remarkably useful. David Jernigan's CNS Neuro-Antitox II, a product called Detox Factors from Natural Partners, and sometimes concentrated fruit juices such as acai, mangosteen extract and goji berry are beneficial, too. In addition, Pinella from NutraMedix, red root, burdock root, beet juice, dandelion leaf and root, all aid in the functioning of various detoxification pathways. Finally, I may recommend that my patients use detox footpads and ionic footbaths, castor oil packs, and digestive enzymes such as Wobenzym, Vitalzym, Inflammaguel (Researched Nutritionals), as well as others.

Doing bodywork aids in detoxification. I have found therapies such as craniosacral, lymphatic and abdominal massage to be beneficial for my patients, as well as upper cervical therapy, which is a technique that increases blood flow to the brain. Dr. William Amalu performs the latter and is quite good at using it in his practice. NET (Neuro-Emotional Technique) is a physiological strategy that can also be really helpful for getting the body to release toxins. Also, I recommend stretching exercises and skin brushing techniques to all of my patients.

If heavy metals are a problem, I recommend chelation therapy using agents such as chlorella, cilantro, zeolites, DMSA, DMPS and Calcium Disodium EDTA. OSR also shows a lot of promise, especially when mixed with phospholipids. Chelex from Xymogen, Metalloclear and Ultraclear from Metagenics are also good, gentle chelation products.

Finally, I give chlorella to almost all of my patients, because I think that its uses and benefits are numerous. I may also use other toxin binders, everything from Cholestyramine to activated charcoal, Nanotech Chitosan from Allergy Research Group, glucomannan

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and apple or citrus pectin. Other practitioners may recommend additional or different binders.

Addressing Detoxification Problems

Compromised detoxification mechanisms in those with Lyme disease are sometimes due to methylation pathway defects. To correct this type of problem, I may recommend that my patients do the Amy Yasko protocol, and in the meantime, try to get the ammonia out of their bodies, using things like yucca root, BH₄, and sometimes RNA Ammonia Support Formula. Rich Van Konynenburg has developed a simplified version of the Yasko protocol that seems to have some clinical utility. I also find that Dr. Richard's plant stem cells (Gemmo therapy) can be remarkable for fixing detoxification problems, but I tend to refer my patients out for this type of treatment.

One of the problems with patients who aren't able to detoxify well is that they are nutritionally depleted. Intracellularly, they aren't able to absorb their nutrients, so one of the things that I do to correct this problem is to order a urine and plasma amino acid profile and red blood cell elements test. I then recommend that they supplement their diets with whatever minerals and amino acids that they happen to be deficient in, according to their test results. Administering IV amino acids and minerals is sometimes necessary. I may also recommend that they take Peltier Electrolytes from Crayhon Research, which is kind of like glorified Gatorade, but which works well to replenish some of the cell's missing elements. I may also send patients out for IV nutrition, to receive different Myer's cocktails and such, to get them more nutritionally balanced.

Immune System Supplements

Various immune supplements can be beneficial for strengthening the immune system, which is another important component to healing from the Lyme disease complex. I sometimes administer intramuscular transfer factor to my patients, or I may give them Researched Nutritionals' Transfer Factor LymPlus, or Multi-

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Immune Transfer Factor, the latter of which can be really useful for calming down an overactive immune system. I also use low-dose Naltrexone in my practice.

Healing the Gut

It's important for me to support my patients' physiology, to the extent that I am able, by adding the right kind of nutrition to their diets and which is easy for them to tolerate. Many of my patients are gluten and casein-sensitive, and have lots of food allergies, so eliminating these allergens from their diets is important.

In order to heal their guts and decrease Leaky Gut syndrome, I may give them substances such as Xymogen's IgG-2000 DF, which are bovine source immunoglobulins that calm the gut down. I may use this in conjunction with a product called Intestimax, which is a combination of marshmallow, butyrate, and glutamine that supports the integrity of the intestinal lining. Or I might give them rectal butyrate, which also calms the gut, or Ketotifen, which reduces inflammation and promotes healing of the intestine. Sygest, Juvecal and Roqueforti, as well as other spagyric homeopathics from Bioresource are likewise useful for this purpose.

After this, I will start treating their yeast problems. Yeast overgrowth must be controlled in order to fully heal the gut, and I use a broad range of remedies for getting rid of yeast; everything from cellulase to caprylic acid, pau d' arco, and oregano oil, to the pharmaceutical medications.

Treating Hormonal Dysfunction

Balancing hormones is a remarkably important component to healing from Lyme disease. In Lyme, the HPA (hypothalamic-pituitary-adrenal axis) is severely impaired and it's one of the more difficult areas of the body to heal. Plant stem cells seem to help the HPA-axis to some degree, but I think that hormones are one of the areas in medicine that still needs to be researched, if practitioners really want to optimize their patients' whole endocrine system.

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Bioidentical hormones, when used properly, can help to restore HPA function in some with Lyme disease. *Borrelia* likes to destroy the body's connective tissue, and endocrine glands have a lot of connective tissue, so it is important to get antibiotics and other antimicrobials into those glands. Optimizing endocrine function is also important, but if practitioners improperly prescribe hormones, then their patients can get "out of whack." For that reason, I often refer my patients to an endocrinologist or skilled naturopathic physician who can more properly deal with this aspect of their healing.

Lifestyle Recommendations for Healing

I think that "island life" (tranquility and few toxins) is probably best for the chronically ill, although this lifestyle probably isn't realistic for most. In any case, it's important that those with Lyme get away from sources of electromagnetic stress wherever possible. Even though there may be more healing resources in cities, those who are a little more off "the grid," will fare better with their treatments. Living a slower paced life is also beneficial for healing, as is consuming a diet rich in organic food. It's okay for those with Lyme to have animal protein but it needs to be really clean, healthy meat. Basically, those who are leading really clean lives, in the absence of as many environmental toxins as possible, have greater success in their healing journey.

Diet

It is important that people with Lyme maintain a non-gluten, sugar and yeast-free diet, while keeping their body's pH up by eating foods that promote less acidic blood. For those with methylation problems, keeping sulfur-containing foods like broccoli and garlic to a minimum, as well as onions and animal protein, is a good idea. Blood type diets might be beneficial for some. I have observed that blood types A and AB have the most difficult time tolerating treatments, so such people might benefit from following a blood type diet. Eliminating dairy from the diet is especially important for those with arthritis and certain neurological conditions. Finally,

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those with Lyme should minimize any other food allergies that show up on their IgG and IgA blood test results.

Exercise

I think that Dr. Burrascano's approach to exercise is right on. He advocates weight training with lightweights, as well as stretching-type exercises, but cautions against doing too much aerobic exercise. I agree that people with Lyme need to stretch and do gentle exercises, and that too much aerobic exercise, too fast, will deplete the adrenal glands, decrease T-cells, and open up the blood-brain barrier so that more *Borrelia* can get into the brain. Anaerobic-type exercises are more important, especially when people are just starting on a new treatment protocol.

Treatments for Symptomatic Relief

Insomnia

My approach to treating insomnia is to start by giving my patients one sleep remedy at a time, and then adding others as necessary, by "stacking" them up, one on top of the other, until patients are able to sleep well. I start by recommending natural remedies such as glycine, L-theanine and GABA. Dr. Zhang has a fantastic product called Herb Som, which contains schizandra. To overcome insomnia, it is important that those with Lyme find supplements that promote their GABA pathways.

If the natural remedies don't work for my patients, then I will prescribe them pharmaceutical drugs. I will basically do everything under the sun to get them to sleep, so if the drugs don't work, then as a last resort, I will refer them out to a psychiatrist for a prescription of Xyrem, which seems to help when all else fails.

Pain

To treat my patients' nerve pain, I use everything from transdermal remedies to non-steroidal anti-inflammatory drugs. Ketoprofen cream, Kaprex from Metagenics, Kapp Arrest from Biotics, Salox-

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icin and Doloryx from Xymogen and UltraInflamX from Metagenics are all useful. Key and Wellness Pharmacies have transdermal neuropathy creams and gels, which are made and combined using different preparations. I also use medications such as Gabapentin and Lyrica, and occasionally, Valproic acid, Carbamazepine and Dilantin. I try to stay away from prescribing narcotic drugs, because over the long run, they increase inflammatory cytokines in the body.

If my patients' pain cannot be relieved by any of the aforementioned strategies, then I will refer them to a pain management specialist. Kids often need more pain management than adults.

Finally, curcumin from turmeric can be extremely helpful for lowering inflammation and reducing pain, as can bee venom and urine therapy (although I don't use the latter in my practice). Energetic work, stretching and detoxification strategies can also relieve pain, depending upon its source. Getting to the source of the pain is important for determining what the best remedy will be. If my patients' pain is in the morning, sometimes it's due to toxins in their bodies. If it gets worse throughout the day, then it may be that their Lyme infections are causing the pain.

Depression and Anxiety

As is true for pain, when prescribing remedies for anxiety and depression, it's important to know the cause of these symptoms. Sometimes, I find it necessary to prescribe anti-depressants, and I refer my patients to Lyme-literate psychiatrists that I know. I'm not a big fan of drugs, but sometimes people need them, at least for a short while. To help determine the underlying cause of my patients' anxiety or depression, I sometimes check their neurotransmitter levels using labs such as NeuroScience or Sanesco, and then recommend amino acids and other supplements to make up for any deficiencies. Just supplementing with magnesium or selenium can often be remarkably helpful, as can detoxifying the body of heavy metals, supporting its nutrition, and getting rid of ammonia and other neurotoxins.

Fatigue

Fatigue is one of the more difficult symptoms to treat, but it's one of the most bothersome. Like other symptoms, it is important to discover its cause, which is no easy task. Provigil, NT Factor Energy, glutathione and methyl or hydroxy B-12 can be beneficial for reducing this symptom. If patients don't have a lot of yeast, using D-ribose or even some of the Mannatech glyconutrient products may also be helpful.

Brain Fog

Thinning the blood with low dose coumadin, heparin, boluoke (lumbrokinase), serrapeptase, ginkgo or Pentoxifylline can sometimes reduce brain fog and other cognitive symptoms. Puerrin, yucca root, NutraMedix Pinella, chlorella, and Bacopa are also good for this purpose.

Healing Emotional Trauma

Emotional trauma is a huge component of illness and can be a block to patients' healing. I think that in a sense, cells hold on to memories. Doing therapies that access the subconscious mind, such as EMDR and hypnosis, can be helpful for releasing traumatic memories on a cellular level, as can Family Constellation work and psychotherapy. Really looking deep within the self to discover the spiritual causes of illness, as well as faithfully exploring and healing past memories is important. People with Lyme often need to "go deep" in order to heal their emotional trauma.

Who Are Those That Heal From Lyme Disease? Who Are Those That Don't?

The people who tend to heal from Lyme disease are those who don't know how sick they are. They are those who are out there doing things, living life and functioning amidst all of the adversity that Lyme disease brings into their lives. They are the ones who really push themselves to get better, which means that ironically, the most adrenally-depleted people might be those who are having the most

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success with their recovery. Such people go out and get sunshine every day. They stretch and do all the tasks that are required of them to heal, such as daily skin brushing, colonics and keeping a good diet. They are able to focus on their symptoms but not make the symptoms the focus of their lives.

Also, people who can roll with the punches, take things in stride, adapt to adversity, self-manage symptoms as they come up and make decisions on their own, are those who heal. They are of the sort who can make the decision to stop a supplement if they no longer need it, and to research new supplements but not base their life decisions upon what others tell them about those supplements. They hunker down and stay in the healing process for the long haul, and can balance immediate gratification with deferred gratification. They are open to trying new things, don't focus on every single symptom that manifests in their bodies and don't have to know the reason "why" for everything; for example, why certain remedies work and why certain things are happening to their bodies.

I think that it is really important for those with Lyme to have a positive attitude, too. This can be taken to a fault; some Lyme sufferers might be "happy herxing" for two years, and I think that's ridiculous, but it's good if they are able to adapt to adversity and to view failures as a bump in the road, instead of as a curse.

For example, the person who is able to get over a gallbladder attack, a negative reaction to a medication or an IV line complication and say, "Okay, that didn't work, let's try something else," instead of becoming despondent and giving up, has an easier time healing. Those who don't get "stuck" in persistent thoughts of disease or who don't get post-traumatic stress from their illness or treatments also heal faster than those who do.

Toxic partners are another block to healing. It's extremely difficult for family members to understand what the sick person is going through, and it can be a huge detriment to that person's healing.

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Likewise, when people harbor anger, blame others, get stuck and hung up on details, or have other forms of emotional distress, their healing becomes compromised.

Other impediments to healing include mold, yeast and other toxic chemicals in the environment.

Finally, people who aren't on the Internet all of the time asking questions about Lyme disease and getting totally despondent when hearing stories about patients who kill their pastors, have an easier time healing!

The Role of Spirituality in Healing

I think that there's a spiritual component to healing that really matters. People need to feel connected to something larger than themselves, whether that something is found within a formal religion or elsewhere. If there's a way that those with Lyme can interface with the divine, such as through prayer or meditation, then this can make a positive difference for them in their healing journey.

How Finances Affect Healing

Lyme disease is sadly, a disease for the rich. That financial resources are directly related to one's pace of improvement causes me more consternation in my treatment of Lyme patients than anything else. I can do ten thousand things under the sun for them, but if financial limitations are the main thrust of their stress, then it's really hard to get them better. If they can't pay for probiotics, for example, or some of the main detoxification supplements, then their healing becomes complicated. It's difficult to admit, but it's almost as if the wealthier patients are paving the way for the right protocols to emerge and get out there. Until a streamlined path to wellness becomes clearer, however, patients without financial resources will have a more difficult time getting better.

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That said, I have some patients who, through the help of their friends, church, synagogue or family, have been able to make things happen for themselves, even when they thought that they couldn't afford a particular treatment. They have done this by going beyond in their thinking. They tell themselves things like, "I am going to do this IV treatment and I'm not going to get stuck on the details about how it's going to happen. I'm also not going to go bankrupt, or if I do, then I will refinance my house." They find a way. So I believe that those who can completely prioritize this disease and the healing process, get better. Those who say things like, "I have \$2,000 and if I don't get better after I spend all of that, then I am going to kill myself," surely won't get better after spending that \$2,000.

Mistakes in Treating Lyme and Less-Than-Beneficial Treatments

When health care practitioners only focus on treating co-infections, then that is a problem, as is excessively focusing on any one single aspect of healing. Having pre-defined cocktails for patients is also detrimental to their well being.

When it comes to specific treatments, I am concerned about non-frequency specific Rife machines, IV hydrogen peroxide, the salt/C protocol and colloidal silver IV's. I think that while they have their place in healing Lyme disease, and I have seen some people improve by doing them, there may be problems with such treatments.

I am also cautious about the "latest, greatest treatments" that come down the pipeline. Over the past nine years, I have seen so many treatments that patients grab onto just because they are new, but few have long-term benefits. While it may be true that the trail-blazing practitioners are occasionally developing groundbreaking protocols, it is not prudent for those with Lyme to try every one as soon as it arrives. I believe that it would be more responsible for them to watch and wait for a year or so to see what complications arise and what benefits others receive as a result of such treatments. I saw problems arise with MMS and intracellular heat

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therapy, for instance, and do not want to be an agent of harm in a mad dash to get people well.

The Biggest Challenge for People with Lyme Disease

People with Lyme disease are generally really sick, and have been this way for a long time, but their families, doctors or friends sometimes don't believe that they are unwell and their insurance companies often won't pay for their care. As a result, they feel isolated, as if they have been living in a twilight zone, or are going crazy. So they develop mistrust of others, and even of themselves, and they start questioning whether they are legitimately sick. The second-guessing and this burden of guilt that people develop from being so pushed aside, is the number one most difficult aspect of having Lyme disease. But truly, people with Lyme are some of the sickest people on the planet, and treatment regimens are some of the most complex that I can imagine in medicine. I have had patients on up to fifty different medications and over one hundred and fifty herbs at different times during their treatment. Treatment regimens are so complex, but often, Lyme patients can't even cognitively "get it together" enough to listen to instructions about what they need to do to get better. They aren't healthy enough to manage their own care, but the only way to heal from Lyme disease is through a lot of self-management, so they are stuck in all these catch 22's, and there are just a few ways out. So it can be very beneficial to have friends and family members who can help them through it all.

How Friends and Family Can Help the Sick

Friends and family of the sick should read Pamela Weintraub's book, *Cure Unknown*, and watch the documentary, *Under Our Skin*. They should go to Lyme disease conferences on occasion and do research on Lyme. They should accompany their loved one to doctor's appointments at least some of the time, and become highly informed about what this disease is about, and realize that it doesn't just affect the patient, but the entire family.

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One of the biggest problems with Lyme disease sufferers who have partners is that their libido is so low, or they hurt, so they don't want to have physical contact with their healthy partner. People usually marry one another when they are healthy, and even though they make promises to be there for each other "in sickness and in health," during times of sickness, the healthy spouse often gets "caregiver fatigue," or becomes angry and frustrated at the partner who is sick. Partners need to be aware of this and seek counseling to deal with it, so that they don't take these feelings out on their loved one, who is already suffering greatly as a result of illness. Family members and partners of Lyme sufferers need to realize that counseling is not only for the sick, but also for healthy people trying to stay healthy. That said, caregivers also need to take time off from care giving; spending occasional weekends or vacations alone can restore their capacity to help their loved one.

Finally, it's important that parents of children with Lyme disease not make their child's illness the overriding, defining characteristic of the family. Parents tend to become overwrought with stress when their kids get Lyme, but they need to remember that their kids have hopes, aspirations and desires outside of their illness. The kid is not just a sick person; there's still a lot more to him or her than the illness. Of course, parents need to ask their children how they are feeling, and if they are hurt or tired, but they shouldn't make the child's illness the central defining characteristic of their relationship. They need to find a healthy balance in their conversations and attitudes toward their child, which can be difficult.

How Long Does It Take to Heal from Lyme Disease?

Most of my patients need treatment for anywhere from nine months to three years, if they do everything right. If they comply with their treatment regimens, then most of them should get 90% or more better.

Last Words

We are coming up with new treatments all of the time. There is hope for those with Lyme disease! If current technology hasn't been able to figure it out, there are enough talented practitioners out there who care, who are researching and who are dedicated to their patients' care, and for this reason, I believe that better answers will come, in time.

How to Contact Steven J. Harris, M.D.

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