# Healing Lyme

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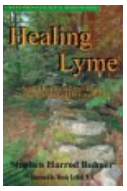


**Disclaimer**: **This information may not be entirely accurate and should be verified by the reader. As always, you should consult your medical professional prior to any changes in your treatment program.** In conjunction with your medical professional, I encourage you to do your own research and create your own path to wellness. **The content is provided for informational purposes only.**

These notes are my review of materials presented at the conference noted above. As I was not yet diagnosed with Lyme disease, I did not attend the conference personally.

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# Basics


The Healing Lyme book is available from Amazon and many other bookstores. I highly recommend it and have had it on my top book picks on my site for many months. If you find the information here of interest, do yourself a favor and get the book! Also, consider getting the CDs from this conference as well. Audio CDs are available from Tree Farm Communications.

Healing Lyme was written from a particular orientation. He found that starting to write the book put him in the middle of the Lyme wars and the controversy between doctors and herbalists married to their protocols.

All disease is ecological. Don't hate disease organisms. “Bacteria are really sexy”. He always asks the question “Are there plants moving into the same regions at the same rate of speed?” There are with Lyme disease.

Most potent is Polygonum cuspidatum. Anthriscus sylvestris (Wild Chervil) and Goutweed are the other two that he finds the most useful.

How does the organism think? Generally, we should not view them as the enemy but we need to limit their behavior. He did not want to create a protocol that was guesswork which is what is done today even by doctors with antibiotics. You have to understand what the spirochete does to know how to approach it the best.

3 primary things the bugs do:

- Spread
- Hide from the immune system
- Break down collagen tissues to feed

They only do one thing to cause disease and that is break down collagen. Where they break down the collagen is where the symptoms occur.

They are best considered to be parasitic organisms - more like parasitical protozoa than bacteria. Originally classified as protozoa and share some characteristics of both protozoa and bacteria. Thinking of them as bacteria limits the ability to deal with them. They are different.

They cannot make all of their own nutrients. They have to scavenge them from their host. Primarily, they get the nutrients from the collagen tissue. Primary places for Lyme are:

- Skin
- CNS
- Joints
- Heart
- Eyes

One of primary symptoms is floaters for large population. There is a long list of ocular symptoms.

They are found in the retina at various times and in the aqueous humor of the eye. The severity of the symptoms is directly related to the health of the immune system. They are very sensitive to

immune function and possess mechanisms for reducing immune function. If immune system is already suppressed, the symptoms and duration of the disease will be worse.

There is no comprehensive text on Lyme anywhere for physicians to get an overview of the disease organism. He reviewed over 500 journal articles and every in-print book. There needs to be a complex medical text done on Lyme. No one is working on it.

The journal articles are not consistent with what the physicians and the CDC say. The rates of infection are huge. Harvard researches estimates 200,000 (not 20,000 from CDC) new cases per year.

Antibiotics are only marginally effective. Effective for 60% of the people. Many will not respond. Mode of transmission is not just ticks.

Transmission

- Semen
- Urine
- Breast milk
- Tears
- Transmitted to babies in womb
- Found in mosquitoes, mites, flees and biting flies

Transmission through some of these routes has been documented but is not being looked at.

Most assumptions about Lyme in the medical community are incorrect. Much of the correct information is coming from the same journal articles that doctors are apparently not reading.

Spirochetes go first to the urinary bladder. Similar to leptospira. It is not an accident. They are expressed out in urine and encyst themselves into a durable cyst viable for up to 2 1/2 years. They cover the grass in any area where an infected animal pees. Other animals eat grass, turns motile again and goes through GI tract into the system. Move better through viscous material than blood.

Semen - having sex with partner can go through vaginal tissue into the body. High incidence of Lyme in married couples. Doctors assume environment, but assumptions like that are dangerous. Everyone is assuming Lyme is from tick transmission only.

Antibiotics are assumed to be effective. Some cases are miraculous. He writes about overuse and speaks out against it. However, this is one of the few cases where the complementary approach of antibiotics and herbs is needed – can be 95% cure rate. The success rate changes after many antibiotic courses and years of illness.

Antibiotics are 70-95% effective but 35% relapse rate which means 40% cannot be cured even with long-term antibiotics. Keeps spirochete levels low but an autopsy of one lady on antibiotics for 4-5 years showed spirochetes.

95% cure rate with cephtriaxone but the numbers never factor in 35% relapse rate. In 5% of people, antibiotics never work. 200,000 infections per year means 10,000 people are untreatable with antibiotics. Antibiotics will keep levels low but will not eradicate the bugs for a large minority of people. The longer the condition is untreated, the less chance or responding. Same lowering of effectiveness overall with more antibiotic regimens. Treatment is most effective within one month, better in one week. EM rash appears in only 1/3 of people bitten by a ticks. 1/3 of

200,000 means that 130,000 infected with Lyme each year do not get a rash. Treatment is thus delayed.

No matter dosing, length, type, schedule, there are still viable spirochetes in the body. Lyme is a potent emerging disease. Lyme is epidemic.

You have to understand physiological shifts in the body caused by Lyme to know how to design a good protocol. This protocol is a base protocol and can be adjusted based on individual circumstances.

2 kinds of Borrelia – Relapsing Fever and Lyme.

Natural products have been used with relapsing fever in other countries. 12 different forms of Lyme Borrelia. It is assumed that only 3 cause disease but that is incorrect. Borrelia Burgdorferi is assumed to be the primary agent of infection in US and the other two in Europe. That is a generalization. Generally true, but not factually true. Many types cause human infection.

Lyme is very hard to grow in a laboratory. They are picky about what they eat and where they grow. Syphilis can still not be grown in a laboratory. Researchers started growing Lyme in lab and did in vitro tests but the studies mean nothing. They act entirely differently in an animal or human body than they do in a test tube. Outcomes turned out to be untrue.

We came along 100 million years ago and Lyme spirochetes have been infecting us all along. They are parasitic and have to have a host. In last 50 years since introduction of antibiotics and technology, they have gone through rapid evolutionary changes.

Borrelia is unique in microbial world. Possesses features unusual to bacteria. Largest number of genetic units of replication of any bacteria known. Their genome structure is highly mutable. They can change rapidly. All nucleotides, amino acids, fatty acids, enzyme co-factors have to be scavenged. Gene structure rapidly rearranges to hide from antibiotics and immune system and to better fit themselves into host animals. They are found in 40 different kinds of ticks. Biting flies, mites, flees mosquitoes. Highly durable in mosquitoes and survive in mosquito eggs through to the new mosquitoes. Cysts survive freezing and thawing. Ticks that carry Borrelia attach to over 300 species of birds, mammals, and reptiles. Transmission occurs over long distances. 60 species of birds harbor infected ticks. He is not aware of spirochete transmission through animal meat. Best thing is to know what to do if you get infected.

He has not seen enough experience or data to show that the spirochetes can be eradicated. It is more likely that we reduce the levels to the point that they do not cause problems if the immune system is healthy.

Can inhibit their ability to infect the body or keep level low enough to not have problems. For some on antibiotics, they are reportedly eliminated but the data is not clear.

Lyme is considered to be a Northern latitude disease but reported in Peru, Australia, North and South Africa, Caribbean, South America. 2% of agricultural workers in Peru test positive.

When tick bites and attaches itself, it forms a gasket on the skin but releases tick saliva factors into the bloodstream. They are highly bio-active. They interfere with the human immune response to infection and allow the spirochetes to take advantage of that and spread throughout the body. This is why the in-vitro studies are not valid. Saliva counteracts the immune responses

and shuts down the body response. The anti-immune compounds inhibit the alternative pathways of the complement system.

If levels if Interluekin-2 (IL-2) and Interferon Gamma are kept high, rate of infection drops considerably. Make sure those levels are kept high. There are specific herbs that are helpful for keeping these levels high in the body. Lyme cannot gain a foothold in a host with an active complement system. Keep the alternative pathway of the complement system active. Spirochetes take advantage and seek out sites in the body if immune function is already low. Most Americans have poor immune function. Degree of infection and severity of symptoms are dependent on immune strength.

Spirochetes alter genome structure to infect both ticks and people. They analyze the blood and determine what type of animal they have bitten and then they alter their gene structure. They have up to 12 linear and 12 circular plasmids. When they identify the kind of animal, they weave changes into their DNA. The information tells them how to avoid the immune system and allows them to live in a warm-blooded environment with a different pH.

Medical researchers assume that spirochetes are not intelligent simply because they do not have a ganglia. Spirochetes are highly intelligent. They are so sophisticated that medical research does not have a comprehensive picture or foothold into what is truly happening.

Spirochetes have an inner-protein and outer-protein coat. They are like a hand (inner-protein) with a latex glove (outer-protein). The outer-coat comes into contact with a host and is altered by the spirochete to penetrate the host. OspA-OspF. Others such as Erp and vlsE. In tick, OspA predominates but then when they have a blood meal, they upregulate OspC and downregulate OspA. They have a variety of outer-protein coat shifts. They can change very rapidly. Erp proteins on the outer coat when expressed bind to Factor H in the complement immune system. There are binding compounds that pull portions of our immune system to it and create camouflage dynamics. They use decerin binding proteins (associated with collagen). Plasminogen is also bound. 154 genes are altered when the spirochete encounters a blood meal. 75 are upgregulated. 79 are downregulated. 37 changes to the outer-protein membrane have been found so far. They have had 100 million years to perfect this. Spirochetes exchange information with each other such as resistance information, virulence information, etc. As fast as an antibiotic is pumped into their body, they pump it back out before it can affect them. They alter their structure from moment to moment to maximize survival. Their ability is nearly inexhaustible. These same changes are not observed in-vitro. They are sensitive to tiny changes in our immune system. If an uninfected tick bites an infected host, they will know in seconds and will immediately flow to the site and infect the uninfected tick.

They can identify large numbers of tissues in the host and prefer tissue sites like joints, brain, eyes, collagenous sites. They live deeper in tissues than other types of bacteria. There is an imbalance in Th1 and Th2. Th (T-helper) cells have two types. Th1 are IL-2, TNFb. Interferon Gamma. Th2 are IL-4, etc. In initial infection, a powerful Th1 response is initiated. Balancing Th1 and Th2 response leads to better response in treatment. Most late stage chronic conditions tend to be Th2 dominant. Lyme is Th1. This is why Astragalus is not good in late stage Lyme. It is very good for acute Lyme as it powerfully activates Th1. In chronic Lyme, this exacerbates autoimmune conditions and you do not want more Th1.

Three stages are: early, early disseminated, and late disseminated. Early does not really exist. Within 7 days might be considered early. However, the first week or month is when people are not treated because they have not seen an EM rash. They are already in the eyes and spinal fluid within 7 days to a month. Within days, they are already in the knee joints. The earlier you

treat the better since they have not had as much time to adapt. Generally just need to know early disseminated or late.

Diagnosing Lyme is difficult. The later treatment occurs, the harder it is to get rid of the disease. When they go into the skin system, they break down tissues, inhibit wound healing factors. They synchronize their actions to maximize their impact. They can be found intracellularly. When antibiotics like Rocephin are used, it may still not reach sequestered spirochetes. In Lyme arthritis, the knee can swell to four times its normal size. Generally impacts the large joints. They spirochetes upregulate fibronectin binding protein (synovium) and decarin binding proteins (joints) that help to congregate in joints, tendons, collagen. They form micro-colonies.

Spirochetes stimulate immune response and create MMP (matrix metallopeptidase) compounds which help them to facilitate deeper penetration. MMP type differs. MMP1, MMP3, MMP9 are the most common ones. Herbs specifically counteract that process and shut them down. MMP 2, 8, 13, 19 are sometimes present. **Polygonum cuspidatum shuts down every pathway of MMP.** Acts as a modulator, not an inhibitor. MMPs in the presence of plasminogen become very active in breaking down cartilage and joints. This results in GAGs (glycosaminoglycan). Inhibition of MMP production inhibits GAGs. **Best thing for inhibiting MMP is Polygonum.**

CD4, CD25, CD57 T-cell levels are low. Lyme specifically shuts down CD57 white blood cell production. CD57 is a diagnostic marker for chronic Lyme. CD8 levels are higher. Stimulating CD4 production and balancing CD4/CD8 ratio interferes with spirochete. Increasing CD57 reduces symptoms. The higher the Th1 response initially, the milder the infection.

Neuroborreliosis is the most debilitating part of Lyme. Spirochetes infect spinal fluid, brain, etc. after hours and in the CNS in 7-14 days often before the rash would even appear. 11% get Bell's Palsy and many have neurocognitive problems.

# Treatment

Must consider four things in the approach to treatment of Lyme:

- Killing the spirochetes
- Immune modulation and support
- Collagen tissue support
- Symptom picture treatment

**If you support the immune system specifically and support collagen tissue, you can completely stop its impact in the body.**

## *Andrographis paniculata*

Dosing is often too low and too short with all of the treatments. Need to be massive and for 8-12 months. Whole herbs are much better. Andrographis tincture is very bitter. Wild herbs are generally better, but with andrographis, standardized is better since complicated protocols and preparation are often complex for people with neuro-Lyme and cognitive deficits. Many cognitive (memory issues, hypoperfusion) issues do not correct with antibiotics alone. When Lyme gets

into the brain, it starts to break down the myelin sheath and generates potent neurotoxins (quinolinic acid). You have to shut down "quin" production.

Andrographis standardized to 10% andrographolides. 8000mg per day 8-12 months in four equal doses. Side effect of most of the herbs is GI disturbance. Start with a lower dose of 1 tablet three times a day and then build up and then adjust based on response.

Andrographis crosses the blood-brain barrier. It was radioactively labeled and was shown that they move right into the CNS. Strong anti-spirochetal action against Leptospira, Relapsing Fever, Treponema Dentali, and Syphilis. Polygonum is also effective against all 4. Enhances immune system and protects the nerves. Anti-inflammatory, especially in the brain. Calming to the CNS. 50% is excreted in two hours. That is why you have to take constant dosing throughout the day.

## *Japanese Knotweed (Resveratrol)*

Resveratrol comes from the Japanese Knotweed root. Prefers Source Naturals brand. 4 tablets 4 times a day (8000mg per day) for 8-12 months. Does many things. It is amazing. Angioogenesis modulator and protects endothelial cells and protects from spirochete invasion. Immunomodulant, immunostimulant. Central nervous system protectant and relaxant. Antioxidant. Anti-inflammatory. **Shuts down quinolinic acid** and protects against ROS (reactive oxygen species) in brain. "Quin" + ROS cause many of the neurocognitive problems. Polygonum will generally stop it.

**Blocks MMP1, 3, and 9 through the same pathways the spirochetes activate.** Crosses the blood-brain barrier and specifically protects the brain. It is a drug/herb synergist that increases the effectiveness of other pharmaceutical products.

## *Cat's Claw*

500mg capsules 4 caps 4 times per day for 8-12 months. There is much controversy over TOA-free. Most of it is not true. TOA-free is not any better. Just separates you from your money. TOA constituents are necessary in Lyme disease as they are the most active in the nervous system. **Cat's Claw specifically raises CD57 white blood cell counts.** That is why it is so good with Lyme. When CD57 goes up, spirochetes go down. **It is also an HLA-DR modulator.** HLA-DR is often found in resistant or chronic Lyme. Cat's Claw can modulate. Raintree is a good option.

## *Smilax*

Not a big fan of Smilax but it binds toxins and reduces herxheimer reactions. Looks good on paper, but not as useful in practice.

## *Astragalus*

For early Lyme. 1000mg 3 times daily to 4000mg 4 times daily for sixty days for active Lyme. Not to be used for chronic Lyme.

## *Stephania*

Favorite besides Knotweed. Hard to find and thus not in the core protocol. Plum brand is imported from China. Plum brand also carries Polygonum but the quality is not good. Specific for eye, demyelination of the nerves, Bell's Palsy. Japanese formulation called Cepharanthin would be his treatment choice for Lyme if it were available in the US. It is available in Japan. Excellent immune-modulator. Potent calcium-channel blocker. Can cause constipation.

Not a fan of tinctures except for Stephania. Likes body to take what it wants rather than the manufacturing process taking out what it does and throwing the rest away.

## *Others*

Chronic fatigue is a problem with Lyme. Best thing is Herb Farm Eleuthero (Siberian Ginseng) tincture in a 1:1 formulation. 1 teaspoon 3 times a day. Tincture should be black. 1:5 formulation for long-term tonic but is not enough with Lyme. Good for depression with Lyme. 30-60 days 1 tsp 3 times a day with two weeks off and then repeat. Brings up energy and helps with stress response.

Selenium 200mcg daily and zinc picolinate 20-30 mg daily also help shut down “Quin” production. Very specific.

**Important to develop protocol for collagen formation. The stronger the collagen, the less effect you will feel from the infections.** Pregnenelone and glucosamine sulfate are very good. **Vitamin C is essential.**

# Lyme Coninfections

Synergistic with Lyme. Symptom picture is much worse if 2 or more. Treating Babesia first results in better outcomes. All are pretty easy to treat.

- **Babesia** – most common. **Artemisinin**. 100Mg 3 times a day for 30-40 days. Very reliable. **Red root** important. Shaking, chills, and fever. **Boneset tea** 2-4 caps daily. Can use the whole artemisia annua. The top 1/3 is the strongest. 27 grams in a quart of water boiled and steeped. Drink 1 quart per day. Capsules are easier to take.
- **Ehrlichia** – invade white blood cells. Called HGE and HME. **Tincture of colchicine (Autumn crocus)**. 20 drops daily for seven days only. No report of any negative effects from use of the whole herb. Specific for Ehrlichia. Knocks it out in seven days. Hard to get. Is the most toxic plant though no adverse effects have been reported from the use of the whole herb. **Astragalus** 1000-2000 mg three times daily for 30-60 days.
- **Bartonella** – **Polygonum** 3-4 tabs four times daily. **Boneset tea** 3-4 times per day. **Red root** tincture if spleen or liver inflammation. 30-90 drops 4 times daily.

# Contraindications

The list below is not exhaustive. Please do your own research in combination with your medical doctor to better understand contraindications.

Andrographis – mild constipation, gallbladder disease
Cat's Claw – pregnancy, GI tract problems, organ transplant, blood thinners
Polygonum – pregnancy, nausea, vomiting, diarrhea, interaction with blood-thinning agents

# General Comments

If CD57 is raised and CD4/CD8 ratio balanced and support collagen, you force the bugs into a static state where they cannot do much. **95% cure rate if you do both herbs and antibiotics.** The bugs can go around antibiotics alone much more easily.

Teasel is very specific for Lyme-generated arthritis. Mixed responses for killing spirochetes. 1/3 of people report die off. 2/3 do not, but all feel better.

You will have a fairly normal life and may need to treat yourself better than you used to.

Sauna and heat results have been good for many people. Lyme spirochetes are able to tolerate heat extremes better than Syphilis. Need 106 degrees sustained which would cause significant damage to the rest of the body. The heat itself is not going to kill the bugs. Sauna therapy is effective for some people.

All dosages for 150lb person. Adjust by body weight for children.