

Lyme Disease
Combat XI

Biofilm Busters



THE CHRONIC LYME DISEASE SERIES

Jenna S. Smith

Lyme Combat I: Salt and Apples

"Your Vision Will Only Become Clear When You Look Into Your Heart. When One Looks Outside; One Dreams. When One Looks Inside; One Awakens."

Carl Jung

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Introduction

This book has been written for people like me who have chronic Lyme disease.

Whether you are at the beginning of your healing journey, or many years into the struggle, you are here now, reading this book for a reason.

You are hoping for a cure. You are desperate to feel better. And you are curious...

Well, I can tell you that many people swear by various alternative protocols, and many more swear by antibiotics with supplements and diets...there are many protocols – I believe – because there are so many unique diseases, (or rather combination of diseases), along with underlying health conditions.

What is clearly true for ALL of us, is that there is no ONE cure.

What is also clearly true for ALL of us is that we want our lives back.

We want to laugh, dance and sing. We want to feel joy, not a fleeting glimmer of joy but an all encompassing joy that lasts through a whole day or perhaps even a week!

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This book will help you no matter what protocol you are using, and no matter what point in your recovery you are at.

Remember to be patient.

There are too many diseased people searching for answers that are looking for the fast food line...no, it doesn't exist unless you just were bitten for the first time last week.

In that case insist on the highest dose of Doxycycline for the absolute longest dose you can beg for. You don't want to be the heartbreaking case of actually catching the disease in time, but not getting enough medication and having a full blown case of hard core neuro-lyme just months later. (I'm not making this up – it happens all the time!)

Chapter One – Why Do We Relapse

There are three reasons we relapse:

- We are not given enough medication
- We are bitten again
- We have co-infections

The last reason is the most common.

We may actually get our bodies to be fully functional and tell ourselves that we have licked it! We are cured!

However, most people are aware that if they are faced with too much stress, or if they push themselves physically, or if they get run down – it is just waiting to come back. Perhaps it will attack a different joint, organ or emotion, but the reality is that the Lyme was never eradicated.

Chapter Two - Inside A Biofilm

Biofilms have been recently discovered as one of the key biological roadblocks to curing many chronic diseases.

For chronic Lyme disease, this is a major breakthrough.

With neurological Lyme disease, the biofilm is believed to be constructed of actual bits and pieces of our myelin sheath which covers and protects our actual nerves that make up our central nervous system.

So when the immune system calls for killer cells to destroy the invaders, our immune system can actually attack our central nervous system trying to break through the biofilm and destroy the infection which they cannot do.

Peta Cohen, M.S., R.D., is the founder of Total Life Center in Northern New Jersey, and has a Masters Degree in Clinical Nutrition, was recently interviewed by Allergy Research Group ([read entire interview here](#)), and offers these insights into biofilms:

"I do a tremendous amount of testing and assessing the children through urine and fecal analysis. What got me so interested in nattokinase and lumbrokinase was the concept of what a biofilm infection actually is. If you do a medline search on biofilms and platelet aggregation, fibrinogen, and fibrin, boom, it's there right in your face.

"Bacteria build biofilms by first aggregating together, and then rapidly weaving this protective web or matrix around them. They build a polymeric matrix. It's a sticky, gluey, mucus-y goop and it's got fibrin in it to give it an intact structure. The bacteria recruit fibrinogen to create fibrin as part of that matrix. At that point they can shed their outer membrane, which has the proteins that serve as antigens and as a target of the missile of the immune system. They're very protected. They're very crafty in creating a way to survive and procreate and hide from the immune system."

This understanding has opened up a whole new world in the ability for scientists and medical doctors to understand and treat chronic Lyme disease.

Chapter Three – Systemic Enzymes

An enzyme is a biocatalyst - something that makes something else work or work faster. Chemical reactions are generally slow things, enzymes speed them up. Without enzymes, the chemical reactions that make up our life would be too slow for life as we know it. (As slow as sap running down a tree in winter). For life to manifest, as we know it, enzymes are essential to speed up the reactions.

We have roughly 3000 enzymes in our bodies and over 7000 enzymatic reactions. Most of these enzymes are derived or created from what we think of as the protein digesting enzymes. But while digestion is an important part of what enzymes do, it's almost the absolute last function.

Natural Anti-Inflammatory.

Enzymes are the first line of defense against inflammation. Inflammation is a reaction by the immune system to an irritation.

Let's say you have an injured right knee. The immune system, sensing the irritation in the knee, creates a protein chain called a Circulating Immune Complex

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(CIC for short), tagged specifically for that right knee. (The Nobel Prize in biology was won in 1999 by a scientist who found the tagging mechanism). This CIC floats down to the right knee and causes pain, redness and swelling - the classic earmarks for inflammation. This, at first, is a beneficial reaction; it warns us that a part of ourselves is hurt and needs attention. But, inflammation is self-perpetuating, it creates an irritation that in response, and the body makes CIC's for!

Aspirin, Ibuprofen, Celebrex, Vioxx and the rest of the Non Steroidal Anti Inflammatory Drugs all work by keeping the body from making all the CIC's. This ignores the fact that some CIC's are vital to life, like those that maintain the lining of the intestine and those that keep the kidneys functioning! Not to mention the fact that they, along with acetaminophen, are highly toxic to the liver. Every year 20,000 Americans die from these over the counter drugs and another 100,000 will wind up in the hospital with liver damage, kidney damage or bleeding intestines from the side effects of these drugs.

Systemic enzymes, on the other hand, are perfectly safe and free of dangerous side effects. They have no LD-50, or toxic dose. Best of all, systemic enzymes can tell the difference between the good CIC's and the bad ones. This is due to the

fact that hydrolytic enzymes are lock and key mechanisms and their "teeth" will only fit over the bad CIC's. So instead of preventing the creation of all CIC's, systemic enzymes just "eat" the bad ones and in so doing, lower inflammation everywhere. With that, pain is also lowered.

Enzymes eat scar tissue and fibrosis. Fibrosis is scar tissue and most doctors learn in anatomy that it is fibrosis that eventually kills us all. Let me explain. As we age, which starts at 27, we have a diminishing of the body's output of enzymes. This is because we make a finite amount of enzymes in a lifetime and we use up a good deal of them by the time we are 27. At that point, the body knows that if it keeps up that rate of consumption we'll run out of enzymes and be dead by the time we reach our 40's. (Cystic Fibrosis patients who have virtually no enzyme production to speak of, even as children usually don't make it past their 20's before they die of the restriction and shrinkage in the lungs from the formation of fibrosis or scar tissue).

The repair mechanism of the body goes off balance and has nothing to reduce the over abundance of fibrin it deposits in nearly everything from simple cuts, to the inside of our internal organs and blood vessels. It is then when most women

begin to develop things like fibrocystic breast disease, uterine fibroids, and endometriosis.

We all grow arterial sclerotic (meaning scar tissue) plaque, and have fibrin begin to spider web its way inside of our internal organs, reducing their size and function over time. This is why as we age our wounds heal with thicker, less pliable, weaker and very visible scars.

If we replace the lost enzymes, we can control and reduce the amount of scar tissue and fibrosis our bodies have. As physicians in the US are now discovering, even old scar tissue can be "eaten away" from surgical wounds, pulmonary fibrosis, kidney fibrosis even keloid years after their formation. Medical doctors in Europe and Asia have known this and used orally administered enzymes for such for over 40 years!

Systemic Enzymes also facilitate blood cleansing. The blood is not only the river of life; it is also the river through which the cells and organs dispose of their waste. Enzymes improve circulation by eating the excess fibrin that causes blood to sometimes get as thick as catsup or yogurt, creating the perfect environment for the formation of clots. All of this material is supposed to be cleaned off by the

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liver on "first pass" or the first time it goes through. Given the sluggish and near toxic or toxic states of everyone's liver these days, that seldom happens.

So the waste remains in the blood, waiting for the liver to have enough free working space and enough enzymes to clean it. This can take days or in some people, weeks!

When systemic enzymes are taken, they stand ready in the blood and take the strain off of the liver by;

- Cleaning excess fibrin from the blood and reducing the stickiness of blood cells. These two actions minimize the leading causes of stroke and heart attack: blood clots..
- Breaking dead material down small enough that it can immediately pass into the bowel.
- Cleansing the FC receptors on the white blood cells, improving their function and availability to fight off infection.

And here we come to the only warning we have to give concerning the use of any systemic enzyme - don't use the product if you are a hemophiliac or are on prescription blood thinners like coumadin, heparin and plavix. The enzymes cause

the drugs to work better, so there is the possibility of thinning the blood too much.

Immune System Modulating.

Enzymes are adaptogenic, seeking to restore a steady state to the body.

When the immune system is running low, we become susceptible to infectious disease. When it's cranked up too high, then the system creates antibodies that attack it's own tissues, as are seen in the autoimmune diseases of MS, Rheumatoid Arthritis, and Lupus. Here the systemic enzymes will tone down immune function and eat away at the antibodies the immune system is making to attack its bodies own tissue.

When the immune system is run down too low, the enzymes increase immune response, producing more Natural Killer cells, and improving the efficiency of the white blood cells, all leading to improved immunity.

Virus Fighting.

Viruses harm us by replicating in our bodies. To do this, a virus must bond itself to the DNA in our cells through the medium of its exterior protein cell wall.

Anything that disrupts that cell wall inhibits the ability of viral replication by rendering individual viruses.

Systemic enzymes can tell the difference between the proteins that are supposed to be in your body and those that are foreign or not supposed to be there (again the enzyme lock and key mechanism). Systemic enzymes have a unique feature. *Side effects do not occur with systemic enzymes.*

This means that raising the dosage to massive levels *does not cause any problems unlike pharmaceutical drugs.* The initial dosage, which is often one potent enzyme pill three daily taken 45 minutes before or 45 minutes after a meal, can be raised by three tablets daily every few days until the desired therapeutic response develops.

A person given more than 3700 enzyme tablets in one day experienced only diarrhea from this massive capsule intake.

Of the thousands of systemic enzymes, certain combinations are found especially useful for certain conditions.

The three most important enzymes for chronic Lyme disease are **Lumbrokinase, Nattokinase and Serrapeptase.**

Chapter Four – Lumbrokinase

Lumbrokinase

Lumbrokinase is a systemic enzyme in a group of six, novel proteolytic enzymes derived from the earthworm *Lumbricus Rubellus*, and it is slowly establishing itself as possibly the best and brightest new treatment for chronic Lyme sufferer.

I say "new treatment" because it is new information for me - generously supplied by a fellow "Lymie" Ted Patterson who has tried it and "feels better than he has in years". The more I researched this enzyme, the more excited I have become.

First, lumbrokinase has been used successfully in China's four top hospitals in nerve and infectious diseases since 1995 without any harmful side effects. Initially used for the potent ability to dissolve blood clots and vein thrombosis, it was soon discovered to improve the quality of blood in a number of ways that are still being discovered.

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According to [Allery Research Group](#), medical reports from leading researchers and doctors have further discovered the power of lumbrokinase to not only dissolve clots which obviously helps protect against heart disease and strokes, but also:

- **to lower fibrinogen levels** in cancer patients, which is strongly associated in scientific studies with better outcomes, less metastasis, and slower growth of tumors;
- **to offer antiplatelet, anti-thrombotic and self-destructive cellular activity**, remarkably regulating hypercoagulation; and most importantly for us;
- **to dissolve bacterial biofilms** present in chronic infections in conditions like autism and Lyme disease, allowing antimicrobials and anti-bacterials as well as our own immune system to work effectively and quickly to destroy the colonies that hide behind the biofilms.

So, as lumbrokinase dissolves this biofilm, we have hope that our killer cells, or in more critical cases where the immune system is no longer working effectively,

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antibiotics (pharmaceutical or herbal) will be able to destroy the infection and return us to health!

Due to the difficulty of absorbing the enzymes fully in such a way as to actually break down the biofilms, the highest quality product is essential.

[See recommended Lumbrokinase here.](#)

Chapter Five – Serrapeptase

"Serrapeptidase", better known as "serrapeptase", is best known for its ability to relieve pain from inflammation, reduce inflammation, and destroying pathogens. It is suggested to be able to kill Lyme bacteria, a wide variety of fungus (another tool in the fight against Candida) and unfriendly bacteria.

This means this enzyme through it's natural action in our bodies can greatly strengthen the immune system. This enzyme is naturally processed commercially today through fermentation, and was first discovered in the silkworm intestine.

In the past, it has been known primarily for it's ability to relieve pain - especially pain from inflammation, anti-inflammatory properties.

Serrapeptase reduces inflammation in three ways:

1. Breaks down the insoluble protein by-products of blood coagulation known as **fibrin**. Fibrin develops from soluble protein which clots together to form a mesh when you are wounded. Fibrin can cause many health

problems in certain health problems and diseases;

2. Thins the fluids formed from inflammation or injury and facilitates their drainage which speeds the tissue repair process.

3. Serrapeptase alleviates pain by inhibiting the release of specific pain-inducing amines known as **bradykinin** (according to Wikipedia, bradykinin is a group of proteins consisting of nine amino acids), that cause blood vessels to enlarge (dilate), and therefore causes blood pressure to lower..

4. The cardiovascular effects of the serrapeptase are due to the remarkable ability to break down dead or damaged tissue without harming living tissue. Atherosclerotic plaques can be slowly dissolved without harming the inside of the arteries.

Serrapeptase is also known for its ability to destroy harmful pathogens and unfriendly bacteria. This helps to greatly strengthen our immune system and free it up to fight more serious infections (such as Lyme disease.)

Surprisingly it has been known for over a decade that serrapeptase works to break apart and/or dissolve biofilms.

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The wonderful collision of earlier research with the frantic search for a cure for the many modern chronic illnesses (such as Chronic Neurological Lyme disease, Fibromyalgia, Chronic Fatigue Syndrome, Epstein Barr, Autism, MS to name just a few) and auto-immune diseases (such as HIV, Celiac disease and Diabetes 1 to name a few) has resulted in the discovery of serrapeptase inhibiting and destroying biofilm.

Bacteria, as we have discussed in many blog posts, often follow a process called biofilm formation which results in virtually impenetrable fortresses for the bacteria to multiply and thrive growing steadily and in extended chronic infections causing the immune system to attack our most weakened and fragile organs and/or central nervous system making the disease incredibly painful and resistant to any anti-microbial, anti-bacterial or anti-viral agents - pharmacological or organic in nature.

Throughout medical research into various means of inhibiting or destroying these biofilms, great breakthroughs have occurred - especially in the last few years.

One study from top Italian scientists suggest that "proteolytic enzymes" (see definition below) could significantly enhance the activities of antibiotics

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(pharmacological or organic) against biofilms by revealing the infectious colonies as the biofilms are destroyed, and actually inhibit the invading bacteria or virus from developing any new biofilm "hide-outs."

If the body were always capable of producing adequate proteolytic enzymes, it is possible that cancer would not develop. In theory, cancer cells have a type of protein coating that is destroyed by these proteolytic enzymes. When this protein is destroyed, the body's white cells are able to attack the cancer cells and destroy them.

This is also true of the protein coverings that enable Lyme disease to successfully evade our immune system and busily creating these strongholds - sometimes for years without any symptoms - and the WHAM! You encounter exceptional stress and everything shuts down. For "Lymies" we call that the "crash". For those fortunate souls who discover their Lyme infection immediately, the infection is killed before the biofilms can be constructed.

Unfortunately, for those who think they have successfully eradicated a new infection of Lyme, it is not uncommon for a full-blown infection to flare up months or years later due to emotional stress or extreme physical stress and find

that a few spirochetes slipped into the central nervous system and evaded the antibiotic treatment.

Lymes disease can lie "dormant" for decades without showing more than a few aches and pains here and there...creating massive biofilm colonies while the unsuspecting victim pops ibuprofen for a sore joint or stiff neck.

The late alternative medicine renowned internist physician, Dr. Hans Nieper, M.D., (1928-1998) of Germany, pioneered the use of this enzyme in clearing arteries and capillaries of accumulated cholesterol-loaded plaque.

In this extraordinary application of an inexpensive and entirely safe food grade natural protein, Dr. Nieper fed the protein to a small group of men scheduled for artery by-pass surgery by him. **He delighted in presenting a pair of 70 year old former gymnasts doing handsprings who previously could barely walk to the door unaided, and suffered extreme chest pains.**

Another licensed medical doctor who requested anonymity calls serrapeptase "miraculous". Dr X claims serrapeptase protects against stroke and is more effective and quicker than EDTA chelation treatments in removing arterial plaque. **He also reports that serrapeptase dissolves blood clots and causes varicose veins to shrink or diminish. Dr X excitedly told of a woman scheduled for hand**

amputation and a man scheduled for bypass surgery who both recovered quickly without surgery after treatment with serrapeptase.

To conclude this series on "New Hope for Severe Chronic Neurological Lyme Disease, it appears to me, as a journalist and chronic neurological Lyme sufferer, that these three enzymes from earthworms will most certainly ease the sever intensity of symptoms and possibly cure even decades of suffering.

I know that I am not speaking for myself alone when I say that the acceptable goal for healthy and vibrant living is not as high as it once was - which has caused me great sadness. However, I am now raising that standard high in the air with new found hope that extraordinary health can be ours again - not way down the road, but perhaps someday soon!

NOTE: This is a powerful anti-coagulant so it must be used with care. If cut while taking this product, contact your physician immediately.

[Click here for recommended Serrapeptase.](#)

Chapter Six – Nattokinase

Nattokinase, another "biofilm buster" is being used more frequently by Lyme doctors for the very difficult cases which don't appear to improve with any other treatments - conventional or non-conventional.

Unlike lumbrokinase which has been used for less than fifty years, nattokinase has been used for at least 1000 years in Japan. It is a potent enzyme extracted from a traditional Japanese food called 'natto' which is a fermented cheese-like food that has been popular as a folk remedy partly due to its taste, but more so for its ability to correct heart and vascular diseases. It is produced by fermenting soybeans and adding "Bacillus natto"

The resulting enzyme is produced when the bacteria interacts with the fermenting soybeans.

The following quote is taken from **Allergy Research Group's Newsletter** ([read here](#)) in an interview with Dr. Stephen Hines:

"Lyme Disease is my specialty. I am a Lyme patient myself and I use myself as a test subject for any therapy I use on my patients. When you have a chronic

infection that gives rise to Fibromyalgia and Chronic Fatigue Syndrome, you will deposit excess fibrin in your tissues, and that will trigger a secondary immune response. Your body deposits fibrin (defined below) so that organisms are inhibited from being very mobile.

"That is both good and bad. They're not mobile, so they can't do as much damage, but you also can't get antibiotics or other medications to them as easily.

"Ultimately, in order to treat the infection, we want to get deep into the tissues and this is where nattokinase has a powerful role. I start my patients on nattokinase and build them up slowly, and once they have reached a peak level and the pathogens are exposed and vulnerable, I add in the antibacterial, antifungal, or antiviral medications."

Nattokinase, like lumbrokinase is a powerful anti-coagulant with some amazing medicinal properties.

"Lyme Fog" like Alzheimer's is partially caused by the slow build-up of "amyloid deposits."

According to a recent article by ***Vitamin Research Products***, another cutting edge lab, Amyloid deposits are particles of oxidized protein that build up inside all non-dividing, or post mitotic cells, such as the brain, heart and other key cells. Amyloid buildup slowly shuts down the ability of the cell to function properly and acts as an irritant, increasing free radical generation. ([read full article here](#))

Evidently, brain cells are especially vulnerable to amyloid buildup during disease processes. Amyloid proteins occur in much greater abundance in Alzheimer's disease and maturity onset diabetes than in the normal aging cells.

Over the past 40 years, only a few compounds have been reported to dissolve amyloid protein. However in January of this year (2009), researchers have discovered that nattokinase could cleave amyloid and enhance amyloid clearance. The researchers discovered that nattokinase, but not trypsin or plasmin, has the ability to degrade amyloid.

So, nattokinase is showing clear evidence of clearing the brain of biofilms AND amyloid proteins.

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Additionally, nattokinase is believed to help cure chronic Lyme disease due to its ability to destroy any infection residing in blood platelets as well as dissolving biofilms. This could be one of the reasons for its current success with the stubborn chronic cases where a variety of co-infections turn the blood into "infectious soup" - as the enzymes seem to clear up a multitude of symptoms very quickly.

“Patients are reporting that they have more energy, less pain and a clearing of mental confusion in the first few days of using nattokinase!” Patricia Kane, PhD tells of her experience using nattokinase with chronic diseases.

This special enzyme also stabilizes blood pressure shown in various studies, and due to the fortifying role of nattokinase as an anti-coagulant, veins and arteries retain better flexibility which plays an important role in preventing and/or treating high blood pressure and hypertension.

Dr. Chris D. Meletis concludes in his article for Vitamin Research Products:

"Hypercoagulation is linked to heart disease, strokes, hypertension, pulmonary embolism, venous insufficiency, inflammatory bowel disease, fibromyalgia, chronic fatigue syndrome, diabetes and migraines. Nattokinase has impressive blood clot dissolving or thrombolytic activity matched by no

other enzyme. Consequently, nattokinase is an ideal natural approach to stop excessive coagulation, improve heart health, and reduce factors involved in a host of disorders."

NOTE: This is a powerful anti-coagulant so it must be used with care. If cut while taking this product, contact your physician immediately.

[Click here for recommended Nattokinase.](#)

Chapter Seven - What Happens Now?

Whatever treatment you are currently using, destroying the biofilm will not interfere with your treatment – it will only enhance the scope and reach of your treatment's ability to rid your body of these hidden colonies.

I must admit in all fairness that when I interviewed medical professionals who were experienced LLDs, I was given two diametrically opposed views.

One side insists that these enzymes must be given intravenously to have any impact at all, and the other side insists that there are additives which allow the enzymes to enter the blood stream before being destroyed by stomach acid.

I contacted Allergy Research Group and they supported the bioavailability of their product (which comes as no surprise) and my own experience seems to indicate a successful attack (as measured by herxes!)

Regardless, the healing process is long with many ups and downs. In fact I would vow that the days are longer for those of us with Lyme – perhaps because

we have to bear so much physical pain, which is compounded by emotional pain when symptoms flare.

If you are suffering with Lyme disease you need to have as much information on healing protocols as possible. Like tools in a toolbox, different jobs require different tools.

Also, keep in mind:

Most Lyme-literate doctors believe that if a chronic patient doesn't respond to treatment that there is most likely a co-infection present which may mimic or complicate a Lyme infection.

So if you are discouraged because nothing has helped you towards recovery, it could be that you have a nasty co-infection holding back your progress.

Secondly, as stated earlier, each of us with Lyme disease has unique chemistry which causes our disease to be completely unique to us.

Therefore, a combination of antibiotics that heals one person may not have any effect on another person.

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I am not a doctor, but I have been bedridden with Lyme disease, Bartonella and Babesia for many years, and I have spent the worst of them (the last four years) researching every aspect of tick-born illnesses.

I have struggled with months of IV antibiotics that didn't help me recover, and I have been on and off this protocol (due to finances) and have found that it works for me.

If you have been infected with Lyme for any great length of time, recovery is bound to be a long and slow process.

If you have recently been infected, your recovery **should be** much faster and less complicated. I stress "should be" because there are some ferocious strains of Lyme that can infect the central nervous system in under 24 hours.

So be prepared to take responsibility for your own health and insist on aggressive treatment.

For help with specific symptoms go to ["How To Relieve The Symptoms of Lyme Disease."](#)

If you have Lyme disease I hope you recover quickly. And remember, you are not alone.

Appendix A - The Jarisch-Herxheimer Reaction

A Jarisch-Herxheimer reaction or “herx” as it is commonly called is a predictable and temporary “flare-up” or worsening of symptoms caused by the die-off of certain bacteria.

This condition was discovered and named after the German dermatologist, Karl Herxheimer (1844-1947), and originally observed in syphilis patients.

Although both Lyme disease and Syphilis come from a Spirochete bacteria, their structure is quite different.

Dorlands Medical Dictionary refers to the Herxheimer reaction as *a transient, short-term, immunological reaction commonly seen following antibiotic treatment of early and later stage [infectious] diseases which [may be] manifested by fever, chills, headache, myalgias (muscle pain), and exacerbations of cutaneous lesions. The reaction has been attributed to liberation of endotoxins-like substances or of antigens (a substance which causes an immune reaction) from the killed or dying micro-organisms.*

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Unlike Syphilis, Lyme causes multiple Herxheimer reactions, and can be physically and emotionally devastating.

Some have a reaction within days of effective treatment; while for others, it may take longer. Generally, the longer it takes for a reaction to occur after beginning treatment, the more disseminated the disease is.

These brutal flare-ups can last between two days and two weeks, but there are some who report much longer reactions when treating their disease aggressively (some will try several therapies at the same time with the hope of attacking the disease more effectively).

“You have to get worse, before you can get better!” is a grim consolatory phrase passed back and forth in chat rooms and community forums amongst sufferers on the internet.

But the roller-coaster of pain often threatens recovering patients to greater relapse, as we grasp for the energy to deal with both physical and emotional symptoms.

“It’s just so hard to deal with worsening symptoms after months or years of illness.” complains one long-time Lyme patient.

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The good news is that science clearly shows “herxing” means that treatment is working. The dying spirochetes emit a neurotoxin that floods the body from every active location, and over-stimulate the already weakened immune system. So in general, the greater the bacteria-load, the greater the reaction will be.

Many Lyme-literate doctors recommend [“Smilax”](#), an herb that effectively binds the neurotoxins, and passes them out of the body. Epsom salt baths are also soothing; although very hot baths will also aggravate symptoms, as the spirochetes are threatened by heat.

Appendix B –Detoxification

Lyme-literate doctors agree that killing infectious bacteria is but one part of the process of healing from Lyme disease (and co-infections). Detoxification is equally important to rid the body of parasites and other elements in our bodies that harbor the disease.

Detoxification can also be tricky depending on each person's disease, immune system, allergies and many other contributing factors.

Mercury poisoning is a growing health problem that interferes with the evaluation and treatment of Lyme. The best way to rid the body of heavy metals is regular use of the FAR Infared sauna, but there are some other products that greatly help.

Here is a list of the very best products I have found to help your body detoxify:

- [Heavy metal detox](#)
- [Far infared sauna](#)
- [Liver detox](#)
- [Smilax](#)

- [Detox foot patches](#)
- [Dental detox](#)
- [Parasite detox](#)
- [Chemical detox](#)
- [Psyllium cleanse blend](#)
- [Intestinal nano detox](#)
- [Xeno detox](#)

Remember, our bodies have a wonderful detoxification system built in, so drink lots of spring water, distilled water or ionized water to help move waste out of your body.

Appendix C -Coffee Enema

Why coffee?

The purpose of this enema is to cleanse your liver and assist your body to rid itself of toxins. The caffeine is absorbed through your portal vein and dilates your bile ducts which effectively “flush” the bile out of the ducts. All of the blood in your body circulates through the liver every 3 minutes, so this enema will help cleanse your whole body. It is especially good for people suffering with Lyme disease as the spirochetes like to “hide” in the bile.

Full Strength:

8 oz (1 cup) of organic coffee, and 8 oz of distilled water.

Gentler Enema:

4 oz of organic coffee, 4 oz of chamomile tea, and 8 oz of distilled water.

Instructions:

Mix ingredients together making sure that the liquid is warm, but not too hot (test a drop on the inside of your wrist.) Fill the enema bag and hang it nearby.

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Place a large towel near the bag and set a timer and a jar of Vaseline next to the towel. It helps to have soothing music playing during the enema to help you relax.

Lay down on the towel – you must be on your RIGHT side for the entire enema. Coat the insertion tube with plenty of Vaseline and slowly release the fluid. (I find it easier to use a very small amount, wait 2 minutes and then release it into the toilet to clear out the colon, and then proceed to the full treatment)

Use the clamp to monitor the pressure and flow, slowly fill your colon with about 10 oz of fluid. Don't fill beyond your capacity to hold it in. It is better to use less for longer, than more for shorter. Set the timer for 15 minutes and try to relax. If you feel comfortable, you can add slightly more, likewise if you feel the pressure is unbearable, just stay on your side as long as you can (even 10 minutes is good.)

You may find that it becomes easier as you practice.

This enema can be taken up to 4 times per day, five days per week depending upon pain and symptoms. I find it helpful even once a week.

Make sure to drink 8 oz of distilled water afterwards.

Appendix C: How to Relieve Symptoms of Lyme.

Due to prolonged periods of inactivity due to profound fatigue, weight gain is a common problem that further erodes your self-esteem.

Weight Gain/Loss with Lyme Disease

Depending on our immune system, genetics, co-infections, eating habits, many of us gain weight and many others lose weight.

Dr. Burrascano insists on a very strict high protein diet with no sweets or starches. For many the adherence to this diet will keep weight at a healthy level. However, if our body is acidic, fat will be stored up around important organs to protect the organs from the destructive acid. This is why pH Balance is so important. For more information [\(read free ebook called Five Element Shake.\)](#)

There are some very frightening pills on the market which promise weight loss, and these short cuts can be very tempting. Our self-esteem is at an all-time low, and extra fat just adds to depression. Not enough weight has the same depressing and physical dangers.

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The best product that I can recommend and use myself is [Apple Poly](#). It actually reduces belly fat. But additionally, apple polyphenols do the following:

- cardiovascular diseases
- cancers
- osteoporosis
- neurodegenerative disease
- diabetes

Polyphenols have also been known to remove oxygen radicals in the body, a substance that may cause cancer and accelerate the process of aging.

But for the first time during a study of apple polyphenols in Japan, there was a significant effect on muscle strength and organ fat. They have also been found to boost the immune system and measurably extend life span!

[Apple polyphenols](#) are made with immature green apples (which are 10 times more potent than mature fruit), exclusively from the peels (the richest source of phytonutrients).

[Apple polyphenols](#) are 18 times more potent than Vitamin C, and in addition to the super-modulation of oxidative stress, they appear to play a role in the

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prevention of degenerative diseases, particularly cardiovascular diseases and cancer.

Best of all, apple polyphenols are water soluble, where most other polyphenols are not. This allows for the nutrients to be absorbed quickly and easily.

[Honey and Cinnamon](#) : Mix together in warm water and drink on an empty stomach morning and night. Find out more from my blog.

<http://www.lymediseasresource.com/wordpress/honey-and-cinnamon-for-chronic-lyme-disease/>

[**For more information on how to relieve Lyme Disease symptoms click here.**](#)

Disclaimer

Don't proceed with any treatment protocol without the full support of your Lyme disease specialist. If you don't have one, please find one as soon as possible.

It is vitally important that you find and work with a Lyme disease specialist who can:

- *Try different treatment protocols, and monitor which works best;*
- *Support you through potentially severe Herxheimer reactions (that means your treatment is working);*
- *Manage various symptoms that persist during treatment;*
- *Evaluate whether parasites or co-infections are complicating your disease;*
- *Help you keep your sanity with emotional comfort and support;*
- *Present the most promising of emerging treatment protocols;*
- *Monitor and protect the healthy function of your primary organs through recovery;*
- *Provide appropriate diet, exercise and supplements for total recovery.*

The author of this book is not a medical specialist or a doctor, and is writing this information from research and personal experience.

Be careful with your health! It is up to you.