

THE ROSS LYME SUPPORT PROTOCOL

A LYME DISEASE TREATMENT GUIDELINE

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The ideas and recommendations in this Lyme disease treatment guideline are for informational purposes only. The contents are not intended to replace the advice of the reader's own healthcare professional or physician. The treatments described in this document may have known and unknown side effects and health hazards. Each reader is solely responsible for his or her own healthcare choices and decisions. The author advises the reader to discuss these ideas with a healthcare professional or physician before trying them. The author does not accept any responsibility for any positive or adverse effects a person claims to experience, directly or indirectly, from the ideas and contents of this book.

The ideas expressed in this guideline are based on the author's own experience. The success the author expresses may or may not be replicated by another healthcare provider or individual. Because specific research in Lyme disease treatment is insufficient, many of the ideas expressed in this document have limited science to support their use. Any specific health claims about specific herbs (e.g., herb y treats condition x) are based on the authors observation only. For the most part, any health claims are not supported with human studies or recognized as beneficial by most physicians. The author does make functional claims about many herbs and supplements in this book (e.g., Ashwagandha supports healthy adrenal function). Regarding statements with functional and structural claims for each specific supplement or product, the author notes: These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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INTRODUCTION

"The Ross Lyme Support Protocol is a set of Lyme disease treatment guidelines. These successful approaches can speed your recovery so you can live life fully. Discuss these approaches with your healthcare provider to see if they are right for you." Marty Ross, MD

ABOUT THE ROSS LYME SUPPORT PROTOCOL

These are Lyme disease treatment guidelines to treat chronic Lyme and associated diseases. *The Ross Lyme Support Protocol* includes essential treatment steps for the beginning and throughout a chronic Lyme disease treatment. It is designed to:

- boost the immune system,
- improve detoxification,
- speed recovery,
- kill the infections, and
- protect and repair from the harmful effects of the infections and the herbal or prescription antibiotics.

While the following Lyme disease treatment approach focuses on a limited number of areas, it may correct most of the problems like:

- low energy,
- pain,
- insomnia,
- brain, neurologic, and thinking problems (brain fog), and
- immune compromise and suppression.

HERXHEIMER DIE-OFF REACTIONS. When a person starts a Lyme disease treatment or changes herbal and prescription antibiotics, it is common to experience some worsening in symptoms. See *Herxheimer Die-off Reaction: Inflammation Run Amok* (treatlyme.net) for more information about this and the steps you can take to treat it.

TREATMENT LENGTH AND PERSISTENCE. Generally, it takes a minimum of six months to see if these treatments will help. Natural medicines can speed recovery, but treating Lyme still takes time. Once you have marked improvement, then you can likely stop many of these natural medicines except

for probiotics, curcumin, ashwagandha, and a good multivitamin. See *Getting Healthy: Will I? When? How Do I?* (treatlyme.net) for more information about Lyme disease treatment length and persistence.

ABOUT NATURAL MEDICINES. The natural medicines I include throughout this protocol are used as nutritional supports based on their known functions. Basic research and my clinical experience shows they may help improve the various problems identified below in Lyme disease.

DIAGNOSIS, TESTS, AND RELAPSE PREVENTION.

The *Ross Lyme Support Protocol* is a set of Lyme disease treatment guidelines. Read or watch the following articles found on **Treat Lyme** (treatlyme.net) for information about diagnosis, tests, and relapse prevention.

DIAGNOSIS

- *How to Diagnose Chronic Lyme Disease*
- *How to Diagnose Babesia*
- *It Could Be Bartonella or Babesia: The Symptoms and Signs*

TESTS

- *A Review of Lyme Infection Tests. Pass or Fail*
- *The Western Blot Lyme Disease Test: A Lyme Byte*
- *CD-57 Test? Rarely*
- *Is There a Lyme Done Test? No*

RELAPSE PREVENTION

- *Finished? And How to Prevent Relapse*

BEFORE TREATING LYME DISEASE

MAKE SURE IT IS NOT MOLD TOXIN ILLNESS.

Mold toxin illness can look just like Lyme disease. Both trigger a reaction in the immune system that produces too many inflammation chemicals called cytokines, and cytokines cause most of the problems seen in both of these illnesses.

If your illness began while you were living or working in a building with obvious mold, I suggest treating for mold toxin illness first. I find correcting this issue may prevent the need to treat for Lyme disease. Once the mold toxins are removed, the immune system can keep Lyme under control. For more information, read *Mold and Lyme Toxin Illness* (treatlyme.net) and *Positive Lyme Test, No Symptoms, Don't Treat* (treatlyme.net).

VERY ALLERGIC? TREAT MAST CELL ACTIVATION SYNDROME.

Chronic infections can trigger excessive allergic reactions to food, prescription and natural medicines, and to the environment. If this is your problem, consider using supplements, diet, and medicines for Mast Cell Activation Syndrome. For more information, read *Mast Cell Activation Syndrome & Lyme* (treatlyme.net).

[1]

SLEEP

(Use either natural medicines that support sleep or prescription medicines. Do not mix natural medicines and prescription medicines together as a first treatment, though you can do so later.)

TREATMENTS

NATURAL MEDICINES:

(You can take these two herbal medicines together or use in combination with the prescription medicines, if needed.)

- **L-Theanine 100 mg** 1 to 6 pills a night 1 hour before bed. Do not exceed 1,200 mg a day if using for nerve pain or anxiety during the day, as well. Excessive amounts in the day are very sedating. **and/or**
- **Herbal Combination** 1 to 4 pills 1 hour before bed. (Common herbs in sleep combination pills include valerian root, hops, yams, wild lettuce, L-Theanine, and others. For instance, these herbs are found in a product by Integrative Therapeutics called the Revitalizing Sleep Formula.)

PRESCRIPTION MEDICINES:

- **Zolpidem (Ambien) 10 mg** 1 pill 30 minutes before bed. (Use if your primary problem is getting to sleep. It is short-acting.) **and/or**
- **Trazodone 50 mg** 1/2 to 2 pills 30 minutes before bedtime. (Use this if your primary problem is staying asleep.)

For more information about these items or for additional options about sleep hygiene, see *Sleep in Lyme Disease: The Basic Steps* (treatlyme.net). For information about sleep herbs and supplements, see *Sleep: The Natural Medicines*. (treatlyme.net). For more information and sleep prescriptions options, see *Sleep: The Prescription Medicines* (treatlyme.net).

WHY THESE TREATMENTS MAY HELP

Sleep is often disturbed in chronic Lyme disease. Lack of adequate sleep worsens pain, increases fatigue, and suppresses the immune system. It appears that in response to infection, the excess inflam-

matory cytokines produced by the immune system decrease the output of sleep inducing hormones to the sleep centers of the brain. And lack of sleep increases cytokines. A restorative amount of sleep is seven to nine hours of sleep per night. Sleep in the few hours before midnight is most restorative.

[2]

DIET

TREATMENTS

Eat a Paleo-based diet rich in organic foods, healthy fats, proteins, and vitamin rich vegetables. For more detailed information about the diet, see *The Best Brain, Inflammation, Pain, Energy & Detox Diet Ever* (treatlyme.net).

An elimination diet is another diet to consider starting. For detailed information, see *Elimination Diet to Find Food Problems* (treatlyme.net).

WHY THESE TREATMENTS MAY HELP

A Paleo diet is low in simple sugars, which decreases the chances of developing intestinal yeast. It also promotes brain health and supports the energy factories—called mitochondria—found in every cell. Because it is low in sugar, it may decrease inflammation.

An elimination diet helps a person find which foods that trigger allergies or inflammation reactions. If you are reacting to foods, consider trying an elimination diet first. Removing allergic and inflammatory foods from your diet leads to decreased pain and improved energy.

[3]

CYTOKINE CONTROL

TREATMENTS

NATURAL MEDICINES:

- **Curcumin 500 mg** 1 pill 3 times a day. Choose a liposomal product. In such a product, the curcumin is microscopically wrapped in oil like sunflower oil to increase its absorption. **or**
- **Anti-Cytokine Combination** 1-2 pills 3 times a day. Anti-cytokine combinations include curcumin, resveratrol, black tea extract, and N-Acetyl Cysteine (NAC). One product that contains these items is CytoQuel by Researched Nutritionals.

PRESCRIPTION MEDICINES:

There are no effective and safe options.

WHY THESE TREATMENTS MAY HELP

Cytokines are inflammatory chemicals made by the immune system in chronic Lyme disease. Nutritional supports like curcumin, resveratrol, black tea extract, NAC, and antioxidants found in a good multivitamin (see Part 6.) may lower cytokines. This can

- correct many Lyme symptoms,
- boost the immune system, and
- limit Herxheimer die-off reactions.

On the one hand, cytokines are good because they turn on the immune system. They perform a number of functions that include:

- making antibodies work more effectively,
- increasing active white blood cells to fight infections,
- recruiting white blood cells to the location of an infection,
- turning on white blood cells to fight infections, and
- decreasing viral and bacterial replication.

On the other hand, in chronic Lyme disease the immune system makes too many cytokines, which is bad. Too many cytokines

- suppress the immune system,

- cause pain,
- decrease hormone production from organs like the thyroid and the adrenal glands,
- disturb sleep,
- decrease brain function,
- increase fatigue and tiredness,
- waste muscles,
- cause depression, and
- decrease the function of various organs throughout the body, resulting in many other symptoms and medical problems.

At the beginning of treatment or when antibiotics are changed, the cytokines are made in even greater amounts, which causes a person to feel much worse. This is called a Herxheimer dieoff reaction.

See *Control Cytokines: A Guide to Fix Lyme Symptoms & The Immune System* (treatlyme.net) for more information and additional herbal medicine options to use in a Lyme disease treatment.

[4]

ADAPTOGEN

TREATMENT

NATURAL MEDICINE:

- **Ashwagandha 400 mg** 1 to 2 pills in the morning and 1 to 2 pills between 12 pm. Taking ashwagandha late in the day may disturb sleep.

WHY THIS TREATMENT MAY HELP

An adaptogen is a substance that helps the body deal with the harmful medical and emotional stress of being ill. Adaptogens have been used for centuries in Ayurvedic and Chinese medicine with greatly observed benefits. Based on animal experiments, ashwagandha may improve energy, immune function, and adrenal and thyroid function. It likely has additional beneficial effects that have not been researched. [Part 5]

[5]

HORMONES

Read the "Why These Treatments May Help" section below to determine, based on symptoms alone, if you could have low hormones.

TREATMENTS

ADRENAL INSUFFICIENCY

Start with the natural medicine or prescription medicine. It is possible to use both together if the symptoms of low adrenals persist.

NATURAL MEDICINE:

- **Ashwagandha 400 mg** 1-2 pills in the morning and 1 to 2 pills between 1-2 pm. Taking late in the day may disturb sleep.

PRESCRIPTION MEDICINE:

In my practice, I rarely used this because there is a very small risk of immune suppression using prescription hydrocortisone. However, the doses I recommend are the normal amounts the adrenal glands should make. I prefer ashwagandha because it is a supportive herb that does not suppress the immune system.

- **Cortef 5 mg** 1 to 2 pills in the morning and 1 to 2 pills between 12 pm. Taking late in the day may disturb sleep.

LOW THYROID

NATURAL MEDICINES:

- **Ashwagandha 400 mg** 1 to 2 pills in the morning and 1 to 2 pills between 1-2 pm. Taking late in the day may disturb sleep. **Also use with**
- **Zinc 20 mg, Selenium 100 to 200 mcg, and Iodine 200 to 300 mcg** 1 time a day. (These are often found in multivitamins or you can supplement them individually.)

Use these natural medicines first for one to two months before adding or trying the prescription medicine option below. Often, working with these supplements corrects the thyroid so you do not need to take thyroid prescription medicines.

PRESCRIPTION MEDICINES:

- **Desiccated Thyroid 1/2 grain** or **Armour Thyroid 1/2 grain** 1 pill in the morning 30 minutes before anything else and on an empty stomach with water only. Increase every 3 to 4 weeks by 1/2 grain if low thyroid symptoms persist.

For more information about how to manage thyroid, even if your tests are normal, read my comprehensive article: *Hypothyroidism. The Best Tests, Meds, & Vitamins* (treatlyme.net).

WHY THESE TREATMENTS MAY HELP

Fixing low adrenals and/or low thyroid can help the immune system work better and possibly improves energy. A person could have normal range testing for each of the hormones, but still have clinically low hormones. Because of the unreliability of testing, treatment for low hormones should occur if there are clinical symptoms of low hormones as long as treatment does not increase hormone levels above the upper end of normal.

DIAGNOSE BASED ON SYMPTOMS

If you have a number of these symptoms, consider using the natural medicine approaches for each respective problem.

Adrenal Insufficiency: fatigue, recurrent infections, poor recovery from infections, low blood sugar with shakiness and irritability relieved by eating, low blood pressure and dizziness on standing, afternoon crashing, and sugar cravings.

Low thyroid: fatigue, achiness, dry skin, cold intolerance, weight gain, constipation, and changes in menstrual periods.

[6]

ESSENTIAL MICRONUTRIENTS

TREATMENT

NATURAL MEDICINE:

- **Multivitamin.** Use a vitamin that has numerous amino acids, antioxidants, minerals, and various vitamin Bs, including B12 and folate. In my practice, I use powders by Thorne and Integrative Therapeutics and capsules by Researched Nutritionals.

WHY THIS TREATMENT MAY HELP

In my opinion, to heal and feel better requires a multivitamin with an essential set of vitamins, minerals, amino acids, and antioxidants. A good multivitamin can improve functioning of the immune system, muscles, brain and nerves, hormones, organs including the kidney and liver, and detoxification, in addition to decreasing inflammation. It also may protect the body from the toxic effect of prescriptive antibiotics.

[7]

DETOXIFICATION

TREATMENTS

Reduce the total load of negative environmental influences on your health by

- eating organic foods,
- avoiding gluten, scents, alcohol, and tobacco, and
- decreasing emotional stress.

NATURAL MEDICINE:

Support Liver detoxification.

- **Liposomal Glutathione 400 to 500 mg** 1 pill 1 time a day. Glutathione is the master detox chemical used by the liver to remove toxins. It also helps remove neurotoxins and repair brain tissue. It works better than other herbal options like Pinella or Burbur. Read more in *Glutathione: The Great Fixer* (treatlyme.net).
- **Detox Diet:** Drink water regularly to support kidney detoxification. A general rule of thumb is to drink half of your ideal body weight (measured in pounds) as ounces of non-caffeinated liquids a day. For example, a person with a 150-pound ideal body weight should drink 75 ounces a day of non-caffeinated liquid. Eat healthy vegetables and a limited number of fruits a day for vitamins and for fiber. Fiber binds toxins in the intestines and promotes their removal from the body through regular bowel movements.

See *Lyme Detoxification 101: The Basics* (treatlyme.net) for more detailed information.

WHY THESE TREATMENTS MAY HELP

Lyme produces toxins that lead to inflammation from cytokines. This suppresses the immune system and gives many of the Lyme symptoms. In addition, many of the natural and prescription medicines can have toxic effects. These detoxification steps may protect against and fix toxin issues.

[8]

EXERCISE

TREATMENT

Exercise to tolerance. Find a level you can do that does not make you worse the next day. This may mean you can only walk half a block at the beginning. Furthermore, over exercise—an amount that makes a person feel worse—may suppress the immune system and impair healing. Be careful. At the beginning of treatment, you may have to wait to begin exercise until you have some improvements.

WHY THIS TREATMENT MAY HELP

Exercise improves blood flow to all tissues. This improves the penetration of antibiotics and helps with detox. Exercise also releases various chemicals like endorphins and enkephalins that produce healing effects and improve immune function.

[9]

IMMUNE SYSTEM BOOSTERS

The entire *Ross Lyme Support Protocol* is designed to support and boost your immune system. Because of this, most people do not need to take specific immune system boosters. *The Ross Lyme Support Protocol* supports the immune system through:

- sleeping
- lowering cytokines
- detoxing
- using an adaptogen
- fixing hormonal problems
- killing Lyme, yeast, and coinfections
- exercising as tolerated and
- eating a Paleo or elimination diet to fix immune system dysfunction.

In addition to these steps, there are additional supplements you can take. To read more about these options, see *How to Boost the Immune System in Lyme* (treatlyme.net). I do not recommend these additional supplements at first. Consider adding them six to nine months into treatment or during antibiotic holiday periods.

[10]

YEAST

Read “Why These Treatments May Help” below to determine if you may have a current intestinal yeast overgrowth problem requiring treatment.

TREATMENTS

PREVENTION OR TREATMENT

For yeast overgrowth prevention, use probiotics and antifungals in A & B.

For current intestinal yeast overgrowth treatment use probiotics and antifungals in A & C.

A. PROBIOTICS: REQUIRED FOR YEAST PREVENTION OR TREATMENT

NATURAL MEDICINE:

- **Probiotic.** Use a product shown to repopulate the intestines in scientific studies. Take at least 5-10 billion live cultures one hour away from antibiotics. During an active yeast infection, consider increasing to 20 billion cultures one time a day or divided into two doses.

B. ANTIFUNGALS FOR PREVENTION:

Use either the natural medicine or prescription medicine. You do not need to use both together.

NATURAL MEDICINE:

- **Herbal Combination** 2 pills 2 times a day. Common herbs found individually or mixed together include: Pau D'arco, caprylic acid, rosemary oil, thyme oil, garlic, and grapefruit seed extract. You can find these herbs in products like Phytostan by Integrative Therapeutics and CapriPlus by Karuna.

PRESCRIPTION MEDICINE:

- **Nystatin 500,000 IU** 2 pills 2 times a day.

C. ANTIFUNGALS FOR TREATMENT:

Do this if you have a yeast screening score of 140 or higher (see below). When you complete treatment, then start yeast prevention antifungals as above. Use the natural medicine or prescription medicine option, but not both together.

NATURAL MEDICINE:

- **Herbal Combination.** 2 pills 2 times a day. Common herbs found individually or mixed together include: Pau D'arco, caprylic acid, rosemary oil, thyme oil, garlic, and grapefruit seed extract. You can find these herbs in products like Phytostan by Integrative Therapeutics and CapriPlus by Karuna. This will take 3 to 4 months to get yeast overgrowth under control.

PRESCRIPTION MEDICINE:

Use both of the following together.

- **Nystatin 500,000 IU** 2 pills 2 times a day, and
- **Fluconazole (Diflucan) 200 mg** 1 time daily for 30 days. Use in combination with nystatin to prevent drug resistance. This combination will take 30 days to get yeast under control.

ADDITIONAL OPTIONS:

Some have great difficulty getting rid of intestinal yeast overgrowth. See *Kills Yeast: A Brief Guide* (treatlyme.net) for more herbal and prescription medicine options.

WHY THESE TREATMENTS MAY HELP

Too many yeasts in the intestines (yeast overgrowth) is a common problem that occurs in those with chronic Lyme disease either during or prior to beginning Lyme disease treatment.

Antibiotics used to treat Lyme can lead to too many yeasts. Immune suppression prior to starting antibiotics can also cause yeast overgrowth. Yeast overgrowth can result in an ongoing systemic allergic reaction to the yeast that can suppress the immune system. Yeast overgrowth also leads to inflammatory cytokine excess that causes many of the Lyme disease symptoms and pain. Food allergies and sensitivities can be the result of yeast overgrowth, too.

A useful diagnostic blood test or stool test for yeast overgrowth does not exist. While some physicians may test for antibodies to intestinal yeast in the blood, antibodies are common even when yeasts are in balance. In addition, it is normal to have stool cultures grow yeast; so, a culture does not indicate if yeasts are in excess. For this reason, yeast is diagnosed using my yeast screening questionnaire (Appendix A). This questionnaire evaluates for the possibility of yeast overgrowth based on yeast overgrowth risk factors and intensity of symptoms. In general, I find people benefit from treatment if the score is 140 or higher.

At the beginning of a Lyme disease treatment, often before antibiotics are started, it is essential to treat yeast. Doing so can limit the severity of Herxheimer die-off reactions from treating Lyme because removing yeast removes one source of inflammatory cytokine excess.

[11]

LYME INFECTION TREATMENT

“Based on my experience, these natural medicine and prescription medicine options have equal chances of helping a person. The chance they will help is 85 to 90 percent over a six-month period of time.” Marty Ross, MD

TREATMENTS

NATURAL MEDICINES:

- **Otoba Bark Extract** and **Cat’s Claw**. 5 drops 2 times a day of each herb, increasing the dosing every 2 days by 1 drop per dose until taking 30 drops 2 times a day. Take on an empty stomach. Do not take 30 minutes before through 2 hours after having food, medicines, or supplements. If you get a Herxheimer die-off reaction do not advance the dose until it decreases.

OR

PRESCRIPTION MEDICINES (AND GRAPEFRUIT SEED EXTRACT HERBAL MEDICINE):

I generally start with oral antibiotics. For considerations about IV antibiotics, see *A Lyme Disease Antibiotic Guide* (teatlyme.net).

- **Doxycycline 100 mg** 2 pills 2 times a day or 4 pills 1 time a day. Take with food to prevent nausea. Do not take with calcium supplements or calcium-fortified dairy products like milk, cheese, or milk substitutes like rice milk. OR
- **Clarithromycin** (Biaxin) 500 mg 1 pill 2 times a day. Use doxycycline if you have an Anaplasma or Ehrlichia coinfection.

TAKE WITH

- **Rifampin 300 mg** 2 pills 1 time a day OR
- **Tinidazole 500 mg** 2 or 3 times a day OR
- **Grapefruit Seed Extract 250 mg** 1 pill 2 times a day.

For many more Lyme herbal and prescription antibiotic options, see *A Lyme Disease Antibiotic Guide* (teatlyme.net).

WHY THESE TREATMENTS MAY HELP

Lyme exists in different forms (spirochete and microscopic cyst) and lives in and out of cells. A Lyme disease treatment should treat all forms and places where the germ lives at the same time.

Otoba Bark Extract and Cat's Claw are nutritional supports that seem to treat all forms and locations. Because these herbs are dosed using drops, they can be more easily regulated to manage a die-off reaction by not increasing the dose until the reaction lessens. In my experience, any oral antibiotic combination works as well as the Otoba Bark Extract and Cat's Claw combination, which is 85 to 90 percent of the time.

Doxycycline or clarithromycin treat the spirochete. They also treat Lyme in and out of cells. Rifampin, tinidazole, and grapefruit seed extract treat the cyst form.

[12]

COINFECTION TREATMENTS

TREATMENTS

Do not start treatments for the Bartonella or Babesia coinfections at the initial visit. Wait one month or longer to adjust to the Herxheimer die-off reaction from treating the Lyme infection and to stabilize on the supportive supplements.

If you have both of these coinfections, treat one first before adding a treatment for the other. When both are present, my preference is to treat for Bartonella first for two to three months and then add treatment for Babesia. Treat these coinfections at the same time you treat the Lyme infection.

NATURAL MEDICINES:

Bartonella

In my experience, these nutritional supports work 70 to 75 percent of the time and take four to six months. If you do not have improvement in Bartonella symptoms by two months, then change to prescription medicines. Any of my recommended prescription medicine options work about 80 to 85 percent of the time.

- **Houttuynia** 5 drops 2 times a day of each herb and increase the dosing every 2 days by 1 drop per dose until taking 30 drops 2 times a day. Take on an empty stomach. Do not take 30 minutes before through 2 hours after having food, medicines, or supplements. AND
- **Sida Acuta** 1/4 tsp 3 times a day for 1 week, then increase to 1/2 tsp 3 times a day. It is best to take this without food. It can be taken at the same time as the Houttuynia.

Babesia

In my experience, these nutritional supports work 75 to 80 percent of the time and take four to five months. If you do not have improvement in Babesia symptoms by two months, then change to prescription medicines. Any of my recommended prescription options works about 80 to 85 percent of the time.

- **Cryptolepis** 5 ml 3 times a day. AND/OR
- **Artemisinin 100 mg** 2 or 3 pills 2 times a day for 3 days on the medication then take 11 days off. Continue this 14-day cycle. The goal is to reach 5 pills 3 times a day on the 3 days the medication is taken. I use artemisinin this way because the intestines develop an enzyme that de-

stroys this herbal medicine if it is used longer than three days. Be aware the dose on the 3 days is quite strong. Often it causes a worsening of the Babesia symptoms beginning on the second day and sometimes lasting until six days later. If a person is very medicine sensitive I start at 1 or 2 pills 3 times a day. Artemisinin often does not work well for Babesia from tick bites on the East Coast of the U.S.

PRESCRIPTION MEDICINES:

See *Kills Bartonella: A Brief Guide* (treatlyme.net) and/or *Kills Babesia: A Brief Guide* (treatlyme.net) for prescription approaches you can take to treat these infections.

WHY THESE TREATMENTS MAY HELP

Based on my experience, a person will not recover from Lyme if these two Lyme coinfections are not treated when they are present. It is as though they protect Lyme. Conversely, Lyme seems to protect them, as well, which is why it takes months to get rid of these infections.

[13]

ADDITIONAL NATURAL MEDICINES

Many other natural medicines help manage symptoms and problems existing in Lyme disease. Wait one month after beginning a Lyme disease treatment to start these. For additional treatment ideas based on your specific medical problems, see articles in the following medical problem chapters online at Treat Lyme (treatlyme.net). For instance, if you have severe brain fog or numbness, find helpful articles in the Brain & Nerves chapter.

- *Biofilms*
- *Bladder*
- *Brain & Nerves*
- *Detoxification*
- *Energy & Fatigue*
- *Heart & Blood*
- *Herxheimer & Cytokines*
- *Hormones*
- *Immune System*
- *Mental Health*
- *Nutrition*
- *Pain*
- *Sleep*
- *Stomach & Intestines*
- *Yeast*

[14]

SPECIAL CONSIDERATIONS

PERSISTENT LYME INFECTION REGIMEN

New research shows that Lyme can develop persisters. These are germ forms that go into hibernation and can ignore antibiotics. This condition can occur after someone is on antibiotics for some time. If you have tried antibiotics before and not gotten better, or if you are a year or more into treatment and not seeing good improvements, consider a persistent Lyme regimen. For more information, read *How to Treat Persistent Lyme. What Works?* (treatlyme.net)

IF YOU ARE BECOMING MORE ALLERGIC WITH TREATMENT

Chronic infections can trigger excessive allergic reactions to food, prescription and natural medicines, and to the environment. If this is your problem, consider using supplements, diet, and medicines for Mast Cell Activation Syndrome. For more information, read *Mast Cell Activation Syndrome & Lyme* (treatlyme.net).

THREE MONTHS

My experience in chronic Lyme disease treatment shows that by three months of treatment, 30 percent of people have improvement. Generally, these people have an easier chance recovering from Lyme disease with traditional herbal and prescription antibiotic combinations. For those that are not having significant changes by three months, then adding Biocidin could help. Based on lab experiments, various herbs in Biocidin may break down biofilms and decrease antibiotic resistance by blocking efflux pumps that remove antibiotics from germs. Read more in *Biocidin: A Potent Antimicrobial & Biofilm Breaker* (treatlyme.net).

Biocidin LSF. Start at 1 pump under the tongue 1 time a day. Every 2 days increase by 1 pump first as 1 pump 2 times a day, then 1 pump 3 times a day, and eventually to 2 pumps 3 times a day. If you develop a Herxheimer die-off reaction, do not increase until it passes. For sensitive people, place 1 pump in 5 ounces of water. Start with 1 ounce 1 time a day. Increase by 1 ounce a day increasing gradually at first to 1 ounce 3 times a day. Eventually, as tolerated, work up to 10 ounces (2 pumps) 3 times a day.

SIX MONTHS AND BEYOND

There are additional treatment steps to consider by six to nine months of Lyme disease treatment if you are not having adequate improvement. Read these articles online at Treat Lyme (treatlyme.net) for more information.

Detoxification

- *Mold and Lyme Toxin Illness*
- *MTHFR and Detoxification. A Lyme Byte*
- *Heavy Metals: The Problem & The Best Test*
- *Far Infrared Sauna Detox: More Than Sweat*

Biofilms

- *Biofilms: Lyme Disease Gated Communities*

Chronic viral infections

- *When & How to Treat Chronic Viruses: A Brief Guide*

Boost energy, fix mitochondria cell energy factories

- *Power Up! Energy and Mitochondria*

Co-infections

Continually review your symptoms to see if you have a coinfection that was missed. Treating Lyme is like peeling the layers of an onion. As you treat, it sometimes becomes more apparent which coinfections are present. In addition, it is possible to have coinfection relapses.

- *Kills Bartonella: A Brief Guide*
- *Kills Babesia: A Brief Guide*

Autoimmune illness and chronic Inflammation

- *Low Dose Naltrexone (LDN) & Lyme*
- *LDI: Bring on The Regulators*

Yeast

If you have a number of these symptoms—such as increased sugar cravings, intestinal gassiness or bloating, recent vaginal yeast infection, oral yeast, and/or vaginal or rectal itching—consider treating for yeast overgrowth in the intestines.

- *Kills Yeast: A Brief Guide*

[15]

HEALTH DECLINE AFTER DOING BETTER

It is common to have ups and downs during a Lyme disease treatment. In some cases, there can be a significant decline after a person is doing better. In these cases, consider yeast overgrowth of the intestines or relapse of a Bartonella or Babesia coinfection. In my experience, most major health declines are due to yeast overgrowth in the intestines. This is true even if significant symptoms of yeast do not exist.

Excessive yeast in the intestines lead to increased levels of cytokines. Because excess cytokines cause many of the chronic Lyme disease symptoms, it could seem like your Lyme disease is getting worse.

Yeast could be the cause of your decline if you have a number of these symptoms: increased sugar cravings, intestinal gassiness or bloating, recent vaginal yeast infection, oral yeast, and/or vaginal or rectal itching. For information on diagnosing yeast, see *A Silent Problem: Do You Have Yeast?* (treatlyme.net) For yeast treatment information, see *Kills Yeast: A Brief Guide* (treatlyme.net).

[APPENDIX A]

YEAST SCREENING QUESTIONNAIRE

The total score for the Yeast Questionnaire gives the probability of yeast overgrowth being a significant factor in your case. If your score is 140 or higher, there is a high probability that treating for yeast will improve your health.

SECTION A: YOUR MEDICAL HISTORY

1. Have you been treated for acne with tetracycline, erythromycin, or any other antibiotic for one month or longer? **50 points**
2. Have you taken antibiotics for any type of infection for more than two consecutive months, or in shorter courses four or more times in a twelve-month period? **50 points**
3. Have you ever taken an antibiotic—even for a single course? **6 points**
4. Have you ever had prostatitis, vaginitis, or another infection or problem with your reproductive organs for more than one month? **25 points**
5. Have you ever been pregnant two or more times? **5 points**
6. Have you been pregnant one time only? **3 points**
7. Have you taken birth control pills for six months or more? **15 points**
8. Have you taken corticosteroids such as Prednisone, Cortef, or Medrol by mouth or inhaler for more than two weeks? **15 points** Two weeks or less? **6 points**
9. When you are exposed to perfumes, insecticides, or other odors or chemicals, do you develop wheezing, burning eyes, taste metal in your mouth or any other distress?
 - Yes, and the symptoms keep me from continuing my activities. **20 points**
 - Yes, but the symptoms are mild and do not change my activities. **5 points**
10. Are your symptoms worse on damp or humid days or in moldy places? **20 points**
11. Have you ever had a fungal infection, such as jock itch, athlete's foot, or a nail or skin infection, that was difficult to treat and:
 - Lasted for more than two months? **20 points**
 - Lasted less than two months? **10 points**
12. Do you crave
 - Sugar? **10 points**
 - Breads? **10 points**

- Alcoholic beverages? **10 points**

13. Does tobacco smoke cause you discomfort such as wheezing, burning eyes, or another problem? **10 points**

Section A Total: _____

SECTION B: MAJOR SYMPTOMS

For each symptom that is present, enter the appropriate number in the point score column:

If a symptom is occasional or mild, score 3 points.

If a symptom is frequent and/or moderately severe, score 6 points.

If a symptom is severe and/or disabling, score 9 points.

SYMPTOM POINT SCORE

1. Fatigue or lethargy _____
2. Feeling of being “drained” _____
3. Poor memory _____
4. Feeling “spacey” or “unreal” _____
5. Inability to make decisions _____
6. Numbness, burning, or tingling _____
7. Insomnia _____
8. Muscle aches _____
9. Muscle weakness or paralysis _____
10. Pain and/or swelling in joints _____
11. Abdominal pain _____
12. Constipation _____
13. Diarrhea _____
14. Bloating, belching or intestinal gas _____
15. Troublesome vaginal burning, itching, or discharge _____
16. Prostatitis _____
17. Impotence _____
18. Loss of sexual desire or feeling _____
19. Endometriosis or infertility _____
20. Cramps and/or other menstrual irregularities _____
21. Premenstrual tension _____
22. Attacks of anxiety or crying _____
23. Cold hands or feet and/or chilliness _____
24. Shaking or irritable when hungry _____

Section B Total: _____

SECTION C: OTHER SYMPTOMS

For each symptom that is present, enter the appropriate figure in the point score column.

If a symptom is occasional or mild, score 1 point.

If a symptom is frequent and/or moderately severe, score 2 points.

If a symptom is severe and/or persistent, score 3 points.

SYMPTOM POINT SCORE

1. Drowsiness _____
2. Irritability or jitteriness _____
3. Lack of coordination _____
4. Inability to concentrate _____
5. Frequent mood swings _____
6. Headache _____
7. Dizziness, loss of balance _____
8. Pressure above ears, feeling of head swelling _____
9. Tendency to bruise easily _____
10. Chronic rashes or itching _____
11. Psoriasis or recurrent hives _____
12. Indigestion or heartburn _____
13. Food sensitivity or intolerance _____
14. Mucous in stools _____
15. Rectal itching _____
16. Dry mouth or throat _____
17. Rash or blisters in mouth _____
18. Bad breath _____
19. Foot, hair, or body odor not relieved by washing _____
20. Nasal congestion or postnasal drip _____
21. Nasal itching _____
22. Sore Throat _____
23. Laryngitis, loss of voice _____
24. Cough or recurrent bronchitis _____
25. Pain or tightness in chest _____
26. Wheezing or shortness of breath _____
27. Urinary frequency, urgency, or incontinence _____

- 28. Burning on urination _____
- 29. Spots in front of eyes or erratic vision _____
- 30. Burning or tearing of eyes _____
- 31. Recurrent infections or fluids in ears _____
- 32. Ear pain or deafness _____

Section C Total _____

Yeast Score (Add Sections A, B & C) _____

RESOURCES

You can find high quality products for the supplements mentioned in this guideline or throughout Treat Lyme at **Marty Ross MD Supplements** (treatlyme.com).

ABOUT THE AUTHOR



Marty Ross, MD, is the creative force behind Treat Lyme, Marty Ross MD Supplements, and The Ross Lyme Support Protocol. He believes strongly that given the right information, people with Lyme and tick-borne illnesses can recover. He offers these resources so that all who have Lyme disease may recover.

Dr. Ross practiced clinical integrative medicine in Seattle, WA until late 2018. There he treated thousands of patients across the USA and the world with Lyme disease and related illnesses. He is a reasoned voice about what works and does not work. As an educator, he tries to make the complex understandable. His recommendations draw from the best of natural and prescription medicines using the best available science.

Dr. Ross is a graduate of Indiana University School of Medicine. He completed his family medicine residency at the Georgetown University/Providence Hospital program where he served as chief resident.

Through Treat Lyme and his weekly Lyme Q&A Webinar called *Conversations with Marty Ross MD*, Dr. Ross has improved the lives of many with Lyme. His online publication is read by patients and medical providers alike. His webinars draw patients looking for answers and medical providers learning to treat Lyme disease using integrative medicine.

Dr. Ross is a member of The International Lyme and Associated Diseases Society and The Institute for Functional Medicine.