

HEALING LYME DISEASE: An Integrated Approach to Curing

Chronic Infection

Daniel A. Kinderlehrer, M.D.

This document is for informational purposes only. It is not meant for diagnostic purposes and/or prescription recommendations for any specific individual.

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Antimicrobial Interventions

Rife Machine: The Rife technology is based on the concept that specific electromagnetic frequencies resonate with the Lyme Spirochete and cause it to break apart. This has been observed with light microscopy and I personally have talked with Chronic Lyme sufferers who now feel cured after using this machine. It can cause significant Herxheimer reactions. For more info contact: www.rifelabs.com/Rife-Home.html

Recommended reading: The Cancer Cure That Worked, by Barry Lynes

Hyperthermia: Sauna/hot tub
Increasing body temp to 102 will increase antibiotic activity fourfold; increasing body temp to 104 can kill Bb spirochetes. Contact:

Hyperthermia is a treatment used outside the well as chronic infections. www.cancer2000.com

United States to treat cancer as

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Colloidal Silver: Dosing depends on concentration
General well tolerated
Has anti-yeast activity
Anecdotally helpful in Lyme

Suzanne's Supplements 978-356-6966

Recommendation:

Colloidal silver 500 ppm 1/2 tsp, 2X/day

Carnivora: Dionaea Muscipula/Venus Fly Trap
Available in capsules and extract
Intravenous available in Mexico
Has antimicrobial, tumoricidal and immune enhancing activity

www.cancer2000.com

www.carnivora.com

Suzanne's Supplements 978-356-6966

Carnivora Research, Inc. 866-836-8735

Native Essence Herb Co. 800-377-4229

Recommendation:

Carnivora, 4-8 caps/day

Bee Venom: Melittin has a strong inhibitory effect on Bb at very low doses

Given as subcutaneous injection, with or without anesthetic. Dr. Glen Rothfeld 781-641-1901

www.neuraltherapy.com

Apitronic Services 604-271-9414 has products and literature

Digestive enzymes: Taken between meals may break up the cyst wall making the cyst more vulnerable to antimicrobials and host's immune function.

Suzanne's Supplements 978-356-6966

Recommendation:

Wobenzyme, 8-10 tabs 3 times daily,
between meals

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Olive leaf extract

Generally well tolerated

Has anti-yeast activity

Unclear activity against Lyme

Artemisia annua

Has anti-protozoal activity, anti-malarial

Evidence of anti-Babesia activity

Suzanne's Supplements 978-356-6966

Recommendation:

Artemisia Forte 1-2 caps 3X/day

Immune Enhancement

Herbs that stimulate immune function

Echinacea

Astragalus

Iscador (mistletoe): Available by injection

www.lscador.com

See Alternative Therapies in Health and Disease

May 2001

Cat's Claw, Una De Gato

Has immune stimulating and anti-inflammatory

Activity

www.rain-tree.com/catclaw.htm

Native Essence Herb Co. 800-377-4229

Suzanne's Supplements 978-356-6966

Recommendation:

Cat's Claw, 1.5 gm, 1-4 caps 3X/day

Mushrooms

Many studies document the immune stimulating
benefits of specific mushrooms.

Coriolus versicolor, VPS

www.philsteinberg.com/byrec/22.html

very expensive

Wildfire Natural Products 888-583-3532

Maitake

Cordyceps

Shiitake

Reishi

www.gmushrooms.com/Health/nmh.html

Consider combination product:

GMHP 800-789-9121

Suzanne's Supplements 978-356-6966

Recommendation:

Echinacea Forte, 1-2 caps, 2X/day

Vinco's Defense Response Modifier

2-3 caps 2X/day

M/S/R Mushroom Formula 1-3, 2X/day

Transfer Factor

Derived from Bovine colostrum

Suzanne's Supplements 978-356-6966

Recommendation:

Transfer Factor Plus, 2-4 caps 2X/day

Specifically targeted to Bb, Babesiosis, Ehrlichiosis and specific viruses:

ImmunFactor 2

Chisolm Biological Laboratory 800-664-1333

(very expensive)

Reticulose

Potent immune stimulator, initially derived from bovine colostrum

www.adviral.com

Not yet FDA approved

Daily self-administered intramuscular injections need prescription and letter from physician who can order from Canada

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Recommendation:

Reticulose .5-1cc IM, 1X/day

Oxidative therapies

Improve oxygenation, increase anti-oxidant activity, anti-microbial activity and immune stimulation

Hyperbaric oxygen

www.hbotoday.com/treatment/lymedisease.shtml

contact Mike McNally 607-797-7791

Ozone

Intravenous

Transdermal via steam bath 888-791-6921

Trans-rectal, Trans-vaginal, Sinus inhalation

Hydrogen Peroxide

Oral (food grade) not recommended

Intravenous, Dr. Joe Py 978 388-2782

Ultraviolet blood irradiation involves drawing out 60-200 cc of blood and exposing it to ultraviolet light, then transfusing back into the patient.

www.affs.org/en/articles/uvbloodirradiation.html

Suggested reading: Oxygen Healing Therapies, by Nathaniel Altman

Intravenous Vitamin C

Can give high doses, up to 50000mg, without known toxicity. Has helped many people with acute and chronic infections.

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Hormonal support

Adrenal glands support general metabolism, and increase production of hormones under stress. Under chronic stress the adrenals may lose their capacity to respond appropriately, and develop adrenal exhaustion. Symptoms include fatigue, lightheadedness, salt cravings and immune dysfunction. Adrenal function can be measured by blood, urine and salivary testing. Treatment may include herbs, glandulars,

DHEA, Pregnenolone, Dioscorea and prescription medication.

Thyroid

Lyme disease is frequently associated with Hashimoto's Thyroiditis, which usually manifests as an under active thyroid state. Symptoms may include low basal temperatures, cold intolerance, dry skin, constipation and fatigue. While controversial among conventional

Physicians, some doctors prescribe thyroid hormone replacement even when lab tests are normal. This does not carry any risk if vital signs and lab tests are properly monitored. Some people notice improvement on over-the-counter thyroid glandulars and kelp supplements. Under active thyroid function will compromise immune function. Recommended reading, Hypothyroidism, the Unsuspected Illness, By Broda Barnes

Testosterone

Low testosterone production can occur in both men and women, particularly after the age of 40. Low levels can result in lowered libido, a common problem among Lyme sufferers, and non-specific loss of vigor. If you ask your Physician to check testosterone, make certain s/he

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orders a free testosterone level, not just a total testosterone. Replacement therapy is with a patch, cream, or injection. Suggested reading: The Testosterone Syndrome, by Eugene Shippen.

Dr. Joe Py 978-388-2782

Menopausal hormone replacement therapy

Perimenopause and menopause and the resultant decline in estrogen and progesterone can result in a plethora of symptoms including sleep disturbances, hot flashes, and mood disorders, all common symptoms among Lyme sufferers. Hormone replacement is a complicated decision, but balancing these hormones may take additional stress off of women going through the change. Suggested reading, Natural Hormone Replacement by Wright and Morgenthaler(800-543-3873)

Musculoskeletal

Glucosamine has been shown to be as effective as Ibuprofen in managing pain associated with Osteoarthritis. Usual doses are 500mg, three times daily. Chondroitin appears not be as effective, but occasional patients get additional relief when this is added. It can take up to two months to see results. Recommendation:

Glucosamine 500mg 3X/day

MSM is a sulphur based compound that has anti-inflammatory action that can help with muscle and joint pain. See www.msm-uk.net

MSM 1000mg 2X/day

Herbs that have anti-inflammatory activity:

Ginger root

Curcumin

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Capsaicin cream applied topically

Recommendation: Take individually or

Consider combination product:

Suzannes Supplements 978-356-6966

Infla-profen 1 cap, 3X/day

Energetic

Acupuncture

Massage

Rolfing

Yoga/stretching

Exercise in moderation. Don't overdo it.

Homeopathy – Injectable homeopathic bee venom injected at trigger points can alleviate muscle pain, tendonitis, bursitis and neuralgia

Dr. Glen Rothfeld 781-641-1901

Many other homeopathic preparations have been helpful, must be individualized.

Nervous system

Mood disorders, particularly anxiety and depression, are common problems among Chronic Lyme sufferers.

prescription medications are often helpful in controlling these symptoms. Non-prescription supplements include:

SAMe, usually in doses of 800mg daily, very expensive, can help both depression and Arthritis pain

St. John's Wort can lessen depression in mild cases. Usual dose is 300mg three times daily. should not be taken with prescription Antidepressants.

Kava can be effective against anxiety, but has been associated with liver toxicity.

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Calm Forte is a homeopathic for mild anxiety.

Flower essences are effective in some people. David Dalton in Amesbury, MA has an excellent reputation.

Essential Oils have been helpful for many people.

For more info call Young Living Essential Oils, 800-763-9963. These products may not be tolerated by chemically sensitive individuals.

Most people with anxiety and depression report that symptoms are significantly worse in the morning. Consider changing your sleep cycle so that you go to sleep later and wake up later.

Sunlight can be quite helpful in alleviating depression, especially at the sea shore where there is an abundance of negative ions. In the winter consider using a light for the treatment of Seasonal Affective Disorder. See www.sada.org.

Sleep disorders are common, including inability to fall asleep, early morning awakening, and hypersomnia. Prescription medication may be necessary to ensure adequate rest. Non-prescription over the counter meds may be helpful, especially diphenhydramine (Benadryl). Natural remedies include:

Magnesium can be an effective relaxing agent. At therapeutic doses of 200-800mg at bedtime it can cause diarrhea. Magnesium glycinate appears to be well tolerated
Suzanne's Supplements 978-887-9790

Valerian root has been helpful for some individuals, it can cause gastric distress.

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Melatonin helps some people fall asleep, and slow release preparations can prevent early morning awakening. Occasional people notice an increase in depression. Doses are usually .5-3.0 mg, ½ hour before bedtime.

Some people enjoy significant improvement in sleep if they get in bed before 9:00. Putting a radio or TV on at barely audible levels, so that the mind strains to hear the sound, can turn off obsessive thinking.

Autonomic dysfunction occurs when the sympathetic and parasympathetic nervous systems no longer maintain their normal balance. Symptoms include heat and cold intolerance, lightheadedness/dizziness, heart racing and pounding, fatigue and anxiety. Some patients get relief from anxiolytic drugs or beta-blockers. These symptoms may respond to acupuncture and/or Chinese herbs. They often respond to JMT, described below.

Muscle cramps, peripheral neuropathy

Both Magnesium and Calcium can diminish cramping as well as numbness and tingling. See recommendations under minerals. B vitamins can benefit the nervous system, although supplementation is controversial. See discussion below under General Support.

Cognitive dysfunction

Short-term memory deficits and difficulty with focus and concentration do not respond particularly well to supplements. There is anecdotal benefit from:

Ginkgo Biloba, 120mg 2X/day

Acetyl L-Carnitine 500mg 1-2X/day

Phosphatidylserine 100-200mg bid

Pregnenolone—doses vary widely

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Gastrointestinal

The GI tract can be directly impacted by Bb infection resulting in inflammatory bowel disease (ulcerative Colitis and Crohn's disease), irritable bowel disease and nonspecific abdominal pain. In addition the GI tract suffers from medications that can cause direct irritation and disturb the gut ecology by killing beneficial Bacteria and enhancing yeast growth or C. Difficile infestation. It is important to maintain GI health as our intestines are not only involved with digestion, but also are a major repository of nervous tissue, immune activity and hormone production.

Pro-biotics should be taken with some food in the stomach (gastric acid normally will kill the beneficial Bacteria), but away from antibiotics. There are many good brands, but for individuals who are having difficulty consider strains that have shown particular benefit:

Lactobacillus Rhamosus implants the best

Lactobacillus Bifidus is particularly important in Children

Suzanne's Supplements 978-356-6966:

Sacchomyces Boullardi is helpful for antibiotic induced diarrhea and yeast overgrowth, and can prevent C.Difficile (antibiotic induced) Colitis. 2 caps 2X/day

Entrin Bifidus is an inexpensive combination of Beneficial bacteria, 2 caps 3X/day

Nutrients to support mucosal integrity are important for Proper GI function. Intestinal integrity can be measured with an Intestinal Permeability test. Dr. Joe Py 978-388-2782 can evaluate this. Consider (Suzanne's Supplements):

Intestinal permeability factors, 2 caps 1-3X/day

UltraClear Sustain, 1-2 scoops, 2X/day

Digestion can be compromised by a lack of adequate Pancreatic enzymes, often resulting in gas and loose stools. This can also be evaluated with a stool test, Dr. Joe Py 978-388-2782.

Consider (Suzanne's Supplements):

Wobenzymes 1-2 caps after meals
Vitaline high lipase pancreatin, 1-2 tabs after meals
Vitaline chewable digestive enzymes,
1-2 tabs after meals

Yeast overgrowth can result in abdominal discomfort, bloating, gas, loose stools as well as oral thrush, vaginitis rashes, malabsorption and sensitization to sugar and yeast containing foods. Yeast overgrowth often leads to systemic symptoms of fatigue, cognitive impairment, mood swings and other allergies, especially molds and foods, milk and wheat being the most common. While taking antibiotics it is imperative to avoid simple carbohydrates (i.e.sugar, alcohol), replace beneficial Bacteria and take an anti-yeast agent. Some doctors prescribe medications such as Diflucan and Nystatin. Non-prescription recommendations include (Suzanne's Supplements):

Paramicrocidin (citrus extract), 50-125mg 2X/day
Prolive (olive leaf extract) 500-1000mg 2X/day
Oregano oil, 1-2 caps 3X/day
Caprylic acid (from coconut oil),250-750 mg 2X/day
Toxin accumulation in the intestines can result in GI as well as systemic symptoms. It may be helpful to do a vegetable juice fast and get a series of colonic enemas. Yerba Prima intestinal cleanse uses a combination of herbs and bulking agents to effect a more gradual and gentle cleansing over time. (Available at the Natural Grocer and Vitamins, Etc. in Newburyport, and at Wild Oats) The routine use of bulking agents can help

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Eliminate toxins in the GI tract and may help remove neurotoxins as well, because they undergo an entero-hepatic circulation. Recommendations:

Psyllium seed husks, 1-2 T, 2X/day
Freshly ground flaxseeds, 2-6 T, 1X/day

Bentonite clay, 1 T, 1-2 X/day

Chlorella is an excellent agent to promote Detoxification. In addition it stimulates immune function and promotes healing.

www.watershed.net/chlorella.htm

www.angelfire.com/mi/peking/singa.htm

Liver function may be compromised because of drug toxicity, and the added demands of removing toxins and metabolites.

May decrease the liver's capacity to properly clear toxins.

I suggest supplementing with:

Silymarin (Milk thistle), 150-200 mg 2X/day

Green tea (decaf if anxiety is an issue)

1-3 cups/day

In addition consider intermittent supplementation with Ultra Clear powder, which contains a combination of nutrients that replete an over-taxed liver. (Suzanne's Supplements)

UltraClear 1-2 scoops, 1-2 X/d

General support

Nutrition

Diet. It is imperative that individuals battling a chronic infection eat a healthy diet. Emphasis should be on fresh fruits and vegetables, organic whenever possible; whole grains; Organic free-range meat and poultry. Limit refined carbohydrates (sugar, corn syrup, white flour), caffeine, alcohol, chemical additives (preservatives, coloring, artificial flavors) and trans-fats (in many margarines, commercially baked goods and deep-fried foods such as french fries).

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Hypoglycemia commonly results in fatigue, brain fog, headache and mood swings from two to six hours after eating. Some people need to snack between meals, especially with protein, to prevent the dips in blood sugar. food sensitivities may aggravate this problem. Chromium (as picolinate, 200mcg twice daily) can stabilize blood sugar. Diet needs to be individualized, as some people do well on higher protein regimens, while others respond to high complex carbohydrates with limited protein. A good book to help determine your optimal diet is The Metabolic Typing Diet by Wolcott.

Food sensitivities can cause symptoms similar to Lyme, and exacerbate any of the symptoms attributed to Lyme. There are many books on this subject. Consider an elimination diet in which suspected foods are removed for one to two weeks then challenged independently, A good book to follow is Detecting Hidden Food Allergies

By William Crook. Blood tests and skin tests are not Reliable. The most common food sensitivities in the U.S. are milk, wheat, corn, citrus, eggs and additives.

Adequate fluid intake is essential. I recommend 6-8 glasses of water daily, adding ¼ tsp of sea salt to each glass if there is no problem with edema or high blood pressure. In addition, consider adding 1 tsp of baking soda daily on an empty stomach because most of us are too acidic; acid inhibits bactericidal action and increases sympathetic nervous system activity, contributing to anxiety and palpitations.

Nutritional supplementation is controversial. There is no question that most Americans, including apparently healthy individuals, benefit from supplements for a number of reasons:

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Only 10% of Americans consume the recommended five servings of fruits and vegetables daily.

Micronutrient losses resulting from conventional food growing, processing and handling are substantial.

Soil quality has consistently declined resulting in significant trace mineral deficiencies.

Environmental pollution, smoking and certain dietary habits result in the production of damaging free radicals, associated with degenerative diseases including cancer and cardiovascular disease, and contributing to premature aging and immune dysfunction. This increases the need for anti-oxidant supplementation, such as Vitamins E, A and C.

However, the Lyme spirochete is also dependent on nutrients to thrive, and supplementation could theoretically enhance bacterial growth. There is no clinical data on the impact of nutritional supplementation in persons with Lyme. I do know one individual whose symptoms flared when she began B vitamins, and improved when she stopped. On the other hand, some Lyme literate physicians routinely recommend high doses of B vitamins, both orally and intramuscularly. B vitamins are particularly important for proper nerve and adrenal function.

A compromise would be to avoid B vitamin supplements but take a "green drink" that will supply a reasonable dose of micronutrients as well as other factors that will benefit anyone fighting a chronic infection. Some suggestions (Suzanne's Supplements):

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NutraGreens, Amni 1-2 scoops, 1-2X/day

ProGreens, Allergy Research 1-2 scoops, 1-2X/day

Mineral supplements do not stimulate Lyme. Consider:

Magnesium glycinate 200mg, 1-4X/day

Calcium citrate or hydroxyapatite,
500mg, 1-3X/day

Zinc picolinate 25 mg, 1-2X/day

Selenium 200mcg 1X/day

Chromium 200mcg, 1-3X/day to stabilize
Blood sugar

Iron is important for immune function as well as
Anemia, but too much can be harmful.
menstruating women and vegetarians are
particularly prone to iron deficiency, and
should have levels checked. It is best
absorbed on an empty stomach.

Suzanne's Supplements 978-356-6966

Bronson iron and C, 1 tab, 1-2 X/day

Wild Oats, Vitamin's Etc.

Solgar gentle iron, 1 tab, 1-2X/day

Minerals are more absorbable and bio-

Available in solution. Selectrolytes can significantly help fatigue, muscle cramps, and mood. (See www.morinlabs.com)

Antioxidants

Vitamin C is an important stress nutrient (it supports adrenal function) and immune enhancer. however, the acidic nature can interfere with some antibiotics as well as antidepressants. Vitamin C as ascorbic acid should be avoided, but as calcium ascorbate or sodium ascorbate may be helpful.

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Recommendation:

Sodium or Calcium Ascorbate, 500mg,
1-2X/day

Vitamin E is important to protect cell membranes, especially when taking essential fatty acids.
recommendation:

Vitamin E (natural tocopherols) 400 IU/day

Vitamin A is important for the health of mucous membranes. While potentially toxic, doses of 5-25,000 IU daily are quite safe for adults. At doses above 10000 IU it can be teratogenic.

Vitamin A 5-25,000 IU/ day

Additional nutrients

Coenzyme Q10 is an important nutrient in Cellular respiration, i.e. the production of Energy in our cells. Deficiency can result in Cardiac dysfunction, fatigue and immunological Compromise. CoQ10 is generally low in Lyme Patients. Recommendation:

Coenzyme Q10, 2-300mg daily

Other nutrients that can benefit energy production (so-called mitochondrial nutrients) include Lipoic

acid and Carnitine. I do not have any data or feedback on their efficacy in Lyme disease.

Essential fatty acids are fats that humans cannot synthesize, and therefore must be ingested. These nutrients are essential for the health of our cell membranes and are the backbones of prostacyclins which regulate virtually all the metabolic processes

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in our bodies. EFAs are important as anti-inflammatory agents, immunological enhancers, and mood stabilizers. EFAs taken regularly can improve fatigue, aches, weakness, vertigo, memory, concentration, depression and PMS. Deficiency in EFA may manifest with dry skin (often rough on the backs of the upper arms, thighs and buttocks), dry scalp with dandruff or seborrhea, excessive thirst. recommendations include:

Omega 3

Flaxseeds freshly ground and added to Hot or cold cereals, salads, yogurt, etc. Three tablespoons of flaxseeds yields one Tbsp. of oil, which is provided in six capsules of linseed oil. I take 6 Tbsp of ground flaxseeds daily. Always keep Flax sources cold, and don't heat them.

Recommendation:

Freshly ground flaxseeds 2-6 T/day

Alternatively,

EPA is fish oil that is also omega 3. Most of the anti-inflammatory and mood stabilizing studies have been done with fish oils. Most capsules contain 1000mg of EPA, e.g. MaxEPA, Super EPA.

Alternatively, Cod liver oil provides EPA along with vitamins A and D. These oils

can cause gastric distress, diarrhea and unpleasant aftertaste. Recommendation:

EPA 1000mg, 1-3 caps 3X/day, or
Cod liver oil, 1T/day

Omega 6

Evening primrose oil, black currant seed oil and borage oil are all good sources.

Evening primrose oil is the source that has been most studied. It has been particularly effective in PMS.

Recommendation:

Evening primrose oil, 500mg, 1-3 caps, 3x/day

Nutra-Herbs purportedly decreases Herxheimer reactions. As of this writing I do not have any feedback on its effectiveness or safety. Call 713-772-3277 for more information.

Evaluation for heavy metal toxicity

Lead toxicity is not uncommon in inner city children, but this population does not get heavy exposure to Lyme vectors. Mercury toxicity is a serious problem in all age and geographic groups because dental amalgam fillings consist of 50% mercury, and mercury vapor leaks from the fillings at toxic doses. Symptoms of mercury intoxication include all the neurologic symptoms that have been described in Lyme disease (e.g. cognitive dysfunction, memory loss, mood disorders, increased sensitivity to sound and light, tremor insomnia, headaches, etc.). In addition mercury toxicity can cause gastrointestinal distress, fatigue, immune dysfunction, shortness-of breath, sweating, fevers, palpitations and so on. sound familiar? It is not unreasonable to suspect that people with an infection of the nervous system may be more susceptible to the toxic impact of mercury. Most doctors and dentists don't take this issue seriously, so it should be evaluated by a physician literate in this issue.

www.holisticmed.com/dental/amalgam

Dr. Joe Py 978-388-2782

Energetic Interventions

Acupuncture has been very successful in some individuals in alleviating pain syndromes, muscle spasms, and headaches. It can also help diminish mood disorders, sleep disorders as well as balance autonomic instability (palpitations, hot and cold, etc.) It may also enhance immune function and improve liver, gastrointestinal and nerve function.

Peter Valaskatgis, Lic.Ac. 978-462-1191

JMT is an energetic technique that utilizes kinesiology (muscle testing) with acupressure or acupuncture to retrain the nervous system response to microbial infestation. I have been in discussion with a JMT practitioner who reports that six out of six clients with Lyme have had excellent relief of symptoms.

See www.jmt-jafmeltechnique.com

Dr. Robert Sampson 978-663-4400

The Microbial Balancing Program was developed by Machaelle Small Wright to work with the consciousness of microbes that cause infection, so that we can live symbiotically or in harmony with the organism rather than be at war. It is a definite stretch to our western belief system, but I do know individuals who swear by this program. See www.perelandra-ltd.com. Recommended Reading, Behaving as if the God in All Life Mattered, by Wright.

Homeopathy has been helpful for some people. A homeopathic nosode is available from Vinco, Inc. at 800-245-1939. Countless other remedies have been used with occasional benefit. Ledum is a remedy that many have found helpful to clear the infection.

I do not have first hand information on their use.

Shari Stratton 617-776-7930

Borrelogen is a combination of herbs that claim to treat Lyme but the mechanism is unclear and I have no data or feedback on its efficacy. See www.jnutra.com

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Emotional/Spiritual

Any chronic illness can result in depression. However, the impact of Lyme and other tick borne diseases on the nervous system often results in a much more severe impact on mood than I am used to seeing either in chronic fatigue syndromes or chronic pain syndromes. Antidepressants can be extremely helpful, though not always tolerated, and not always

effective until antibiotics are initiated.

In addition to recommendations previously described under nervous system, it is essential that individuals with chronic Lyme have a support system of family, friends and other Lyme patients who can empathize with their experience.

Anyone with Lyme disease can describe how sensitive Lyme disease is to stress. This is not surprising since stress increases cortisol levels which depresses immune function. It is therefore important to structure your life so as to minimize distress, and develop strategies to deal with stress, such as relaxation techniques. Joan Borysenko's first book, *Minding The Body, Mending the Mind*, teaches a simple breathing technique that can be practiced daily.

It is important to structure each day so that there is some physical activity, optimally including outdoor walking, accomplishing some task(s), and doing something pleasurable.

Exercise is important for immune function, oxygenation, circulation and emotional well-being. However, if fatigue is a prominent feature of your illness, too much exercise can exacerbate symptoms. Be careful to pace yourself and gradually increase activity as tolerated.

Hot baths are relaxing, can enhance antimicrobial activity, and alleviate muscle and joint pains. I recommend adding 2-3 cups of Epsom salts to the bath water. Energetic healers claim that the salts cleanse the aura. It appears to benefit

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the muscle and mood symptoms.

Journaling is an important tool to assess response to therapy, to vent feelings and to track how you're doing over time. As a physician it was extremely helpful in evaluating treatment, and useful to patients to be able to document improvement.

I personally believe that prayer is powerful medicine, and even more so in a group. It is important to surrender to divine will while not submitting to this illness. It is difficult to feel gratitude when feeling awful; nevertheless, I think it is crucial to give thanks for even the little things, like a telephone call from a friend, the ability to walk around the block or a

beautiful sunset. I believe every illness provides the opportunity to learn important lessons, and the sooner we learn them and incorporate them in our lives, the sooner we recover. Specifically, Lyme seems to feed on fear, particularly fear of fully manifesting who we are, claiming our power, and living our destinies. The sooner we can move from victim hood, self-pity and blame to self-empowerment and gratitude, the quicker we heal. For those who are open and willing, it is often helpful to see a healer who can help remove energetic blocks and clear limiting beliefs that impede our capacity to heal.

Suggested healers:

Simma Kinderlehrer 505-989-9700 (does work over the Phone)

Marc Clopton 978-465-1735

Kathy Eckles 978-293-9960

Dr. Andrew Hahn 781-274-6622

Swan Ashley 978-470-1211

I recommend daily meditation, visualization and affirmations. Shakti Gawain's books (e.g. Creative Visualization, Living in the
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Light) are wonderful. After I do some deep breathing, I imagine being surrounded and infused with white light, and then I pray for healing for myself as well as all those who are suffering. I often recite an affirmation (e.g. "I am happy and grateful that I am healing"), and then invoke images of myself full of joyful energy. And I give thanks.

Lyme confronts us with quite a challenge. I am aware that these recommendations may seem overwhelming. I am not intending that anyone attempt to implement all of them. Rather, they are suggestions to consider complementing whatever other treatment you are doing. I encourage you to use your own intuitive wisdom to decide if and when you want to try any of these recommendations. I am aware that they are not comprehensive; I tried to include only those suggestions that had some evidence of efficacy, either in studies or empirically. But there's an awful lot I don't know; my research into this stuff has just begun.

I caution everyone to implement interventions in a staggered fashion so that you don't overwhelm your system, and so that you can determine benefit or side effects.

It is my sincere intention that these suggestions provide fellow Lyme patients with tools that prove useful in your recovery.

With hope and blessings,
Dan Kinderlehrer, M.D.

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