Waking Up the Nation,
One Reader at a Time...

FREE

Public Health Alert

Vol. 6, Issue 6 | Investigating Lyme Disease & Chronic Illnesses in the USA | June 2011

Stem Cell Therapy for Lyme Disease

by David A. Steenblock, M.S., D.O.

It can truly be said that the road to physical Hell is built on immune system dysregulation (including hyper-reactivity and autoimmune reactions) and inflammation. Most chronic diseases, in fact, involve elements of both, typically locked in a biologic "cross talk" between organs and systems from bowel to brain that is interactive and, unless arrested and turned around, sends sufferers into a downward spiral. Chronic Lyme disease is no exception.

Thankfully we physicians have powerful tools at our disposal to help chronic disease patients negotiate their way off the road to physical Hell. Among these are nonembryonic (adult) stem cells.

Before delving into the particulars of how adult stem cells can remediate Lyme disease, we first need to review how the causative microorganism (3 species of Borrelia) wrecks havoc in the body:

Here in the US, Lyme disease arises when the Borrelia burgdorferi sensu stricto spirochete is injected into its hapless human victim by an infected Ixodes tick. Typical early onset symptoms include fever, headache, fatigue, and a characteristic bulls-eye rash on the skin called erthyema migrans. If left untreated the spirochete then spreads via the bloodstream to joints, heart, the peripheral nervous system, and central nervous system.

Although Lyme sufferers' bodies churn out antibodies to B. burgdorferi, these are often ineffective in tagging the spirochete for attack by phagocytes and other components of the immune system. One reason for this is due to the fact that B. burgdorferi decreases the expression of surface proteins that are targeted by antibodies. In addition, it has shown the ability to inactivate vital immune system players such as complement, hide within the extracellular matrix that provides support to tissues, and alter key surface proteins on their surface that would normally provoke a powerful immune response

This insidious pattern of undermining the host's native defenses continues in instances in which the spirochete enters the brain. Here it may induce astrocytes to proliferate and then die off (astrogliosis), which may account for many of the neurologic dysregulation and resultant symptomology linked to Lyme disease. In addition, B. burgdorferi is believed to cause microglia and astrocytes to secrete neurotoxic compounds such as quinolinic acid, Interleukin-6 and Tumor Necrosis Factor-alpha. The latter two are cytokines that may contribute to the cognitive impairment that many Lyme disease patients exhibit.

On top of everything else going on in the chronic Lyme disease sufferer's body, it seems likely that the infection results in the chronic secretion of stress hormones that both produces and feeds fatigue.

About 10-15% of untreated Lyme disease patients develop neuroborelliosis, a condition that can produce a wide range of symptoms and conditions including facial palsy, meningitis, shooting pains, numbness and tingling in the hands or feet that can rob sleep, cause vertigo, memory loss, and mood changes as well as unusual or abnormal skin sensations. In some cases patients experience panic attacks and "high anxiety," while others become delusional and even become detached from reality (Depersonalization or derealization syndrome.) Some develop full-fledged psychoses.

Lyme disease patients are also prone to develop arthritis in their knees and other joints, as well as to experience fibromyalgia. There are also cases of patients with chronic Lyme disease being diagnosed with ALS, MS, schizophrenia and other neurologic maladies which improved or were seemingly resolved following containment of their infection.

The conventional approach to managing Lyme disease focuses on antibiotic therapy which appears of limited utility. Actually up to 30% or more of those who have completed a course of antibiotic treatment continue to experience symptoms such as severe fatigue and muscle pain, sleep disturbance, and cognitive difficulties (In-a-word, Fibromyalgia and chronic fatigue syndrome.) This is attributed by some doctors to the survival and continued activity of Borrelia, and by others who believe the infection triggers an autoimmune reaction that persists over time.

Interestingly, to-date at least four randomized controlled clinical studies have been carried out to gauge the impact of long-term antibiotic therapy for chronic Lyme disease with none producing results that support this.

With the standard approach to managing Lyme disease pretty much a bust, patients and physicians are logically turning to modalities and treatments geared to help eradicate (or at least curtail the activity of) the causative microorganisms or manage the inflammation, pain and such they produce or both.

For more than a decade now my associates and I have been heavily focused on the use of both autologous and allogenic stem cells to address chronic, often progressive diseases including many that involve viral, fungal and/or bacterial players. This includes extensive work with colleagues in Mexico administering pure cord blood stem cells, as well as treatments in my Mission Viejo (California) clinic in which patients are given their own stem cell-rich bone marrow and fat tissue.

What we have observed and documented is that while stem cells themselves will not eradicate microorganisms, they can complement a patient's native immune defense and help reduce and in some instances eliminate inflammation, neuropathy, pain and fatigue. They also assist in repairing and reversing tissue damage including Lyme-damaged epithelial tissues. Bone marrow, fat tissue and a gelatinous layer around blood vessels in umbilical cords called "Wharton's

Jelly" happen to contain vast numbers of a very versatile stem cell called mesenchymals. Technically these are classified as being multipotent, which means they have the inherent capability to differentiate into a wide range of somatic (body) cells including neurons and oligodendrocytes, endothelial cells, osteoblasts (bone cells), chondrocytes (cartilage-secreting cells), and adipocytes (fat cells.) They also produce and express a wide range of growth factors that stimulate cellular growth, proliferation and differentiation. Bone marrow stem cells, for instance, have been shown to produce and secrete a wide range of growth factors including but not limited to platelet-derived growth factor, vascular endothelial growth factor alpha, transforming growth factors (TGFs) TGFA, TGFB1, and TGFB3, Bone morphogenetic proteins (BMPs) 1, 3, 7, 8B, R1A, and PR2, and various extracellular matrix factors. Mesenchymal stem cells have also been shown to modulate and even down-regulate autoimmune processes (which accounts, in part, for improvements seen in persons with autoimmune diseases like MS who have been treated with them.)

In Mexico, pure cord blood derived mesenchymals (typically 1.5 million infused intravenously) alone and used in tandem with CD34+/AC133 cord blood stem cells:

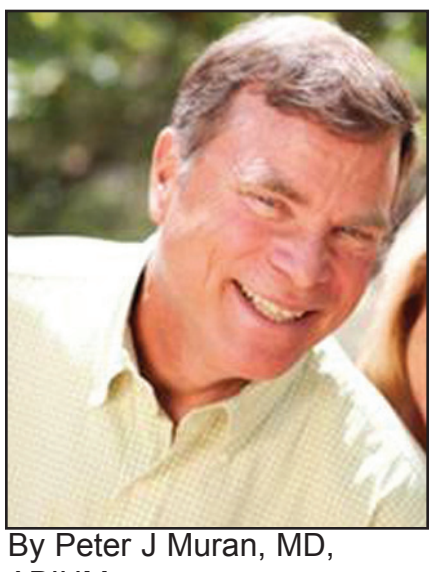
- Partially and in some instances completely reversed diabetic retinopathy & neuropathy
- Reduced and in more than a few cases eliminated intractable pain caused by advanced, disseminated malignancy, fibromyalgia, and Multiple Sclerosis
- Reduced the inflammation and resultant pain and discomfort associated with orthopedic injuries and diseases including damaged tendons, ligaments joints, as well as osteoarthritis
- Boosted muscular strength and stamina in persons with amyotrophic lateral sclerosis (ALS), multiple sclerosis, chronic fatigue syndrome and cachexia due to cancer

Similar results in these diseases and medical conditions as well as others have also been documented with regard to patients treated with their own stem cell-rich bone marrow and fat tissue in my clinic. Among these:

- Attenuation and even elimination of inflammation and resultant pain and discomfort in people with a variety of musculoskeletal conditions including arthritis of the knee. Typically bone marrow or fat tissue stem cells are given in conjunction with other therapies such as platelet-rich plasma (PRP.) The growth factors expressed by the stem cells as well as those contained in the PRP appear to work synergistically in terms of fostering remediation and even regeneration of damaged tissues.
- Turnarounds in neuropathy. My own wife, Noyemy,

"Stem Cells" ...cont'd pg 10

Lyme Disease Management: Immune Health Part 2



By Peter J Muran, MD, ABIHM

Lyme disease management requires a healthy immune system. A healthy immune system requires a healthy gastro-intestinal (GI) tract. To summarize the first article on this topic, the GI tract significantly affects the immunological system. The gastrointestinal tract is full of potential immune triggers. For the most part, the body is able to recognize and tolerate most non-harmful triggers. It is when an immunological response occurs and the inflammatory response is uncontrolled then the next level of inflammation is stepped-up. This next level of inflammation includes:

- Continued deregulation of the immune system
- Leaky gut syndrome
- Continued imbalance in the TH1/TH2/TH 17 lym phocyte profile
- Depletion of the natural killer cells
- Disruption of the homon al system
- Increased sensitivity or allergic response to a wider spectrum of agents

This Part Two of a three-part series will discuss evaluation and testing of the immune dysfunction caused by the GI tract.

What's Living in You

Throughout all the information on Lyme disease, antibiotics are used without the appreciation of the bacterial flora except for the administration of probiotics. Yet, analysis of the GI flora is rarely examined to determine the extent of the dysbiosis that is occurring within the intestine. Although the short-term use of antibiotics with the use of probiotics might not require such an examination, the long-term use of antibiotics could have detrimental effects which would affect the innate immune system generating a profile of chronic inflammation. This chronic inflammation profile could complicate the symptoms and compromise improvement, resulting in a confused issue in health management.

There are two methods to evaluate the small intestine for harmful bacteria overgrowth; one method that is specific to leaky gut syndrome, which occurs in the small intestines; and secondly, a test for the evaluation of the large intestine. All of these tests have their benefits and drawbacks. In essence, what is being evaluated is the total antigenic burden in the intestine, resulting in altered GI permeability and over-activation of the immune system.

Small Intestine

One method that is available to evaluate internal ecology of the small intestine is with a urine analysis for organic acids, Clostridia species, D-Lactate and D-arabinitol. These measurements could indicate if the patient has small intestinal bacterial overgrowth (SIBO) and/or yeast overgrowth. This test gives specific quantitative results of the type of bacteria. The urine analysis can usually be expanded to include additional metabolic products which would provide clues on deficiencies which would affect detoxification, neurotransmitters, energy production cycles and oxidative stress. The drawback of these tests is the expense.

The second method of measuring bacterial overgrowth is an abnormal hydrogen breath test. Abnormal bacterial overgrowth is usually the result of low stomach acid, maldigestion or stasis. In some cases Helicobacter pylori may be the causative bacteria. The main destruction is done by the enzymatic action of the bacteria destroying the integrity of the protective coating of the small bowel, permitting digestive enzymes to further breakdown the lining cells of the intestines. The drawback with this test is the lack of identifying a quantifiable result of other bacteria that may be present.

The measurement of leaky gut syndrome is, at first, pretty straightforward. Two sugars, lactulose and mannitol, which are minimally metabolized, are given at the same time. Mannitol is passively transported through the intestinal wall while lactulose is impermeable in a healthy gut. The ratios of the two sugars are measured in a urine analysis. The ratio in a healthy gut is less than 0.03. If the lactulose level is high then there is an increase intestinal permeability, whereas, if the mannitol level is low then there is an absorption problem. The lactulose/mannitol challenge test is done fasting and with a meal. The complicated part comes with trying to determine the exact causative agent through an elimination rotational diet. Allergy testing will not always identify the causative agent. The underlying bacterial dysbiosis also needs to be considered in this evaluation.

Large Intestine

Evaluation of the internal ecology of the large intestine can be done in one or two methods. The first method, which has been more established, is done with cultures and microscopic evaluation. The advantages are the standardized care-culture technique and the microscopy and enzyme-linked immuno-assay technology and techniques which are well established and validated. This method also has many shortcomings. One of the most obvious is the difficulty in collecting and growing an anaerobic strain of bacteria, which happens to be the predominant organism of the GI tract. Of the bacteria that can be grown, it requires 1,000 to 5,000 cells to culture. The second drawback is the microscopic detection for parasites which require 25,000 cells per gram.

The other method to detect and measure what bacteria is in the large intestine is by DNA strand identification, PCR, and chemical analysis. This has a higher sensitivity for discovering the organisms present in the GI tract and identification. There is an ease of collection and transport. It only requires 1 to 5 cells for identification of bacteria and only 5 cells per gram for parasites. This method has its shortcomings in that PCR techniques and reference ranges are not clinically validated. Correlation between quantification of pathogen or resistance genes based on PCR is not fully known. Ability to determine bacterial strains and specific species depends on limited availability and cost of commercial probes (especially for anaerobes). There are a few human studies on clinical significance of using PCR evidence of a protozoan pathogen.

(Reader Caveat: The following section is detailed and technical. If you find this a bit overwhelming, advance to the summary paragraph to obtain the pertinent concepts)

Identification of GI inflammation

Both lactoferrin and calprotectin are proven markers of intestinal inflammation. They distinguish inflammatory bowel disease from irritable bowel syndrome.

Fecal lactoferrin is an iron-binding glycoprotein which is expressed by a white blood cell seen in acute inflammation or infection, the neutrophil. Elevated levels of lactoferrin indicate neutrophil infiltration of the inner layer of the intestines, the mucosa. Lactoferrin is 90% specific for active inflammatory bowel disease versus irritable bowel syndrome, thereby lactoferrin uniquely discriminates an inflammation from infection.

Fecal calprotectin plays a regulatory role in inflammatory process. It is a reliable marker for the presence of infectious, inflammatory or malignant disease. It is released by mobilized and activated neutrophils in the gut in response to cell or tissue damage, increased permeability of the mucosa, or infectious processes.

What About Your Immune System

An over-expression of the immune system caused by gut inflammation normally responds as a systemic inflammatory response of the cytokines. This results in inflammation messaging throughout the whole body. These over-expressions of an inflammatory response through cytokine chemical messengers are imitated by the dendritic cells. Upon a dendritic cell encountering a pathogen, cytokines or specific tissues, it will process that information and either engulf it; facilitate antibody production through another lymphocyte, the B cells; cause an oxidative burst of the substance; deliver cytokines to the foreign substance; or lead to further cytokine production by means of activating T- lymphocytes. T lymphocytes belong to a group of white blood cells known as lymphocytes, and play a central role in cell-mediated immunity.

The immature T lymphocyte is activated and the T lymphocyte activation begins at an immature T lymphocyte or Th-naive cells (Th0 cells). The Th0 cells are transformed into Th1, Th2 or Th17 lymphocytes, which have different levels of interaction. For those without an immunology background, mainly get the idea that Th1, Th2, and Th17 will respond to a stimulus differently, as outlined below. Please refer to the first article to clarify cellular versus humoral immunity.

The dendritic cells can also signal the Th0 cells to produce T-regulatory cells. The T-regulatory cells' net effect in the gut is to main

"Immune" .... cont'd pg 8

Public Health Alert

The PHA is committed to researching and investigating Lyme Disease and other chronic illnesses in the United States. We have joined our forces with local and nationwide support group leaders. These groups include the chronic illnesses of Multiple Sclerosis, Lou Gehrig's Disease (ALS), Lupus, Chronic Fatigue, Fibromyalgia, Heart Disease, Cancer and various other illnesses of unknown origins.

PHA seeks to bring information and awareness about these illnesses to the public's attention. We seek to make sure that anyone struggling with these diseases has proper support emotionally, physically, spiritually and medically.

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Monsantostein

by Dottie L. Heffron

Before I graduated from college I found myself on several job interviews that led me down the path of potential employment as Frankenstein's bride. One in particular that stands out in my memory is an interview I had with Monsanto, the seed giants.

Ok, I should admit it. I should have done my homework BEFORE I went on the interview, I thought as I peeled out of the parking lot after the interview concluded. The man who interviewed me revealed during the interview that they have had picketers out front yelling things like, "Frankenfooders go home, etc, but they didn't pay them any attention and just went about their business."

I looked at him bewildered. I did not really understand what he meant, so as usual I just smiled and nodded. I had a strange sense of "something's not right there" as I looked at the big huge building growing smaller in my rearview. I begged and pleaded with God. Please Lord, never, ever let me work at a place like that. In return, I will become a nun as payment for your favor.

When I got home, I pored over the internet like warm gravy looking for any reference to frankenfood, seedGods or biopirates. What I found was just about totally unbelievable. There were hundreds of websites all talking about how bad GMOs are to humans. I could not believe they were modifying the genes in our food and they have been since around 1992(1) and earlier. I was totally taken by surprise, and I sat there in shock.

Upon further investigation, my interview wasn't just any old lab I had interviewed for; at that time, it was the biggest soybean plant in North America. (2) They were playing God with the seed DNA in a lab not more than 5 miles from where I live.

Taken from the history of the GMO page at The National Sustainable Agriculture Information Service, part of The National Center for Appropriate Technology states:

"*Genetic modification refers to technology that makes it possible to manipulate the genes of living organisms to change the characteristics of that organism. Combining multiple genes from different living organisms is referred to as recombinant DNA technology. Resulting products are

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ABOVE: Monsanto Soy Bean Production Facility. BELOW: They had grown so large that expansion was necessary. Photos by Dottie Heffron

How to Listen for God's Voice

by Joan Vetter

It is true - often we have fathers who don't talk to us for whatever reason. Maybe they are angry men, demanding and controlling, or they are absent. Or perhaps they just don't know how to lovingly reach out to care with their words. However that is not what God intended for a father/child relationship.

We are told in scripture that God is our Father. I know that has a myriad of responses at first for many. For some it is a longing to experience the place of acceptance, but others may not pursue God, thinking He will reject them or ignore them. However, if we associate the name God with father, common sense reveals a God who desires to communicate with His family.

I remember so clearly one of the first times I heard God speak. I was in a meeting where the leader indicated we would all hear God tell us what He thought of us. My first response was doubt, and even thinking maybe everyone would hear something but me. He instructed us to ask God, and then just be still and hear with our spirit and not our mind. At first it was all too quiet. Then three words tumbled forth right on the heels of each other. Today those words still evoke that similar response of a sweet knowing that my heavenly Father loves me.

Recently I heard a pastor speak about training his son to listen for deer when he took him hunting. He said it is the same way with learning to listen for God. First, we need to believe that He desires to speak to us and that we can learn to hear Him. Then, we persevere even though we may make a few mistakes along the way. However, we remain in an attitude of thanksgiving that we are the sheep of His pasture and His sheep will hear his voice.

Have you ever received a phone call where the person failed to identify themselves and just proceeded to talk? If it is someone familiar we know their voice immediately. Or perhaps we recognize the voice but can't place it, or we have no clue who it is.

Therefore, training, for the most part, is simply spending time with God through His Word and especially through the Holy Spirit. When we know His nature and His Word we can recognize who is talking to us.

Sometimes God may send an angel to communicate with people. Such is the case with Zacharias in Luke 1:13, when an angel proclaimed, "Do not be afraid, Zacharias, for your prayer is heard, and your wife Elizabeth will bear you a son, and you shall call his name John." However, Zacharias proceeded to question the angel by saying, "How shall I know this? For I am an old man, and my wife is well advanced in years." Then, the angel announced that Zacharias would be mute and not able to speak until the baby was born, showing us that even when we hear a true word from God or an angel, are we willing to trust?

Even the deaf learn to communicate through sign language. Sometimes God may use a sign to speak. For instance, yesterday I saw a sign at the YMCA with a picture of two hands encompassing the words Safe Place. It reminded me of my computer screen saver, a picture of clouds in the form of two huge hands. The emotion of being safe in God's hands flowed over me with such a sense of gratitude.

Another way God speaks is through people or words we read. I asked the Lord if I should do something a friend requested of me. I honestly didn't have peace about it, but hated to disappoint her. Today I read a daily devotional with these words: "Resist the temptation to take on more than you can effectively handle. Any over-extention could deplete your resources, physically, emotionally, financially or spiritually. Exercise sound judgment when making choices and you would do well to be conservative. The enemy would love to stretch you beyond your abilities." I recognized without a doubt that was God answering my prayer for wisdom.

I challenge you to search through the Bible looking for the places God speaks to His people, and then let your heart and ears be tuned to the frequency of His personal voice to you. Just like your finger prints are one of a kind, the way He communicates with you will be unique. "I heard the Lord call my name - listen close you'll hear the same."

pha

Poetry Corner

EXPLORING REALMS

DO explore each misty realm,
(No taxes on MIND TRAVEL)
Yet, keep in mind that Common Sense
Won't let your dreams unravel!

TODAY

Today was worth living
When you were still here -
Your smile was a magnet,
I rarely felt fear.
But now that you've gone,
My tomorrows are gray;
Please God, give me memories
To help me each day.

THE MIND

Your mind is an exciting door
To all things that exist;
The breaking light of each new dawn
When sunset's glow persists.

A flash of wings as birds fly by,
Each seeking its own nest;
They fly together in the sky,
Yet separate, at rest.

Your mind lets you go anywhere,
Paris? Rome? Peru?
But it's the starting point of thoughts
That DO make dreams come true.

LIFE

Is it all a real parade?
Life, as it quickly passes,
Or just a scene and dream charade
A mass of misty flashes?
No, I think it must be real
Because your touch uncovered
Mem'ries lost in Time's past web
And recently recovered.
So let's remember, heart-of-hearts,
Commitments, husband-wife,
And concentrate on sharing Love
The Elmer's Glue of Life!

THE CURIO CABINET

A cabinet of curios
Stands in my valley home,
Filled with unique momentos
From London, Paris, Rome:
To buy them through excitement
When traveling years ago,
But dusting them for twenty years
Has somewhat dimmed the glow.
That figurine, with arms held high,
In red Flamenco clothes,
So elegant when purchased
Has cracks on chin and nose.
Those tiny pigs from Venice
Spe-cia-li-ties in glass,
Fall to the floor when handled,
And are in the "no-dust" class.
Those shelves of items treasured,
Things I loved so much…
Have taken on new meaning
THEY'RE JUST A BUNCH OF STUFF!!

KING SPRING

When Spring is King he throws a Ball
A grand, majestic show,
The decorative designs by HIM
Inspire viewer glow.
Those garden flowers bursting through
Their background of dark green,
Inspire awe, and see that sky
Cross-hatched with clouds, serene,
You're all invited, (bring a friend)
It's on for three months long,
King Spring plays host until he hears
Dame Summer's clarion song.

IN LIVING COLOR

The artist, nature, paints each day
With colors of her own;
With subtle brush strokes uses
Every color that is known.
At morning, yellow splashes
Color all things sunlight bright,
And then, toward noon, her palette grays
Diminishing the light,
At three, the brilliance of green leaves
Have grayed to darker hue;
Sometimes, as breezes move them,
They look sapphire blue.
At four o'clock, Dame Daylight
Bows before the coming night,
No need to fret, Tomorrow brings
A new day, blessed with light!
Nature's palette has a shade
Select, for you and me.
Perk up your Life, just look around,
C'MON….ADMISSION'S FREE!!

Nawanna Rodgers-Gazin is a talented artist who worked for many years as head of the Graphic Arts Department at William Rainey Harper College in Palatine, Illinois. She retired in 1986 and moved to Arizona.

After her retirement, Nawanna designed a line of greeting cards and homemade jewelry and sold her wares at craft shows for twenty years. She has enjoyed writing poetry, playing the piano and singing professionally since she was very young.

At age 88, she is still a wife, mother and active homemaker, who prepares all meals and does her own housekeeping. Contact: NawannaJ@aol.com.

Insights Into Lyme Disease Treatment: 13 Lyme-Literate Healthcare Practitioners Share Their Healing Strategies

Ginger Savely, DNP: Part 2 of 3

by Connie Strasheim
Available from www.LymeBook.com or by calling (530) 573-0190

Chapter 4: Ginger Savely, DNP, Part 2 of 3

About this article:

The following is an excerpt from the book, Insights Into Lyme Disease Treatment: 13 Lyme-Literate Health Care Practitioners Share Their Healing Strategies, by Connie Strasheim. The book is 443 pages and retails for $39.95; it is available from BioMed Publishing Group by calling 530.573.0190 or online at www.LymeBook.com. The book is based on interviews with 13 Lyme-Literate health care practitioners. Each doctor is given their own chapter in which to explain their Lyme disease treatments. This chapter focuses on the treatments of Ginger Savely, DNP, of San Francisco, CA. Note: This book excerpt will be broken up into multiple issues of Public Health Alert due to space constraints, so be sure to pick up the next few issues of the Public Health Alert!

(continued from previous issue of PHA)…

Treating Mold, Candida and Environmental Toxins

I treat my patients' Candida towards the end of their treatment regimen, because the antibiotics for Lyme cause yeast, so there's no point in treating for yeast as long as patients are taking antibiotics. When I do treat them for yeast, I also treat them for mold, using Cholestyramine (as advocated by Dr. Ritchie Shoemaker, M.D.) to bind the mold's biotoxins. I think that mold is a huge problem for Lyme disease patients, too. For some, it may even be the main reason why they got sick, and is the reason why they stay sick. Recent work by Dr. Ritchie Shoemaker has also shown that Lyme patients who are continually exposed to environmental mold will not get well.

Besides Candida and mold, heavy metals and other toxins can potentially affect recovery from the Lyme disease complex. As a practitioner, I have to look at everything that could be impacting my patients' immune systems. So I must do two things at once: get rid of their infections, and empower their immune systems, which means getting rid of everything that drags the system down. Eliminating patients' allergies and sensitivities, for instance, such as wheat or milk, can lift tremendous burdens from their immune systems. Also, reducing their exposure to different environmental toxins, such as mold (as mentioned above) and heavy metals, can help. Some of my patients have heavy metal toxicity, but since I don't specialize in heavy metal toxicity removal, I refer them to a heavy metal detoxification specialist. I haven't had the time to learn how to treat this aspect of illness in depth. I already have too much to do as it is. I'm taking care of my patients' hormones, blood pressure, infections and many other things. There are so many aspects of treatment to consider, and I just can't cover all of the bases.

Treating Insomnia

Sleep is restorative and necessary for the body to heal. Sleep dysfunction is one of the most significant and debilitating aspects of Lyme disease. Unlike the insomnia that is experienced by the average person due to stress, Lyme disease insomnia is a central nervous system problem and can't be treated with the same methods that are used for the average person, such as a warm bath or glass of milk before bed.

If patients' sleep cycles are turned around, then it's important to get them back to sleeping when it's dark. Taking melatonin at doses of 0.5-3.0 mg at 9:00 p.m. can help to regulate their sleep cycle, while taking three teaspoons of Natural Calm magnesium powder in the evening can help them to relax. If frequent urination prevents them from sleeping through the night, then avoiding fluids a few hours before bedtime can be helpful. If this doesn't work, then some may require DDAVP, a prescription hormone that prevents frequent urination.

Whenever I give my patients a prescription sleep medication, I tell them to take it every night right before they get ready for bed. If they wait too long to get to bed after taking the medication, it may not be effective. I also advise them to start by taking the lowest dose necessary and gradually increase it each night, until they are able to sleep soundly through the night without feeling groggy the next morning.

Nutrition

Anyone can benefit from good nutrition, both for feeling good and for maintaining a healthy body over the long run. A body that is under physical and/or mental stress has nutritional needs that are above normal. Those with tick-borne diseases have specific, and above normal, nutritional needs due to abnormal body processes. B-12 and magnesium, for example, are two nutrients that those with Lyme tend to need more of than the average person. Also, free radicals are thought to be more abundant in Lyme sufferers, which makes anti-oxidants an important nutritional requirement.

What Those with Lyme Disease Should Do for Proper Nutrition

1. Avoid drinking alcohol and smoking. Limit caffeinated beverages.

2. Drink eight to ten glasses of water per day.

3. Those with tick-borne illnesses crave sugars due to faulty carbohydrate metabolism, but indulging in these makes the situation worse, leading to hypoglycemic fatigue. Limit simple carbohydrates such as potatoes, pasta, rice, and white bread to one small serving at lunch and dinner. Avoid sweets but if you feel that you must have them, it should always be after a healthy meal and never before noon.

4. Double protein intake to 90-100 grams per day, stressing low-fat proteins such as fish, skinless chicken, lean cuts of beef and pork, fat-free milk products, egg whites, seitan loaf and soy powder. Snack on roasted soy nuts, which are packed with protein.

5. Aim to get at least 25 grams of fiber per day. One-third cup of Kellogg's All-Bran Buds can be added to your morning cereal, which will provide half of the recommended daily requirement for fiber. (By the way, these are tasty and don't get mushy!) Eat lots of veggies, four servings of fruit per day, and always choose whole grains.

6. Since it's difficult to get enough dark greens in the diet, try buying a product like Kyo-Green or Green Magnum and add a tablespoon of this to a smoothie. It's a tasteless powder, but has the same amount of nutrients as a pound of spinach!

7. Add ground flaxseeds to smoothies, cereals, rice, casseroles, etc. Flaxseed provides many benefits to the body, including high amounts of fiber and omega-3 fatty acids, which are natural anti-inflammatory substances. Start with a low dose, as too much may initially cause gas or loose stools. Flaxseeds should be kept in the refrigerator to avoid rancidity.

When formulating a diet plan for their patients, it's important for practitioners to discover what their patients' food allergies are and eliminate those. I test all of my patients for gluten sensitivity, but whether or not they test positive to the gliadin protein, they are yet likely to feel better on a gluten-free diet, and invariably, most all of them do. I also recommend that they eat a "no white" diet, which means avoiding foods that have white flour or white sugar in them. So that means no white rice, no white potatoes or white bread. Instead, I encourage low-fat proteins, vegetables, fruits, brown rice (I don't believe that brown rice feeds infections) and complex carbohydrates. These are pretty much my standard dietary recommendations, but I also think that when it comes to diet, patients get a feel for what their bodies need.

Testing For and Treating Food Allergies

People with allergies have hyperactive immune responses to many substances that the body recognizes as harmful. Their immune systems switch into overdrive when exposed to minor insults such as dust, pollen, healthy foods, and so on. This constant activation of the immune system leaves it drained and exhausted so that when bacteria that really need to be dealt with (Borrelia for example), come into the picture, the immune system is not as strong as it needs to be. Many people with Lyme disease have problems with allergies, even though they may not realize it. They especially tend to not recognize food allergies, because they consume the offending foods on a daily basis and their bodies have learned to mask the negative effects of the foods. It isn't until they remove such foods from their diets and then re-introduce them back in that they are able to perceive their negative effects. Those who wish to learn more about food allergies should read the book, *Detecting Hidden Food Allergies* by William Crook.

Supportive Supplements Vitamins and Minerals

To make sure that my patients are getting the nutrition that they need, I strongly urge them to schedule a consultation with a nutritionist or naturopath who specializes in helping people with chronic or debilitating health problems, and who can help them with this aspect of treatment.

It's a good idea for patients with Lyme to invest in a few plastic seven-day pill holder containers, so that they can organize their medications, including vitamins, at the beginning of each week. This can help those with brain fog remember if they have taken their supplements!

Magnesium

Magnesium tends to be very deficient in Lyme disease sufferers. Some symptoms of magnesium (Mg) deficiency include:

1. Accelerated heart rate
2. High blood pressure
3. Neuromuscular irritability
4. Headaches
5. Hyperactive reflexes
6. Muscle cramps
7. Joint pain
8. Irritability, anxiety, depression

Lyme disease is one of many illnesses that cause magnesium deficiency. The Borrelia burgdorferi bacteria (Bb) is unique from other organisms because it "goes after" magnesium in the host's body, whereas most microbes go after iron. Researchers have been surprised to find that Bb does not seek iron from its host, but that it does need magnesium. Many Lyme disease symptoms, including those that involve the muscles, joints, vision, appetite and heart, as well as inflammation and immune deficiencies that manifest in specific symptoms such as cramping and headaches, are often classic magnesium deficiency symptoms. Taking a good magnesium supplement often decreases these symptoms.

Preliminary research on Morgellons disease shows that the disease fibers are coated with minerals, which are presumably leached out of the body by illness. So Morgellons patients need to supplement with magnesium and other minerals, as well.

Magnesium is involved in an extraordinary range of functions in the body. By restoring proper magnesium levels, the immune system's ability to target pathogens improves. There is a hypothesis within the Lyme disease communi

"Savely" ...cont'd pg 10

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www.nationalmssociety.org/alc

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Mid-Peninsula Lyme Disease Support Group
Mountain View, CA
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6:30-8:30 PM
ldsg_scott@hotmail.com

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milehightick@yahoo.com

Connecticut
www.timeforlyme.org
914-738-2358
Meetings: first Thursday of every month from 7-8:30 p.m. at the Greenwich Town Hall

National Support:
truthaboutlymedisease.com/
Dana Floyd, director

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Montana
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Minnesota
Duluth/Superior Lyme Support Group. Meets first Tues. eachmonth at 7pm, St. Lukes Hospital, 1000 East 1st Street, Duluth, Mn. For more information call Tom Grier at 218-728-3914 or Tom Kurhajetz 218-372-3744.

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Lyme Disease Support

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Portland, Oregon
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Washington State
Alexis Benkowski
WA-Lyme-owner@yahoogroups.com

Western Wisconsin Lyme Action Group
Marina Andrews
715-857-5953

Military Lyme Disease Support

Military Lyme Support is an online source of information and emotional support. This site is for Military Members, Veterans, and their family members who suffer from Lyme and other vector-borne diseases. Members are stationed in the United States and abroad.

http://health.groups.yahoo.com/group/MilitaryLyme/

Texas Lyme Disease Association

www.txlda.org

All donations are tax exempt.
Donate online with PayPal:
donations@txlda.org

"Monsantostein" ... cont'd from pg 3

said to be transgenic or genetically engineered.

"First commercial GMO food crop was FlavrSavr tomatoes by Calgene released in 1992. FDA recognized the FlavrSavr as a food and therefore decreed it did not need to be labeled. Released in 1994, the tomato did poorly and was gone by 1997. Radically changed direction of GMOs."

Being a Lyme literate advocate in my state, I came to the realization that the U.S.FDA et.al made many "modifications" towards our health in 1994. This is the very same year the U.S. FDA stood by, turned a blind eye and let certain entities change the testing for Lyme disease in a meeting with the CDC at Dearborn, Michigan. (3) The 1990s proved to be a busy decade for changing health paths of individuals indeed.

They go on to state: "GMO's around the world--

* Transgenic crops are now grown in 42 countries on 6 continents.

* Currently over 1 billion acres of land contain GMO crops. 2/3 of that acreage is in USA. Principal crops being herbicide/insecticide resistant soybeans, cotton, corn, and canola.

* 70% of products on grocery shelves in USA contain GMO ingredients.

* Over 125 crops are currently registered in biotech database.

The WTO (World Trade Organization) ruled the EU (European Union) broke trade rules with their de facto moratorium on the import and use of biotech products. Ban effectively denies access of US corn and corn products for sale in Europe. Case brought before WTO by USA, Canada, and Argentina.

Controversies Surrounding Biotech

* Proponents claim less use of pesticide, however studies show that GMO crops are being sprayed with up to 5 times the herbicide and insecticide used on traditional crops.

* Loose gene syndrome, GMO crops have accidentally cross pollinated with non-engineered crops, resulting in loss of control of patented genes. This has been referred to as "loose gene syndrome." Companies such as Monsanto have sued small farmers over "escaped" genes when their genes have turned up in other crops.

* Genetic escapees are polluting the gene pool, rendering many non GMO crop seeds sterile. The result is a major threat to natural genetic diversity that has developed over a long period and is fundamentally necessary to long term genetic viability.

* Terminator genes implanted in genetic makeup make seeds sterile after one generation, therefore making it impossible for farmers to save seeds. Seed saving is one of the longest standing and most important practices in sustainable agriculture. Because GMO genes are patented, it makes it illegal for farmers to save seeds or liable for lawsuits if GMO genes drift into their fields and plants.

* The USDA has shown no restraint in pushing biotech as they have reviewed 5000 requests for field trials and not turned one down.

Common GMO Myths Perpetuated by Industry

* GMO food will feed the hungry of the world. Truth: GMO foods destroy diversity, sustainable agriculture, and make developing countries dependent on receiving seeds from USA every year, taking more money away from local farmers and local economies and sending profits overseas.

* GMOs are safe for our food source. Truth: The technology is so new that we have no way of understanding the radical long term impacts of genetically altering living organisms. The public has been used as guinea pigs for a dangerous experiment. Doctors say problems such as allergies and other complications can and will take years to develop.

* GMO products reduce the need for chemicals on the farm. Truth: An overwhelming number of GMO crops require the use of heavy chemicals such as the widely used Round-Up Ready line of crops produced by Monsanto. The company not only benefits from the seed profit, but from the world's most widely used herbicide-- Round-Up, manufactured by Monsanto.

* GMO foods can make products more nutritious, long lasting, and more appealing. Truth: The creation of GMO food products has nothing to do with food quality or ability to withstand shipping and distribution. Foods have been modified to withstand heavy herbicidal spraying, or to produce their own insecticides.

* GMO products are just the logical next step in plant and organism breeding that has been happening since the beginning of agriculture. Truth: Genetic modification crosses genes that would never interact in nature, such as the crossing of spider genes with milk goats to produce large amounts of spider silk in goat milk to be used for body armor and industrial applications."

After reading hundreds of different sites and speaking with several nutritionists my conclusion is that GMO's are not good for any forms of life. They are skillfully engineered by man, just as Lyme disease has been modified by money-seeking bandits who want to steal our health and bestow a circle of sickness upon the unknowing.

Just as in Lyme disease, parts of the spirochetes are patentable inventions. That is why entities never share information on the subjects anymore and this is legal under current U.S. law. I am sorry, but Patients are for Profits. Genetically engineered crops are patentable inventions. Companies have broad power over the use of any patented product, including who can study it and how. This is how many have gotten away with pulling the wool over our eyes for years.

The sign below boasts, "We breed better beans". Who breeds beans?

What they are doing to the soil is a whole different thing. If I went into how they are alternating the soil content that the GMOs are grown in, that would be another article in itself. You have seen the signs when riding across the land yourselves.

Today, I can look back with a smile. I did not have to break my promise to God and become a nun, as I was already working at a new position when Monsanto called me and offered me the job.

I am so grateful that I did not go to work for them, as they stand for everything I am NOT. I want to be PROUD of where I work and what they stand for. I would never have been able to shut my eyes at night knowing full well that this new method of modifying the food supply is not a good thing and it was harming our environment and everyone's health.

Please remember, try and eat organically as much as you can- your health and well-being depend on it. And always remember, "Say NO to GMO."

(1) The National Sustainable Agriculture Information Service http://attra.ncat.org/intern_handbook/transgenics.html
(2) The Morning Sentinel, 2009, Centralia Illinois
(3) The Second National Serogical Testing for Lyme disease testing

http://www.lymecryme.com/DEARBORN_AIO.pdf *pha*

"Immune" ... cont'd from pg 2

tain tolerance by dampening immune responses to ingested antigens. The T-regulatory cells also modulate and balance TH1, TH2 and TH17 lymphocyte subsets. It is the modulation lymphocyte subsets which maintain balance throughout the whole body.

- Th1 produces mostly cellular immunity and is measured by IFN gamma, IL-6, and TNF-alpha.
- TH2 produces mostly humoral immunity and is measured by IL-4, IL-5, IL-6, IL-10
- Th17 produces chronic inflammatory immunity and is measured by IL-17
- Tregulatory for example CD4+CD25+ and is measured by IL-10 and TGF-beta

Th17 is the primary driver of chronic inflammation by producing interleukin 17 cytokines, IL-17. IL-17 further stimulates NFkB (COX-2) and MAP kinases production, which initiate inflammation in Lyme arthritis. NFkB is a measurable unit and can be used to determine the degree of inflammatory response the body is undergoing.

Another inflammatory marker of the innate immune system are complements, c3a and c4a. These will guide to determine whether the inflammation is an autoimmune versus infectious process. The Inflammatory markers of the erythrocyte sedimentation rate, anti-nuclear antibody, C reactive protein and the immunoglobin subclasses may also be of assistance.

A measure of a healthy and responsive innate immune system is the level of the functional natural killer cell activity. These cells are depleted in response to chronic inflammation and the imbalance of excessive Th1 expression. The NK cells can be monitored to reflect the improvement of the immune system.

Summary

The foundational testing associated with both Lyme disease and gastrointestinal inflammation are many. If the situation occurs when the use of antibiotics are not giving the symptomatic relief expected and it appears that the Lyme is still prevailing, look at other regions which can interfere with a healthy immune response. Of importance is the possible inflammation harbored in the GI tract. This can be investigated by exploring the function and possible bacterial overgrowth of the small intestine. The intestinal permeability or leaky gut syndrome should be reviewed. There could be a possible harmful bacteria or parasites in the large intestine. All of these interactions should be compared to the current presentation of possible decline in immune status as fatigue, skin rashes, diarrhea, toxic feelings, shortness of breath, joint and muscle pain, fevers of unknown origin, food intolerance, abdominal discomforts and cognitive changes. To determine the immune directed pathway for the symptoms, utilize laboratory measurements of immune activation and immune tolerance, as described above.

Next article will present a case study and treatment.

For any further information please visit our website page on Lyme disease: http://www.alternativemedicinehealthcare.com/immune-health/lyme-disease.

Peter J. Muran, MD, practices Integrative Medicine in San Luis Obispo, CA, specializing in immune conditions such as Lyme disease.
www.longevityhealthcare.com
Tel: (888) 315-4777

pha

"Savely" ... cont'd from pg 5

ty that if we can keep adequate levels of magnesium in the body, we will also enable the body's immune system to regain its ability to target and attack the Bb organism itself. (It is also thought that magnesium might incite Borrelia to come out of hiding to get the magnesium).

A person's response to magnesium doesn't depend solely upon the amount of elemental magnesium in a particular supplement, however. It depends more upon the amount that's absorbed and bio-available to the body, and the amount needed to correct the deficiency. The gut (the jejunum and ileum) absorbs the majority of ingested magnesium, so the solubility and absorption of a particular type of magnesium across a range of pH's are important to consider when correcting deficiencies. Some magnesium supplements, for instance, have low solubility and are poorly absorbed in the intestine. Common magnesium salts, such as sulfate (Epsom salts), hydroxide (milk of magnesia), and oxide are poor supplements due to their low bioavailability. Also, magnesium chloride may present unwanted side effects due to its hygroscopic (readily absorbing moisture) properties.

I recommend Peter Gillham's Natural Calm for correcting magnesium deficiencies because my patients have had good experiences with it (www.petergilham.com). It comes as a flavored powder that can be mixed with water, or as a plain powder that can be mixed in juice or a smoothie.

When dosing magnesium, patients should increase their nightly amount until their stools become comfortably soft. Too much magnesium will lead to diarrhea. If my patients don't like taking magnesium in powder form, I recommend MagTab SR or Mag Malate.

Patient and Practitioner Challenges and Roadblocks to Healing

One of my greatest challenges as a practitioner is getting my patients to keep plugging away at their treatments, because they get very frustrated and want to give up. It's really hard, because when they don't see any change in their symptom picture, it's as if they can't "see the forest for the trees." If I can help them to get through their treatments, they are often then able to look back and realize that they are getting better, but in general, it's very hard for them to "hang in there." Providing reassurance is one of the best things that practitioners can do for Lyme disease patients, however, and a great majority of their job involves being cheerleaders or psychologists.

Another challenge that I have is coming up with individualized treatment plans for my patients, because they are all so different and I never know what's going to work for them. For instance, I have some people for whom artemisinin makes all the difference in the world, and other people for whom it doesn't do a thing. There is so much that we as practitioners don't know about treating Lyme disease. Further complicating things is the fact that there are so many different strains of Borrelia and other infections going around that we don't know about, which means that we don't necessarily know how or what we are treating.

Ginger Savely, DNP

To be continued in the next PHA issue! *pha*

"Stem Cells" ... Cont'd from pg 1

actually benefited from a stem cell-rich fat tissue treatment for postsurgical issues including numbness in her face (Neuropathy.) In fact, she experienced not only a return of sensation (and this within the first 24 hours following her treatment) but also improvements in her sense of taste and vision. My office crew was so impressed that they had Noyemy discuss her response on camera which can be accessed on-line at http://www.stemcellmd.org/testimonials/noyemes-testimonial/.

❖ Impressive clinical responses in persons with a wide range of neurologic conditions and issues such as epilepsy, cerebral palsy, chronic stroke, ALS, multiple sclerosis, and traumatic brain injury. Some of the patients discuss this on camera at http://www.stemcellmd.org/category/testimonials/our-stem-cell-patients/ and also http://www.stemcellmd.org/category/testimonials/patients-videos/.

Many of these medical challenges share physiologic overlap with those of Lyme disease.

Aging adds a layer of complication to the chronic disease picture because stem cells that reside in the marrow of people over age forty (40) tend to be devitalized and less able to respond to "come hither" signals from damaged or diseased tissues (In healthy young people, an injury or disease generates biochemical signals that stimulate their marrow to mobilize stem cells which then migrate to the affected tissues and engage in repair and restoration activities.) To offset this I worked out and tested a method of purging older patient's marrow of devitalized stem cells using FDA approved drugs such as colony stimulating factors and various technologies including intermittent hypoxia therapy. This calculated mobilization stimulates the bone marrow to then generate replacement stem cells which tend to be healthier and more vital. Once this is accomplished, the marrow is harvested and then injected or infused (depending on the condition being treated.) This is touched on in the November-December 2010 issue of my open access clinic newsletter at http://stemcell.md/newsletters/nov2010.pdf.

The contrast between the results seen in older patients who received their own bone marrow sans the "revitalization method" and those who got revitalized marrow has been striking. Well-documented case histories are being accrued now and will be published in the future.

While allogenic and autologous stem cell therapies, both standalone and used in tandem with complementary treatments, cannot cure Lyme disease, they can help patients contain and reduce symptoms such as intractable fatigue, pain, inflammation and a whole host of neurologic issues.

pha

"CONDENSED" COWDEN SUPPORT PROGRAM

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Nutramedix was founded in 1993 and currently has facilities in Jupiter, Florida, USA and in Shannon, Ireland supplying highly bio-active nutritional supplements to health care professionals and consumers.

From the beginning, Nutramedix has operated with a unique business model. First, the owners and management work diligently to operate a company according to Biblical principles– with honesty, integrity, value and respect for all people. Its corporate environment is one that works to serve both its customers and its employees, producing one the best customer service teams in the industry. Second, Nutramedix was founded with the goal of using a significant amount of its proceeds to support orphans, widows, Christian pastors and missionaries in economically distressed parts of the world. So as a customer, you are not just purchasing high quality nutritional supplements, you are helping us give back to people in need all around the globe.

ABOUT THE PRODUCTS

Nutramedix has made a significant investment to develop a novel, proprietary extraction and enhancement process used to manufacture its liquid extracts. The result is a highly bio-available whole plant, broad-spectrum extract that is also very cost effective. We were the first to introduce Samento, a rare chemo-type of Cat´s Claw, which has remained one of our signature products. We have since developed a full line of liquid extracts utilizing the same proprietary extraction and enhancement process.

Nutramedix also conducts extensive research to procure the very highest quality raw materials for its powdered capsule products, many of which have been designed to enhance the effectiveness of the liquid extracts. We are committed expanding our line of natural products meeting the highest expectations of health care professionals and consumers.

ABOUT THE FOUNDATION

The owners of Nutramedix have been involved in international Christian ministry since the 1980s. Prior to starting the company in 1993, our Founder and President was a missionary pilot serving tribal groups in Peru. The Kairos Foundation was created in 1995 to fund projects that address both the physical and spiritual needs of people in some of the most disadvantaged areas of the world. The foundation provides ongoing financial support for organizations operating in Africa, Asia, Eastern Europe, North America and South America.

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