LYME DISEASE
WHY AN ANTIBIOTIC BUG BOMB IS NOT THE ANSWER!

By Dr. Jay Davidson
“Why God? Why? What is the purpose of Heather’s suffering? Why isn’t she well? Why can’t she get better?” Those were some of the thoughts I constantly struggled with as I stood by and watched my wife’s health fall apart. There were many times that I questioned what was happening. I felt powerless and afraid. I could not figure out why I could help so many clients improve their health but couldn’t help my own wife! If there is anything that can make you feel inadequate as a husband and a man, it’s not being able to help the ones you love.

My wife’s health history is complicated. She was a healthy baby and toddler but began getting sick when she was seven years old. They didn’t know what was wrong, ran countless tests, but nothing came back with conclusive results. She was given medications and suddenly ended up with encephalitis (brain swelling) and was even in a coma for six weeks. They finally discovered that she had Lyme disease and after being given antibiotics through an IV she awoke from the coma and continued her antibiotic treatments. The antibiotics were enough to keep her functioning but they could never make her well. More health problems continued to randomly appear throughout her childhood. She was on the swim team but couldn’t compete in the Junior Olympics because she developed sinus issues and couldn’t breathe. Then, the symptoms of her Lyme disease began to appear again when she was eighteen. The disease had never really left her system, it had just been dulled for a few years. This led to two heart surgeries because she suffered from SVT (Supraventricular Tachycardia), which would cause her heart to race out of control. On one occasion she fell to the floor and almost passed out. She had to be taken to the hospital by ambulance and the EMTs discovered she had a resting heart rate of 260 beats per minute (a normal range for an adult is 60-100 beats per minute). She hadn’t been running around or been active, this suddenly came upon her as she was just going about her day.
Her first heart surgery was unsuccessful and she had to go in for a second surgery. Problem after problem kept popping up and seemed to be getting worse. The emotional scars left by her traumatic health problems deeply affected her. It wasn’t until Heather gave birth to our daughter Leela that she decided she had to do something about her condition. You see, up until that point she was comfortable “just getting by.” Afraid that taking any action to improve her health would end up having the opposite effect, she accepted her weakened state as normal. The pregnancy was hard on Heather and really took its toll. It was her love for Leela and desire to live a healthy and active life with her that gave Heather the courage to take on what felt like an unbeatable giant.

A LIST OF THE SYMPTOMS AND CONDITIONS MY WIFE HAD:
• Insomnia
• Temperature Dysregulation
• Hormonal Dysfunction
• Supraventricular Tachycardia (requiring two heart surgeries)
• Vertigo and Dizziness
• Chronic Sinus Infections (requiring sinus scraping surgery)
• Reproductive Issues
• Leaky Gut
• Acid Reflux
• Constipation
• Adrenal Fatigue
• Mold Toxicity
• Multiple Chemical Sensitivities
• Brain Fog (memory and concentration problems)
• Migraine Headaches
FROM PAIN TO PURPOSE: HEATHER’S STORY

- Severe Joint Pain
- Carpal Tunnel
- Mycoplasma
- Anxiety
- Chronic Lyme Disease for twenty-five years
- Bartonella, Babesia
- Epstein Barr Virus
- Mercury and Lead Heavy Metal Toxicity
- Autoimmune Thyroid
- Asthma
- Shortness of Breath
- Chest pain
- Fibromyalgia
- Brain Encephalitis
- Severe Allergies
- Costochondritis
- Myositis Ossificans (requiring surgery)
- Liver problems causing Jaundice
- Diastasis Recti that created extreme pain in her pelvic floor and vaginal area
- Painful Gallbladder Attacks
- Whiplash from Multiple Car Accidents
- Helicobacter pylori

Think of Heather as the canary in a coal mine. If there is something wrong in the atmosphere, she’ll be the first to know. She would suffer for days after being exposed to a moldy building. Cologne or perfume would instantly give her a headache and leave her with brain fog. Needless to say, this limited the places she
could go. We could never even think about going into a store with fragrances or candles, let alone even walk by one in a mall.

She’s what I would classify as a 3S (severely sick and sensitive). I treated people in this condition before and had successfully helped them to wellness. With Heather it was different: if a treatment worked for someone else, it didn’t work for her and usually made things worse! The things that healed other people would actually hurt Heather. This made the situation even more perplexing, terrifying, and maddening. I wanted to help but didn’t know how. Heather wanted to be healthy, but was overwhelmed by everything going on inside of her.

Despite all of this, I knew, that she would get well. We never lost hope that one day we would find the solution we were looking for. We just didn’t know when, how, or even what it would be. What I learned from this process of searching for answers was that my time frame was different than God’s.

“He has made everything beautiful in its time. He has also set eternity in the human heart; yet no one can fathom what God has done from beginning to end.”

— Ecclesiastes 3:11

We went through it all as we searched for a remedy: sleepless nights, fights between us over nothing, and just overwhelming feelings of frustration and fear. Even though we are both doctors, we were puzzled and left with an endless list of
problems that appeared to have no solutions. This led to constant research and a desperate quest for anything and anyone that could possibly help us. We reached out for help - a lot of help. In fact, we spent over $110,000 on appointments and treatments from different general physicians, Cardiologists, OBGYN’s, MD’s, alternative MD’s, DC’s, Osteopaths, Naturopaths, acupuncturists, Chinese medicine doctors, massage therapists, live blood cell microscope experts, alternative health practitioners with no degrees, etc. We tried every device you can imagine that we thought might bring health and healing to my wife’s body including an infrared sauna, PEMF machine, a rife machine, hyperbaric chamber, and even a whole body vibration plate. We bought juicers, blenders, dehydrators, ozone machines, and even something called earthing (grounding) mats. We installed a whole house water filter, water ionizer, and EMF blockers! We tried hypnotizing programs, foot baths, IV injections, homeopathies, supplements, herbal formulas, liver flushes, colon flushes, enemas, fasts, raw food vegan diets, juicing cleanses, ketogenic diets, and SIBO diets. We were desperate and looking for answers anywhere we could possibly find them. Along with the money we spent on doctors and treatments, we spent well over $400,000 for schooling and extra seminars. All in all, the quest for a cure added up to over $500,000.

It’s safe to say that my wife wanted to throw in the towel many times. This was where I was able to give her the help and support I so desperately wanted to provide. I am relentless, persistent, and intense. I refused to give up and knew that the answers we were looking for had to be out there. They had to be.

No one has ever grown on top of the mountain. Don’t get me wrong, it feels great to be on top of the mountain but it is in the valleys that we grow. When it feels like your world is crashing in on you, you are suddenly willing to step outside of your comfort zone and reach beyond what you thought you could achieve. It’s in those
tender moments of need that God is best able to touch your heart. It goes without saying that this experience helped us to grow a lot.

“Each of you should use whatever gift you have received to serve others, as faithful stewards of God’s grace in its various forms.”

1 Peter 4:10

I thought I was using my gifts effectively in my chiropractic office where I consistently saw over five hundred visits a week, which placed me in the top 1-2% of my profession (the average chiropractor sees ninety visits a week). However, something didn’t feel right. I was changed by my experience with my wife and see my role in the world differently. Battles change people. I am now an elder at my church and teach other doctors in the functional medicine field. I have also been a radio talk show host in Milwaukee, Wisconsin since 2009 where I talk about health and wellness and answer questions from callers about their personal situations. It’s funny how things work out sometimes. If it wasn’t for going through all this with my wife I wouldn’t be a detox and nutrition coach helping others with unexplainable illnesses get well.

“O LORD my God, I cried out to You, and You healed me.”

Psalms 30:2 NKJV
My life is dedicated to finding those lost people and giving them direction and hope. I want to bring hope to you and to our society that so desperately needs to break free from the chains of a broken healthcare system and the toxic pool we now live in. We can regain control over our health and we can turn the tide. From pain to purpose. Heather got well and so can you! There is hope - thank you God!
**Biotoxins**

Lyme and mold are biotoxins that are more common than the CDC would like to acknowledge. It’s estimated that 20% of U.S. office workers who are exposed to biotoxins in their work environments suffer from something called Sick Building Syndrome.¹ Symptoms vary but two common symptoms actually affect our ability to think clearly. Brain fog (the inability to focus) and racing thoughts (the inability to slow down your thinking and relax) are often found in people who have been impacted by biotoxins.

24% of people have a genetic susceptibility to biotoxins like mold as proven by the HLA genotype test, and specifically HLA-DR.² My wife was born with this gene. Because of her genetic defect she is more susceptible to mold toxicity issues. The symptoms associated with mold exposure build with each exposure.

Once these genes are triggered in someone, their body’s immune system does not recognize mold and fungi as a toxin or foreign invader. Therefore, it cannot clear it from the body. The immune system basically does not make antibodies against the biotoxin or flag them for your body to get rid of them. This allows the toxins to build up in the body unchecked.

Research has shown that there are twenty-four different types of fungi found in peanuts, including aflatoxin. Corn is commonly contaminated with fumonisin and aflatoxin.³

Testing showed that my wife, Heather, has the HLA-DR gene for mold susceptibility but I do not. This explains why I don’t get symptoms from the same environment and building exposures that she does.
The Visual Contrast Sensitivity (VCS) test or what is sometimes referred to as the Functional Acuity Contrast Test (FACT) is a great tool doctors use to identify neurotoxic-mediated illness. The test measures hypo-profusion of the optic nerve, which shows the amount of oxygen that is sent to the nerve (neurotoxins decrease oxygen in the nerve and therefore decrease its functionality). While it could be done at home, I believe it is important for a health practitioner to administer this test in a controlled environment in order to ensure accuracy. However, the test is available to take online.4

Have you ever been diagnosed with:
- Autoimmune Condition
- Fibromyalgia
- Lupus
- Chronic Fatigue Syndrome
- Depression
- Rheumatoid Arthritis (RA)
- ALS
- Mental illness
- ADHD
- Multiple Sclerosis (MS)
- Hypochondria
- Migraine headaches
- Anxiety
- Insomnia
- Food Allergies
- Parkinson’s and Alzheimer’s disease
- Tourette’s Syndrome
If you have been diagnosed with any of these diseases or conditions, I suggest that you get tested for Lyme disease. The CDC conservatively estimates that 300,000 Americans contract Lyme disease each year.\(^5\) Sadly, Lyme disease is often misdiagnosed or goes undiagnosed entirely. For example, Multiple Sclerosis is not the only disease that causes demyelination! Lyme disease, mercury toxicity, and even a reverse curve in your cervical spine can cause demyelination as well.\(^6\) While Lyme disease does not usually cause demyelination in the cervical spine, mercury toxicity can cause ascending demyelination up the nerves.

**Early Symptoms of Lyme disease**
- Flu-like illness (fever, chills, sweats, muscle aches, fatigue, nausea and joint pain)
- Bell’s palsy
- Rash (only 30% of the time)
- Headache
- Stiff neck

**Advanced Symptoms of Lyme disease**
- Depression, anxiety, or mood swings
- Tingling, burning or shooting pains
- Abdominal pain, nausea, diarrhea
- Light or sound sensitivity
- Cognitive impairment
- Chest pain, palpitations
- Shortness of breath
- Sleep disturbance
- Arthritis
- Fatigue
- Costochondritis (sore sternum-to-rib junction)
Joint pain associated with Lyme disease typically affects the large joints like knees and hips. Joint pain associated with mold affects the small joints of the fingers and spine (facet joints). Likewise, when symptoms caused by mold flare up it typically happens within minutes after mold exposure, such as when you visit someone who lives in a moldy home. Lyme disease symptoms typically flare up in cycles of 9-10 days or even 28-days.
In 2002, President George W. Bush signed into law a directive for the development of better testing for Lyme (Public Law 107-116):

“The Committee recognizes that the current state of laboratory testing for Lyme disease is very poor. The situation has led many people to be misdiagnosed and delayed proper treatment. The ramifications of the deficit in terms of unnecessary pain, suffering, and cost is staggering. The Committee directs CDC to work closely with the Food and Drug Administration to develop an unequivocal test for Lyme disease.”

However, despite the CDC’s narrow definition of what Lyme disease is, it is still the most prevalent vector-borne disease in the United States.

Standard Lyme disease testing involves a 2-tier method of the ELISA test and the Western Blot test. The ELISA test has to come back positive in order for most doctors to approve a Western Blot test. I have a problem with this. This testing method was originally created as a population observation method, not a method for disease diagnosis. For some unknown reason this became the “medical standard” testing for clinical diagnosis of Lyme. Even the National Institutes of Health website, said the tests were unreliable and could generate both false-positive and false-negative results. Research shows that 50-70% of patients go undiagnosed or are misdiagnosed due to the low sensitivity of traditional antibody-based testing.

Lyme disease’s physical trademark is the bull’s-eye rash. However, that should not be used as a diagnosis marker because research shows that only 30% of individuals bitten by a Lyme-infected tick develop a bull’s-eye rash. My wife has been healed of her chronic Lyme disease but it’s important to note that she never had a bull’s-eye rash and no one ever found a tick on her throughout her 25 year ordeal.
with this disease.

There are other tests used such as the PCR, spinal tap, and even a more comprehensive Western Blot test offered by companies like Igenex®. I don’t recommend the Western Blot test offered by this company because of their controversial methods and low accuracy levels, but many alternative practitioners still use Igenex®. Don’t be afraid to ask your practitioner what laboratory runs and analyzes their tests! Arm yourself with knowledge so that you can be assured you are receiving the best care possible.

CD57 is an aggressive white blood cell that is lowered by Borrelia burgdorferi (Bb). We don’t yet understand what causes this shift to happen. Patients with low CD 57 have more co-infections, feel sicker, have more neurological symptoms, and have more immune problems. Researchers for the American Journal of Medicine recommend this as a marker for the progression of Lyme disease.¹¹

In January 2013, a fantastic test called the iSpot Lyme Test® was launched by Pharmasen Labs in Wisconsin (US). I believe this will soon become the gold standard in testing for Lyme once it becomes more known. The iSpot Lyme Test™ allows for earlier detection of Lyme and increases accuracy because it detects the bacterial infection with an accuracy rate of 84%. It also helps avoid false positives in 94% of cases. As far as lab testing and accuracy, an 84% sensitivity and a 94% specificity is incredibly high! The iSpot Lyme Test® can also detect a positive reading as quickly as 7 days after a person is infected with Lyme as opposed to the standard ELISA and Western Blot tests that can take up to 6 weeks!

Be aware that pain on the sides of your sternum is a possible indicator of Lyme
disease. If your pain is persistent, I suggest that you seek the advice of a health professional.

**Pathogens That Can Accompany Lyme Disease**

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<tr>
<th>Category</th>
<th>Pathogens</th>
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<tbody>
<tr>
<td><strong>Bacteria</strong></td>
<td>Borrelia burgdorferi (Lyme disease), Mycoplasma, Rickettsial type infections such as: Ehrlichia (Anaplasma), Coxiella (Q Fever), Rocky Mountain Spotted Fever, Typhus, Bartonella (Cat Scratch Fever), Treponema, Leptospira, Tularemia (Rabbit Fever, Deerfly Fever, and Ohara’s Fever), Brucella, Chlamydia pneumonia</td>
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<td><strong>Parasites</strong></td>
<td>Babesia, Toxoplasmosis, Helminths (parasitic worms)</td>
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<td><strong>Viruses</strong></td>
<td>Cytomegalovirus (CMV), Human Herpesvirus (HHV-6), Herpes Simplex Virus 1 and 2 (HSV-1 &amp; HSV-2), Coxsackie A virus (CAV), Human Papillomavirus (HPV), Epstein-Barr Virus (EBV), Human Herpesvirus 4 (HHV-4), West Nile Virus (WNV)</td>
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<tr>
<td><strong>Fungi</strong></td>
<td>Candida, Aspergillus, Cladosporium, Stachybotrys</td>
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A classic sign of Lyme disease is inconsistent pain that moves around your body. It can be intense one moment, moderate the next, and then gone in an instant. There are many popular protocols for treating Lyme disease such as, the Klinghardt protocol, the Cowden protocol, the Buhner protocol, the Marshall protocol, the Salt/Vitamin C protocol, the Zhang protocol, and many others. As a clinician, Lyme disease is a challenging problem because there is no set method that will cure it in all instances.

There are two different categories of Lyme disease. There is an acute form of Lyme disease that occurs when someone is bitten by a tick and they develop a bull’s eye rash and a fever. The best treatment for the acute version of Lyme disease is an immediate dose of antibiotics. Does it surprise you that I just suggested the use of an antibiotic with our overuse and abuse of them? There are only a few instances when I would recommend the use of traditional medications. Acute Lyme disease is one of them. Classically, doxycycline is the antibiotic that is prescribed to treat acute Lyme disease. I must say this is most effective when you are not chronically living on prescription medications, meaning that your body is not used to antibiotics.

The other form of Lyme disease is what is referred to as chronic Lyme disease. This typically turns into a form of chronic autoimmune Lyme disease over time, which makes it more difficult to deal with. This chronic form of Lyme disease occurs when the acute phase is not properly handled right away.

There are people (even doctors) who believe that chronic Lyme disease does not exist. Even as recently as 2006, the United States’ federal government endorsed a document stating that chronic Lyme doesn’t exist! It reminds me of when I hear of
claim that the Nazis didn’t kill any Jews in World War II. You can pretend it didn’t happen or that it’s not there, but it just makes you look like an idiot!

There are many reasons to believe that chronic Lyme disease exists. Knowing these reasons helps you to understand the best ways to treat it. One of the challenges of Lyme disease is that people often don’t experience symptoms right away. As I stated earlier, only 30% of all Lyme disease sufferers develop a bull’s-eye rash, which is the classic physical diagnostic identifier. If a person doesn’t get a rash with an accompanying fever and flu, it’s easy to think that something else is going on.12 Dr. Willy Burgdorfer, the man who discovered Lyme and spearheaded the original research into it, contracted the disease when an infected rabbit got urine in his eye. Burgdorfer did experience symptoms almost immediately and developed a bull’s-eye rash under his arm just a few days after that incident.13 While the classic bull’s-eye rash is not found in everyone, it is a telltale indicator of an infection.

An important question to ask is why don’t 100% of people get a rash? I believe this has to do with the fact that Lyme disease is pleomorphic, which means it takes on different shapes at different stages and even adjusts as a result of changes in its environment.14 This is why Lyme disease is referred to as the “New Great Imitator” or the “Great Mimicker.” There are three different forms of Lyme bacteria: spirochete (spiral) form, cell wall deficient (L form) and cyst (sphere) form. If the Lyme bacteria is not in a spirochete form during transmission, there will be no bull’s-eye rash. Think of the spirochete form as the classic form of Lyme disease that weaves through joints and tissues. The spirochete form of Lyme disease doesn’t like to just float in the blood. Lyme spirochetes have lipoproteins on its outer coating that are one of the most powerful promoting cytokine stimulators in all of nature.15
When Lyme bacteria are stressed, they form into cysts. Technically, the spirochete will open up and morph itself into a ball. When the stress is removed, the cysts convert back into spirochetes. Antibiotics are not useful for treating this form of Lyme disease because antibiotics don’t cross the blood-brain barrier very well and can actually exacerbate the situation. A better solution is to use grapefruit seed extract because it is effective against the Lyme cyst.

The cell wall deficient form of Lyme disease is the most difficult form to kill because it hides inside of the cell and pretends to be your body’s own cell. Not handling the cell wall deficient form of Lyme disease is what keeps chronic Lyme sufferers sick. Lyme bacteria slowly replicate about every 8-12 hours, while typical bacteria replicate every 20 minutes.

Another reason why Lyme disease is difficult to treat is that deer ticks (a common cause of the disease) are difficult to see. Lyme spreads the most in its nymph stage, before it reaches maturity. At the height of their transmissive strength they are about the size of a poppy seed! While a person is commonly infected with Lyme by a tick bite, it’s important to note that it’s not the only source. Lyme has also been found to be sexually transmitted and has even been shown to transfer from mom to baby through trans-placental transmission.

Technically speaking, Lyme disease is the bacteria *Borrelia burgdorferi*. There are over 100 different strains of borrelia in the United States and more than 300 worldwide. Researchers now believe that mosquitoes, deer flies, black flies, horse flies, fleas, and lice carry and transmit Borrelia. Deer, birds, mammals, and rodents can also all be carriers of Lyme. Likewise, research from the University of Wisconsin shows Lyme spirochete in the blood, synovial fluid, colostrum, and urine
of cows and horses. Experts like Dr. Ray Stricker say that migratory birds are a big contributor to the worldwide spread of Lyme disease. This explains why Lyme disease is found on every continent except Antarctica. What I find to be the most frightening fact about Lyme disease is that it can be contracted via dead fragments of the spirochete!

The pain of Lyme disease is not just in the physical symptoms infected people suffer from but also the financial cost of treating the disease. According to an unpublished school study by the CDC, the median duration of an episode of Lyme disease is 363 days at an average cost of about $100,000 per patient.
Did you know that you don’t have to live near or visit a wooded area to encounter a tick? It’s true! This is why I think everyone should know how to properly remove ticks. People commonly make a lot of mistakes when attempting to remove a tick from their skin. You shouldn’t just “tick them off!” Just pulling them with your fingers or taking a tweezers to pull it off isn’t good enough. While this is the easiest and fastest way to pull apart the tick, it doesn’t actually remove the tick entirely. People using the pulling method generally remove the body but leave the head. This means the tick’s head and mouth remain attached to your skin! That is not good! It’s important to know that ticks have serrated mouths. If you pull the tick directly away from your skin, its teeth just grab on even harder. This means that ticks technically sting rather than bite.

Instead of trying to pull the tick off their skin, many people think that topically applying an irritating liquid will kill the tick. This isn’t a good option. The use of rubbing alcohol, nail polish remover, or essential oils causes the tick to vomit into your body before it detaches. This is also not good! Holding a flame over the tick will also cause it to vomit. When the tick vomits, it is essentially spewing bacteria into your body!

To remove the tick correctly, mimic its movements. Ticks twist their mouths in either direction to detach itself, so rotate the tick in a similar way to properly detach it. This will cause its teeth to flatten out for easy removal.

I think everyone should have a Tic-Kit® as a part of their emergency first-aid kit. A Tic-Kit® comes with a tick removal device that you can use to properly remove a tick. It also comes with a transport container to put the tick into, a tick identification card, and a prepaid shipping label. Once you remove the tick, place it into the
container (dead or alive) and ship it to the lab. The lab will test the tick for Lyme (Borrelia burgdorferi) and 3 co-infections: Bartonella, Ehrlichia, and Babesia. The kit costs about $40 and includes the removal device, prepaid shipping, and lab testing! The test is a laboratory PCR (DNA) analysis of the tick which looks for the above listed pathogens. Learn more at www.tic-kit.com.

Go to www.DrJayDavidson.com/5steps for more information on this topic.

If you are bite by a tick, remove it and then apply WO China Healing oil by Systemic Formulas on the affected skin immediately. This formula will destroy the spirochete form of Lyme disease. I think of WO China Healing oil as a first aid kit in a bottle.

While antibiotics are useful for treating the acute form of Lyme disease, they are useless for the more chronic or advanced forms of the disease. For those of you who don’t want to use antibiotics at all, I have some homeopathic recommendations for an acute case of Lyme. On the day of the bite and for the 2 subsequent days I recommend you take one or two doses of just one globule of Ledum palustre C30. Ledum can be obtained in the first-aid section of any good homeopathic pharmacy. I also suggest you take one globule of the Aurum arsenicosum C200 on the sixth and twelfth day after the bite.

American laboratory researchers have established that it takes 48 hours at the earliest for the borrelia bacteria to transfer from the tick to the host organism. Medical Doctors, such as Dr. Suniya Schweig of California, have reported cases of when the tick was only attached for a maximum of 8 hours and patients developed
bull’s-eye rashes. The reason research says it can take up to 48 hours for an infection to take hold is that the research comes from animals with long hair! This creates a longer distance for the tick to travel in order to get to the skin and puncture it! When skin is exposed, the tick is able to sting and therefore infect more quickly.
Leading Lyme author, Bryan Rosner, has found that salt enhances the activity of elastase, an enzyme that contributes to white blood cell function and immunity. During acute inflammatory responses, elastase is released by white blood cells called neutrophils. This substance generates fibers in surrounding tissues that may facilitate phagocytosis (the break down and destruction of pathogens) by trapping bacteria and focusing enzyme activity on their elimination. Combined with large doses of Vitamin C, the indirect killing ability of elastase is dramatically increased. Second, increasing sodium concentration surrounding microorganisms like Borrelia burgdorferi leads to bacterial death as sodium ions enter the spirochete form of the bacterium. To be precise, “an increased intracellular sodium concentration, combined with a decreased potassium concentration, leads to spirochete death.” The death is caused by the activity of an antimicrobial peptide in neutrophils known as LL-37.  

**Colloidal silver**, which is typically considered a natural antibiotic, also destroys viruses and fungi. It does kill good and bad bacteria, but is primarily absorbed in the small intestine. This means that it doesn’t affect the good flora in the large intestine. Also, research has shown **3-6 beta-glucan** increases NK cells (natural killer cells) and boosts the immune system. Garlic also supports the NK cells of the body and contains germanium. Germanium is a powerful sulfur-containing antioxidant that boosts oxygenation.

There are also many great herbal energetic Lyme formulas like **GOLD, VIVI, #3 Bactrex** by Systemic Formulas. **Olive leaf** and **Cat’s Claw** are great. However, be careful about specifically choosing to use TOA free Cat’s Claw (also known as Samento) rather than Cat’s Claw itself. There is no evidence to back the claim that the whole plant of Cat’s Claw inactivates anything.  

The research that states
TOA-free formulas are better than formulas with TOA was done by the people who hold the patent on the process to make TOA-free Cat’s Claw. That’s obviously a big conflict of interests! Other great herbs for fighting Lyme include andrographis, red root, stephania, smilax, and Japanese knotweed, which were made popular by Stephen Buhner.
You can’t just kill Lyme and expect someone suffering from chronic Lyme disease to automatically be well. There are always co-infections and other organ dysfunction issues that have to be addressed. Lyme is a just a piece of the puzzle! My wife tried to improve her health by focusing on killing the Lyme for years. She never addressed healing her digestive system, healing her autoimmune conditions, pulling the heavy metals out of her body, and rebuilding the adrenals. She was finally able to experience relief after she dealt with these issues along with the chronic Lyme itself.
The sickest people almost always have co-infections. The four most common co-infections are babesia, bartonella, ehrlichia and mycoplasma.

- **Babesia** is a malaria-like blood parasite that can change its outer surface proteins and evade the immune system. Babesia classically causes night sweats, headaches, shortness of breath, chills, fever, fatigue, the inability to maintain your weight, and muscle and joint pain.\(^\text{30}\) It is usually contracted during blood transfusions and mothers can pass it on to their babies during pregnancy.\(^\text{31}\) The typical antibiotics used for treating Lyme disease do not usually work with babesia. However, cucurmin is a powerful anti-inflammatory herb that has antimalarial compounds which have been demonstrated to be effective against babesia.\(^\text{32}\)

- **Bartonella** is a bacterial infection that targets the central nervous system and brain. It usually presents itself with a rash or papule (a small, red, raised bump on the skin) that progresses until it becomes blistery or crusty. Bartonella also causes lymph nodes to swell in 1 to 2 weeks after infection. Symptoms include seizures, ophthalmological problems, sarcoidosis (inflammation of lymph nodes), brain encephalitis and even stretch marks.\(^\text{33}\) Bartonella is the primary cause of “cat scratch disease” and is easily transmitted by fleas, sandflies, lice, ticks, mosquitos, midges, chiggers, biting flies, scabies, and mites. This bacteria is slow growing and takes about 24 hours to double in number. The bacteria accumulate in red blood cells, the spleen, the liver, and in bone marrow. The erythrocyte sedimentation rate is also often elevated.\(^\text{34}\) While Lyme disease by itself alters mood and can cause depression, most psychiatric symptoms infected people suffer from are related to Bartonella.\(^\text{35}\)

- **Ehrlichia** is a bacterial infection that typically causes a high fever, severe headaches, flulike symptoms, muscle pains, abdominal pain, jaundice, and fatigue. Blood shown to contain Ehrlichia can have a low white blood cell count
(thrombocytopenia), and elevated liver function (AST, ALT).\textsuperscript{36}

- Mycoplasma is larger than a virus, but smaller than typical bacteria. In fact, they are the smallest self-replicating life form known to man.\textsuperscript{37} They are so small that 4,000 mycoplasma bacteria can fit inside one red blood cell! Mycoplasma is one of the main causes of rheumatoid arthritis and can be transmitted through insect bites, small open wounds, inhalation, ingestion, and sex. It also causes pneumonia and has even been linked to Tourette’s syndrome. Research shows that a mycoplasma infection is very common in ALS patients (amyotrophic lateral sclerosis).\textsuperscript{38}

The morphology (appearance) of mycoplasma organisms cannot be distinguished from the cell wall deficient form of Lyme. There is only one primary difference between the two: by definition, mycoplasma cannot generate a cell wall.\textsuperscript{39} Walking pneumonia or Gulf War syndrome is actually a mycoplasma infection. People who are infected with mycoplasma often experience an increase of their symptoms when the atmospheric pressure changes. Mycoplasma provokes autoimmune issues too. Magnesium deficiency is always an issue for people suffering from a mycoplasma infection. I recommend that clients with these issues take a magnesium supplement and avoid arginine. \textit{Byron White Formulas} are fantastic for destroying coinfections of Lyme disease.
Biofilms are basically interconnected groups of microbes that gather together and attach to a surface. They much prefer to be anchored to a surface than to freely float around in the body. Think of a biofilm as a blanket that is spread out on top of a bunch of microbes. This biofilm is typically composed of calcium, magnesium, iron, mercury, lead, copper, and other trace metals. To get rid of the microbes, you have to take off the blanket holding them together (remove the biofilm). Chelating agents degrade biofilm by binding the metals that are required for pathogen aggregation and exopolymer cross-linkage. Enzymes may be combined with chelating agents for a synergistic anti-biofilm effect. Biofilm matrix of gram-negative bacteria are typically anionic and bind cations such as calcium and magnesium. This leads to polymer cross-linking and increased strength.

In order to successfully eliminate the pathogenic microbes, you must also eliminate their protective shield (the biofilm). There are 5 methods to inhibit biofilms: (1) blocking quorum sensing, (2) obstructing the initial attachment phase of biofilm colonies, (3) restricting the swarming motility of pathogenic organisms, (4) employing efflux pump/multi-drug resistance pump inhibitors, and (5) using bacteriostatics or bactericidals.

Quorum sensing is a method of communication between bacteria. One species of bacteria takes on the role of “main bacteria” and the other species of bacteria follow along. When that species is killed, the bacteria choose a new species to be the main bacteria.

A combination of enzymes, chelating agents, antimicrobials, prebiotics, and probiotics can be used to disrupt pathogenic biofilm and support normal gastrointestinal microbiota. Systemic enzymes such as nattokinase and
serrapeptase all decrease the formation of Lyme biofilms. Serrapeptase is an enzyme produced in the intestines of silk worms which is used to break down the walls of a cocoon. These enzymes also break down and eliminate circulating immune complexes (CICs). Systemic enzymes are different than digestive enzymes. The three types of digestive enzymes are proteolytic enzymes (protein), lipases (fat), and amylases (carbohydrates).

Identify injured areas, especially if you suffer from Lyme disease. Systemic enzymes not only help with biofilms, but also are used to repair tissues from damaged areas. Systemic enzymes clean out the debris in the blood and stimulate the immune system.

There are supplemental products that work against gram positive and gram negative bacteria, yeast, fungus, parasites, and viruses. There are even some that inhibit the formation of biofilms. In 2013, research with the supplement Biocidin by Bio-Botanical Research at the University of Binghamton showed that biofilm communities were eradicated within 24 hours of use. Apple cider vinegar can also be a useful therapeutic option for biofilms.
When the human brain becomes inflamed, cells called macrophages respond by releasing quinolinic acid, a neurotoxin. This toxin is also elevated in people suffering from Parkinson’s Disease, MS, ALS, and is responsible for the dementia that can occur in AIDS patients. Quinolinic acid encourages neurons to repeatedly depolarize, which causes the neurons to demyelinate and die. Lyme disease sufferers have also been shown to have increased levels of quinolinic acid. It’s important to note that when quinolinic acid increases, serotonin decreases (the happy hormone).

Likewise, Lyme produces ammonia, an alkaline toxin. This is why it only makes matters worse for Lyme suffers when their doctors try to force their bodies into an alkaline state. While the root of the problems are acidic, the key is to drain the body in these alkaline-ammonia areas first. This removes the buildup of the toxin and allows the body to heal.

For more information go to www.DrJayDavidson.com

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5 Steps to Restoring Health Protocol!


4) Online VCS Screening Test. Available from: http://www.survivingmold.com/store1/online-screening-test


SOURCES


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