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WHEN TICK-BORNE ILLNESS

BECOMES CHRONIC

WHAT YOUR DOCTOR MIGHT BE MISSING

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DR. NAFYSA PARPIA

Dr. Nafysa Parpia is a board-certified naturopathic doctor and the Director of Naturopathic Medicine at Gordon Medical.

Throughout her career in holistic medicine, she has focused on treating patients with complex chronic illnesses. She specializes in tick-borne illness/Lyme disease, environmentally acquired illness, mold/mycotoxin illness, autoimmunity, fibromyalgia, long haul COVID, ME/CFS (chronic fatigue syndrome) and MCAS (mast cell activation syndrome).

Dr. Parpia's extensive knowledge has helped people worldwide overcome difficult-to-treat medical conditions. She uses cutting-edge laboratory tests and deep intuition applied to the full range of scientific data to create comprehensive treatment plans that are highly personalized.

Her targeted system of care includes a synergistic blend of allopathic and functional medicine diagnoses paired with treatment that includes regenerative medicine, micronutrient therapies, peptide therapies, bioidentical hormone therapy, botanical medicine, pharmaceuticals and psychoemotional support.

Dr. Parpia is on the ISEAI Board of Directors (International Society for Environmentally Acquired Illness).

DR. ERIC GORDON

Eric Gordon, MD, is the Clinical Director of Gordon Medical Associates, specializing in complex chronic illness. In addition to clinical practice (40+ years), Dr. Gordon is engaged in clinical research and is the President of Gordon Medical Research Center.

Dr. Gordon has focused on bringing together leading international medical researchers and cutting-edge clinicians focusing on ME/CFS, Lyme disease, and autoimmune diseases. In addition, he combined forces with Dr. Robert Naviaux and his research into metabolomics, mitochondrial function, and chronic inflammatory disease.

Gordon Medical Associates is also a collection site for the Lyme Disease Biobank, providing patient samples to researchers worldwide.

INTRODUCTION

Sarah was bit by two ticks in 2012.

While she'd had other tick bites growing up, these are the two she'll never forget. It wasn't long after these particular bites that Sarah got her first bout of dizziness.

A mother and small business owner, Sarah was working one day when everything suddenly started spinning. Her motor skills temporarily slowed, and her speech slurred. This first episode lasted four hours, and while she came in and out of it at first, her doctors immediately diagnosed her with chronic vertigo.

Physicians recommended that Sarah quit driving, and they put her on a myriad of pharmaceuticals. She lost 15 pounds in the first 30 days because of nausea and couldn't work for another three months. Still, the root cause of her vertigo remained elusive. She had four false diagnoses, was placed on a host of medications, and was put through rigorous and expensive medical testing before she found a doctor that finally put the pieces together: **Sarah had Lyme disease**.

Unfortunately, Sarah's story isn't unique.

By the time many of our patients step through the doors of our clinic, they've tried everything. They're in pain and discomfort. From sleeplessness to shooting pain through their limbs to severe brain fog — symptoms like these aren't just uncomfortable; they're life-altering.

Luckily, there's a new way of looking at chronic tick-borne illnesses that's shedding light on treatment options for even those with advanced diseases. In this guide, we'll talk about tick-borne illnesses, the challenges with traditional treatment options, and how patients can begin healing.

What is Tick-Borne Illness?

Tick-borne illness is a bacterial infection transmitted to humans via an infected tick. Lyme is the most common tick-borne illness in the U.S., and while it was once considered rare, the incidence of Lyme has skyrocketed by 320% since the 1990s. We want to emphasize that these are just the reported cases. The CDC suggests that Lyme cases could be **10 times higher** than the official number, with an estimated 300,000 cases each year in the United States alone.

SYMPTOMS CAN INCLUDE:

- **Pain:** nerve, joint, or muscle that can move to different places throughout the body
- **Neuropathy:** numbness, tingling, or burning sensations
- **Dysautonomia:** rapid heart rate, POTS, sweating or lack of sweating, dizziness, and vertigo are some examples
- **Gastrointestinal issues**
- **Headaches**
- **Brain fog** and other **cognitive difficulties**
- **Fatigue**
- **Dermatological issues:** rashes, redness, itchiness, eczema, and psoriasis
- **Body inflammation** and **changes in weight**

Lyme disease is the most well-known tick-borne illness, but there are others that have similar symptoms. These conditions also originate via pathogens passed on by the bite of infected ticks.

THESE CONDITIONS INCLUDE:

- Babesiosis
- Bartonellosis
- Ehrlichiosis
- Anaplasmosis
- Rocky Mountain Spotted Fever
- Southern Tick-Associated Rash Illness
- Tick-Borne Relapsing Fever
- Tularemia
- Powassan disease

Obviously, symptoms of tick-borne disease could be the result of many other conditions, making them difficult to diagnose. Lyme disease is often called “the great imitator” because symptoms can mimic so many other diseases, from chronic fatigue syndrome (ME/CFS) and fibromyalgia to multiple sclerosis.

And while some patients are even told that symptoms are “all in their head” or that they’re “just depressed,” more doctors are beginning to recognize the signs and symptoms and treating them accordingly.

What happens when you finally find the root of your illness, and treatments only make you feel worse?

When Treatment Isn't Tolerated

For many people, a diagnosis and working with a Lyme-literate doctor means you're closer to answers and a targeted treatment plan rather than only symptom management.

However, a diagnosis is just the beginning. When it comes to tick-borne illnesses, some patients simply can't tolerate treatment. In fact, many of the most popular treatments – including oral and intravenous antibiotics, oxidative intravenous therapies, hyperbaric oxygen therapy, or various herbal treatments – may worsen symptoms in some patients. In some cases, there can be a short period of improvement, and then symptoms return.

Typically, when simple antibiotic therapy fails, it means you're likely dealing with a combination of issues that include:

- Multiple chronic infections
- A high environmental toxin load
- Imbalances of structural integrity
- Stress (emotional or physical)

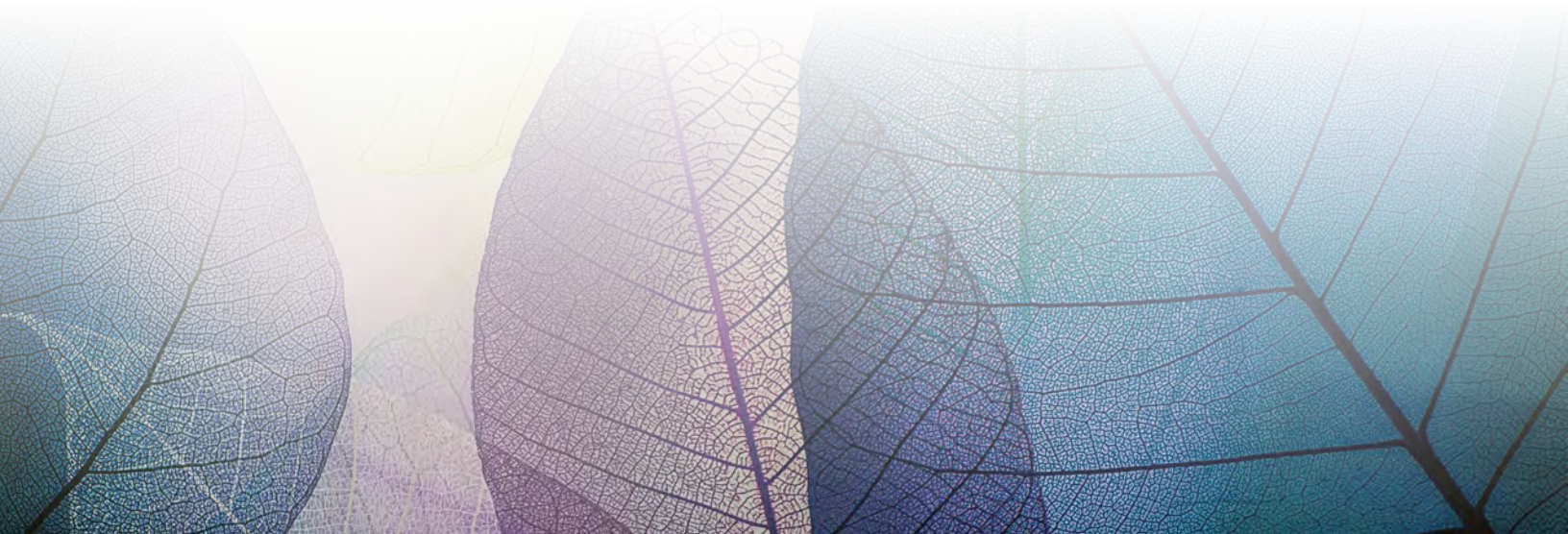
These problems, combined with tick-borne illness, create chronic, systemic, and localized inflammation, which leads to immune dysregulation.

When systemic inflammation is triggered, specific genes turn on and off – a phenomenon called epigenetics – which can further affect immunity. In most cases, secondary illnesses of immune dysregulation and inflammation are developed. These include Mast Cell Activation Syndrome (MCAS), autoimmune diseases, and more.

In other words, it's rare that you're just dealing with Lyme disease!

For these patients, it's crucial to take a different approach. All primary issues need to be addressed, treatments need to be layered in, and the order of treatment is crucial. The order of treatment is determined by laboratory testing, patient presentation, and patient sensitivity.

In other words, every treatment plan must be tailored to the individual!



What is Mast Cell Activation Syndrome?

Mast cells are a type of white blood cell found in connective tissues throughout the body, especially under the skin, near blood and lymph vessels, the lungs, the intestines, and surrounding nerves.

Mast cells release various inflammatory mediators when activated, making them key players in the inflammatory response. Most commonly, doctors associate mast cells with only allergic symptoms; however, mast cell activation can cause numerous other symptoms beyond itching, swelling, and mucus production. These can include migraines, gastrointestinal issues, bladder symptoms, hormone dysregulation, and even bone pain.

Many patients with tick-borne illness are dealing with mast cell activation syndrome (MCAS), so treating that in conjunction with supporting detox pathways and gut health can help to normalize the immune response and improve treatment outcomes.

Mast cells can be activated by multiple triggers, including:

- Hot, cold, or sudden temperature changes
- Stress
- Exercise
- Food sensitivities
- Alcohol
- Perfumes and other odors
- Reactions to medications, supplements, and herbs (even ones you've tolerated before)
- Bug bites
- Infections
- Sunlight
- And more

Patients with MCAS can even be sensitive to detox therapies.

Treatment Considerations

Immune Modulation

Hyperactive and Underactive Immunity

Many patients are already suffering from chronic Lyme, co-infections, exposure to environmental toxins, stress, and structural integrity issues. This leads to an immune system that is simultaneously hyperactive and inefficient.

A HYPERACTIVE IMMUNE RESPONSE CAN OFTEN INCLUDE:

- Hypersensitivity (reactivity) to certain foods, scents, light, sound, heat, and touch
- Autoimmunity
- Allergies
- MCAS (mast cell activation syndrome)
- Dysautonomia
- Inflammation

WHILE IMMUNE INEFFICIENCY CAN PRESENT AS:

- The inability to mount appropriate responses to infections
  - Recurrent viral symptoms (with or without new exposures)
  - Recurrent tonsillitis, sinusitis, bronchitis, and gastrointestinal infections
  - Recurrent fungal infections

When it comes to chronic illnesses, removing triggers is important but not sufficient.

For example, using antimicrobial treatments to remove a trigger can actually further inflammation. To address this, we use immune regulatory protocols before the treatment of chronic infections to prevent the flare that is often the result of antimicrobial therapies.

Chronic inflammation affects multiple systems causing multi-factorial symptoms. It's up to a qualified doctor to be able to assess and treat what is necessary for each individual patient.

For example, it's common for chronic inflammation to affect the endocrine system.

In that case, hormones must be monitored and balanced before the infections are addressed.

Detoxification Support Before and During Treatment:

Symptoms from chronic Lyme and co-infections start from an infection via a spirochete or bacteria, but these illnesses are more than just the pathogen.

There are several reasons why some people respond to treatment, and others don't.

One critical (and often overlooked) factor includes the interplay of environmental toxicant load and genes of detoxification — both must be tested for and addressed.

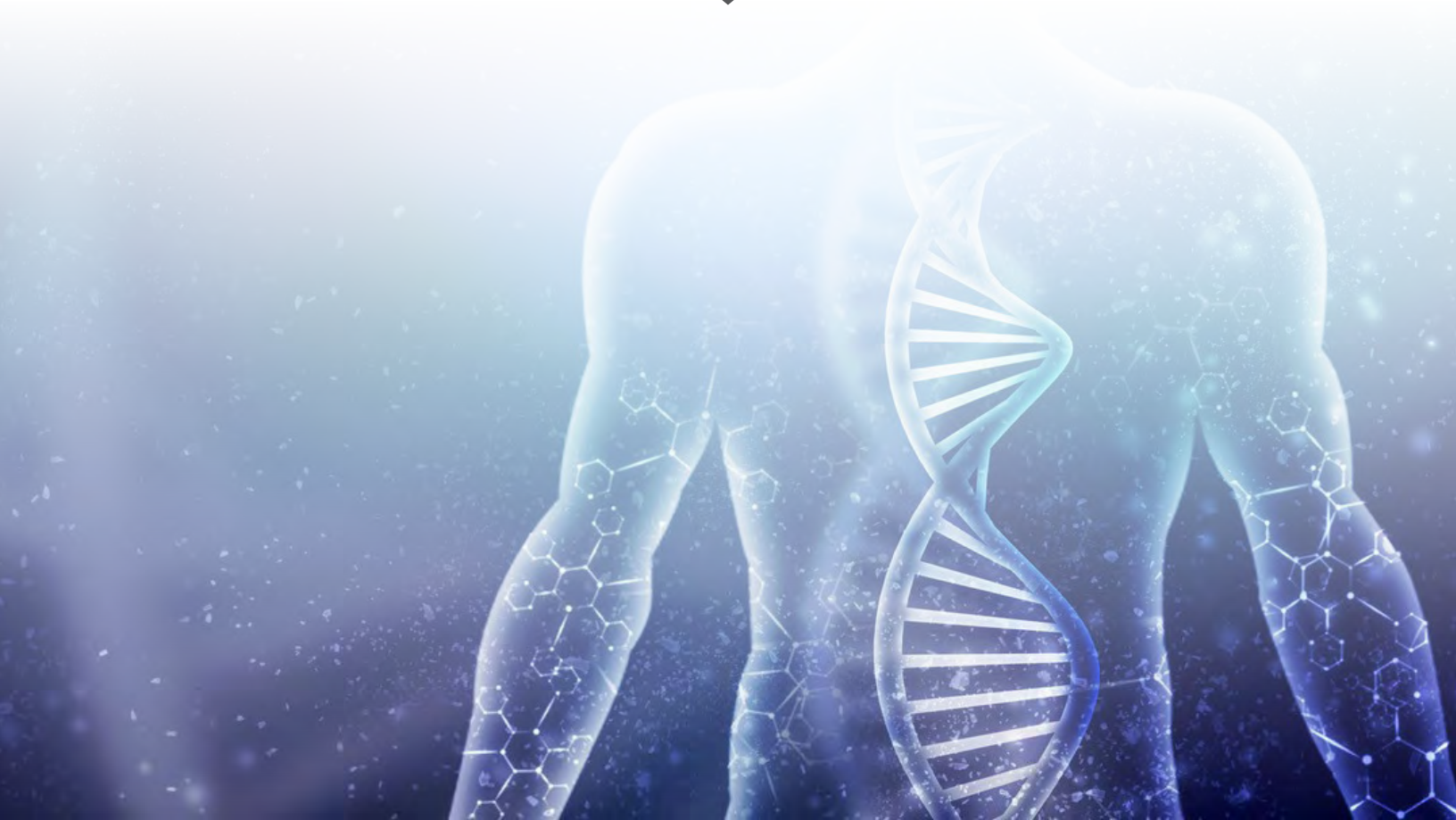
There is also the issue of endogenous toxins. Typically when you're killing off an infection, the process can release toxins into the body.

THESE INCLUDE:

- Inflammatory cytokines
- Biotoxins
- Neurotoxins

This process can overwhelm the system and make you sicker than when you started treatment. That's why, in many cases, we address immune modulation directly, then provide ample detoxification support.

Bringing down the toxin load before treating chronic infections allows for improved immune modulation. Many people, due to diet, lifestyle, exposures, and genetic predisposition, have a high toxic load that can exacerbate the symptoms of chronic tick-borne illness.



What is Toxic Load?

Your toxic load is the total amount of toxic stressors in your body at one time. Imagine your body as a container of water. Add just one drop of a toxic substance, and it disperses throughout the entire container, not causing much of an issue.

But over time, those drops add up, contaminating the whole vessel. And when your body can't release toxins via healthy detoxification pathways, your toxic load grows.

The more toxins you're exposed to, the higher your toxic load. And the more toxins your body has to contend with, the harder it is to heal from chronic conditions.

Most patients who present with long-standing Lyme disease have a high environmental toxic load and a decreased ability to excrete toxins. The inability to excrete toxins efficiently is due to a combination of inflammation and the inefficiencies in their genes of detoxification. In order for patients to respond well to treatment, we must support their genes and organs of detoxification (lymph, liver, kidneys, lungs, and skin).

How Do We Determine Toxic Load?

We can learn a lot about a patient's toxic exposures when taking their history. Often people don't think about their daily exposures.

THOSE EXPOSURES ARE:

- Living in a home with mold or water damage
- Living in a home when it's being renovated or painted
- Being in close proximity to chemicals, such as working in a dark room, industrial work, or as a an artist
- Living near or on a farm, vineyard, golf course, or anywhere near heavy herbicide or pesticide use
- Living near a freeway
- Living near an industrial location
- Using pesticides, herbicides, or insecticides
- Dental amalgams

The best available means to evaluate your toxic load is through a series of laboratory tests to determine which toxins may be affecting you and to access your genes of detoxification.

TESTING FOR TOXINS

Chemicals:
glyphosate
industrial solvents
pesticides
herbicides
exhaust fumes

Mycotoxins

Heavy metals

Toxic Load and Your Immune System

Your immune system is an infinitely complex network of cells and chemical messengers that communicate throughout the body. Many factors contribute to a dysregulated immune system, from too many processed foods to poor sleep and stress. But one of the most significant detriments to the immune system is a high toxic load.

A chronic toxic load often goes undetected, creating low-grade inflammation and confusion among immune signaling cells. Toxins can diminish the production of T-regulatory cells, which play an essential role in regulating the immune system, creating a potential for immune dysfunction.

In addition to a toxic load, many patients with tick-borne illness experience multiple additional imbalances, reducing the likelihood that basic traditional treatment will be effective.

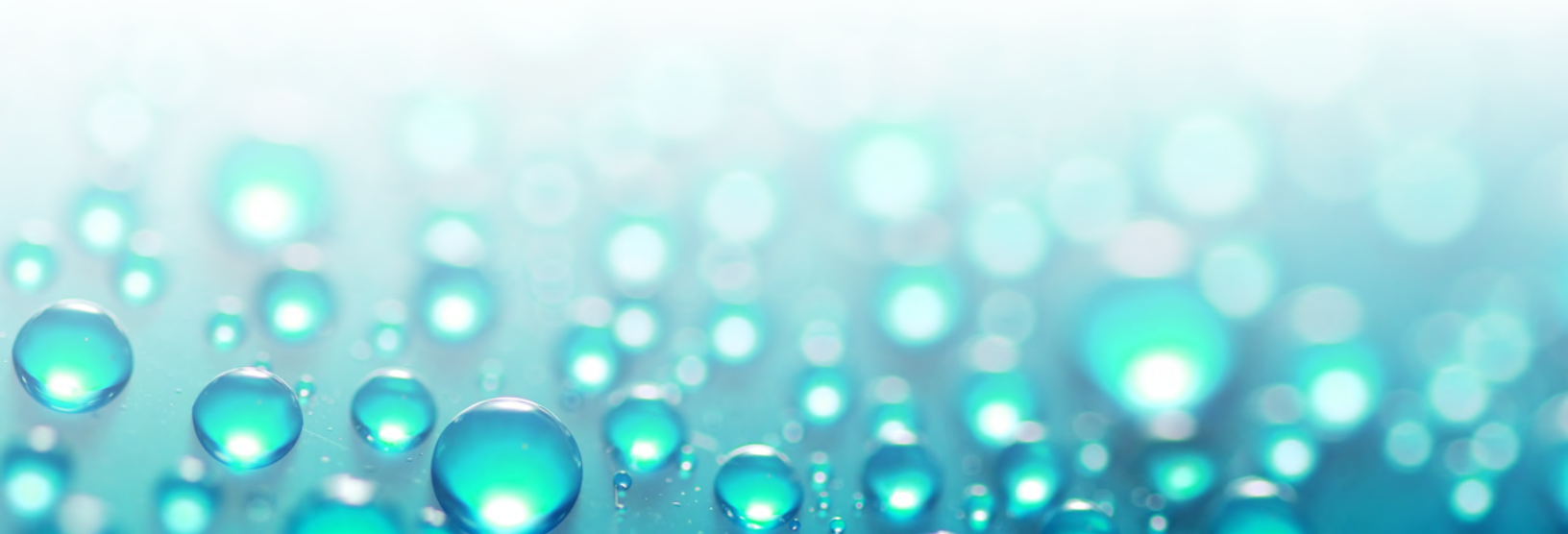
THESE OFTEN INCLUDE:

- Concurrent infections in addition to Lyme and co-infections: molds and fungi, parasites, dysbiosis, viruses, occult dental infections, and sinus colonizations
- Increased intestinal permeability (leaky gut), which leads to food allergies, as well as increased toxin load translocation along the vagus nerve from the gut to the brain, and decreased nutrient absorption
- Leaky blood brain barrier
- Mast cell activation syndrome
- Hypercoagulability
- History of head trauma
- Structural integrity issues (hyperflexibility, lax ligaments, fascia or muscle tightness, or old injury sites that did not heal completely)
- A high emotional burden, including PTSD, psychological defense strategies, or early childhood adverse events (physical or psychological)

Tick-borne disease and environmental toxins can alter immune cell communication, so the immune system mistakenly attacks healthy cells, as opposed to signaling an immune response against the foreign bacteria (aka, autoimmunity).

So, while everyone can benefit from a detox protocol, it's necessary for patients with tick-borne illnesses to clear toxins in order for them to normalize their immune response before beginning treatment.

After the toxicants are cleared, the body is more likely to handle traditional treatments in a way that wasn't possible before, whether it's with antibiotics or herbal protocols.



A Functional Approach to Detoxing Before and During Lyme Treatment

Safely excreting environmental toxicants is a critical missing piece to treating chronic Lyme and other tick-borne illnesses. However, it's still not the whole picture. That's because the detoxification process demands a comprehensive, functional approach in order to remove toxins without reabsorbing them and making you even sicker.

A naturopathic or functional medicine doctor trained in the methodology of personalized detoxification strategies is key to helping you in this area. We do not recommend casual and non-medical detox protocols as they can further stress the immune system.

Support Your Detox Organs

Once you've had a full lab work-up and begun immune modulation, you can likely begin to support your detox organs (the liver, kidneys, skin, lungs, and lymph) with herbs. Without detox support during infection treatment, your organs of detoxification can become overwhelmed, making you even sicker than when you started.

FIRST, YOU'LL START WITH THE BASICS TO PROVIDE A SOLID FOUNDATION FOR HEALING:

- Decrease home toxin exposure
- Adopt an organic diet
- Switch to green cleaning products
- Switch to zero VOC/green paints
- Keep humidity in the house below 50%
- Don't cook in Teflon or store food in plastic containers
- Switch to fragrance-free and green personal products
- Vacuum carpets daily with a HEPA vacuum cleaner or remove carpets
- Get a high-quality air purifier

After covering these basics, an experienced doctor can lead you through a highly personalized detoxification program.

Address Concurrent Infections

Concurrent infections occur when your body is fighting multiple pathogens at once, putting even more stress on the immune system. This, of course, affects your doctor's approach to treatment, and typically, most patients presenting with tick-borne illness have several chronic infections at once.

IN OUR CLINIC, WE TEST PATIENTS FOR CO-INFECTIONS LIKE:

- EBV (Epstein-Barr virus)
- HSV 1&2 (herpes simplex viruses)
- HHV-6
- HHV-7
- CMV (Cytomegalovirus)
- Mycoplasma Pneumoniae
- Chlamydia Pneumoniae
- GI infections (SIBO, parasites, molds/funguses, dysbiosis) and beneficial bacteria status
- Sinus colonizations (bacteria, molds/funguses, and biofilm)
- Occult dental infections (detected via a cone beam dental scan)

The Cross-Talk Between The Brain and Immune System

The combination of several chronic infections including Lyme, co-infections, other concurrent infections as well as environmental toxic body burden cause an immune system response that can evoke in the hypothalamic-pituitary-adrenal (HPA axis). This is one of the feedback loops between the brain and the endocrine (hormonal) system.

Pathogen-associated molecular patterns (PAMPS) have the ability to stimulate the innate immune system, causing pro-inflammatory cytokines that activate the HPA system and alter brain function and behavior. The hypothalamus is the final anatomical step of the limbic system, the primitive part of the brain that responds to the external environment. It is where the brain decides whether a stimulus is safe or dangerous and then translates to mood and behavior.

Inflammation in multiple parts of the brain amplifies danger signals. These signals increase the likelihood that your perception of the outside world (as well as your internal sensations) will be perceived as a threat. When the brain perceives the world through the lens of increased danger, it reacts to otherwise benign stimuli. The most common example of this is mast cell activation syndrome. Your brain's emotional response centers (the limbic system) are, in turn, triggered by MCAS.

In other words, neuroinflammation of the brain by inflammatory cytokines stimulated by chronic infections can be a common reason for the mood and behavior issues that we see in many of our patients with complex chronic illnesses.

HOW DO WE ADDRESS THIS?

- Removing the triggers is always step one. But in chronic illness, trigger removal is typically not sufficient as the inflammation has already set the neurological and immunological patterns in motion. Re-training of these is therefore necessary.
- The more sensitive the patient, the gentler the intervention. When inflamed, sensitive nervous systems overreact to new or unusual stimuli as "danger" even when they pose no real threat. Imagine a rested, fed, warm, happy baby and compare their response to a smiling stranger to that of a hungry, tired, and cold baby.

Ways to retrain the nervous system:

- Peptide therapies
- Neurological and Vagal Nerve exercises and programs
- Breathwork
- Somatic bodywork
- QEEG targeted bioneurofeedback
- Meditation, Tai Chi, Qi Gong, Yin Yoga, meditative walking
- Cryotherapy, cold plunge, and sauna
- Frequency Specific Microcurrent, PEMF, and acupuncture
- Indigenous healing work

The Root-Cause Approach to Tick-Borne Diseases

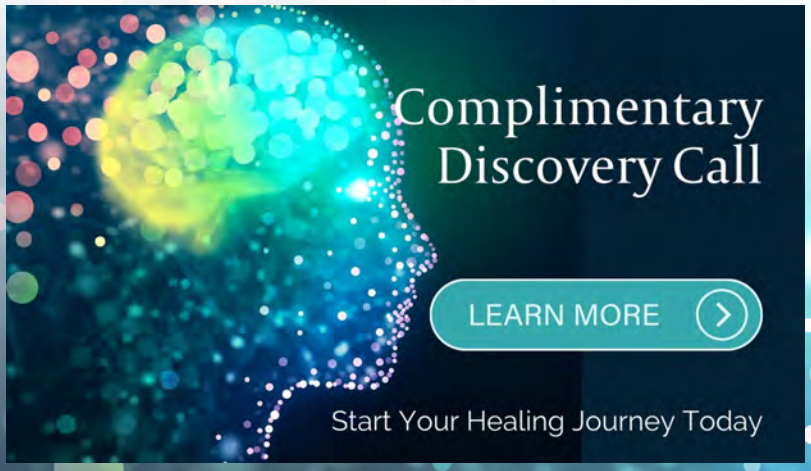
When treating tick-borne illness, it's critical to look at the entire patient, including their state of inflammation and immune dysregulation, toxic load, detox pathways, gut health, structural integrity, emotional state, and concurrent infection load. Failing to address each of these in a personalized manner can result in years on a treatment rollercoaster and feeling much worse before feeling better.

At Gordon Medical, it's been our life's work to find holistic solutions to complex chronic diseases like Lyme disease and other tick-borne illnesses. In fact, we've been practicing root cause and terrain-centered medicine along with symptom management for the last 30 years – specializing in illnesses that have been poorly understood and poorly treated for decades.

Unfortunately, it's all too common to see patients misdiagnosed or begin basic traditional treatment for chronic tick-borne disease only to have that treatment backfire. Approaching tick-borne illness holistically can completely change your healing journey from this disease.

This guide provides a blueprint, but every single patient is different, requiring different testing, protocols, and treatment.

If our approach to healing resonates with you, schedule your Complimentary Discovery Call with our New Patient Coordinator today!



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At Gordon Medical Associates, we serve patients from the greater San Francisco Bay area, the entire country, and around the globe. We specialize in individualized care for a wide range of complex chronic illnesses, including Chronic Tick Borne Illnesses, ME/CFS, Fibromyalgia, Mold illness, Long-Haul, and Autoimmune conditions.

Learn more at: www.GordonMedical.com

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NOTE RESOURCES:

https://wwwnc.cdc.gov/eid/article/21/8/14-1878_article

https://www.cdc.gov/media/releases/2013/p0819-lyme-disease.html

https://pubmed.ncbi.nlm.nih.gov/2682960/

https://www.frontiersin.org/articles/10.3389/fmed.2020.00568/full