



Does Lyme Impair Memory? 6 Restorative Solutions to Help Get Your Brain Back on Track

by Jenny Menzel
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Have you ever walked into a room and forgotten the very reason you went there in the first place? Or, how about searching high and low for your missing glasses, only to discover they've been on top of your head the whole time? We've all experienced brief moments of forgetfulness once in a while, and mostly, they can be humorous. But if you're struggling with neurological

ABOUT THE AUTHOR



After graduating from medical school, Dr. Bill Rawls practiced conventional medicine for 15 years. However, when Lyme disease and fibromyalgia disrupted his career at age 45, he was forced into the world of herbal and alternative medicine. He has since restored his health—and has a passion to help others do the same. [Read his story »](#)



a daily, discouraging occurrence — and that's no laughing matter.

So why do memory issues and [chronic Lyme disease](#) go hand in hand? And more importantly, what does this mean for the health of your brain and its capacity to store and recall information over time? Let's take a closer look at the reasons why your memory may not be operating optimally, plus natural solutions to restore its function.

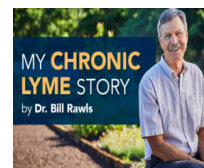
Neurological Lyme: A Recap

[Neurological Lyme](#) is a different flavor of Lyme disease that occurs when infection with the bacteria [Borrelia burgdorferi](#) affects the cranial or peripheral nerves or the central nervous system (CNS), reports the [Centers for Disease Control and Prevention](#) (CDC).

In other words, when a Lyme infection triggers an immune response, **the immune system rallies white blood cells (WBCs) to act in defense, and inflammatory cytokine activity increases in the brain and spinal cord.** When these immune cells infiltrate the CNS in response to a chronic infection, a range of noticeable neurological symptoms may result, such as:

- Memory loss
- Cognitive issues
- Learning disabilities
- Headaches
- Bell's palsy (facial paralysis)
- Meningitis
- [Numbness and tingling](#) in the extremities
- Visual impairment
- [Brain fog](#)

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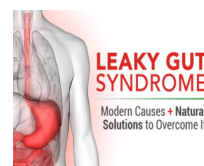


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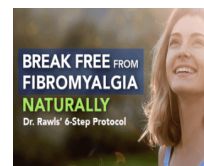
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Not everyone with Lyme disease will experience neurological symptoms, though. When it comes to newly-diagnosed, acute infections, **approximately 15% of patients reportedly experience one or more neurological effects** like Bell's palsy, meningitis, or numbness and tingling in the arms or legs, according to [research](#) published by *Frontiers in Neurology*. But this figure may be just the tip of the iceberg.

For a host of reasons, **getting an accurate diagnosis and obtaining treatment for Lyme is often delayed** (sometimes for months to years) due to a lack of [physician understanding](#) and public awareness, an unseen tick bite, the absence of the hallmark erythema migrans (bull's-eye rash), and insensitive [testing methods](#) that produce false negatives.

This delay in diagnosis and adequate treatment allows the bacteria to flourish unchecked, embedding itself deeper into hard-to-reach areas of the body, like the brain — increasing the likelihood of developing difficult-to-eradicate chronic neurological symptoms.

Much Like Our Brains, Neurological Lyme is Complicated

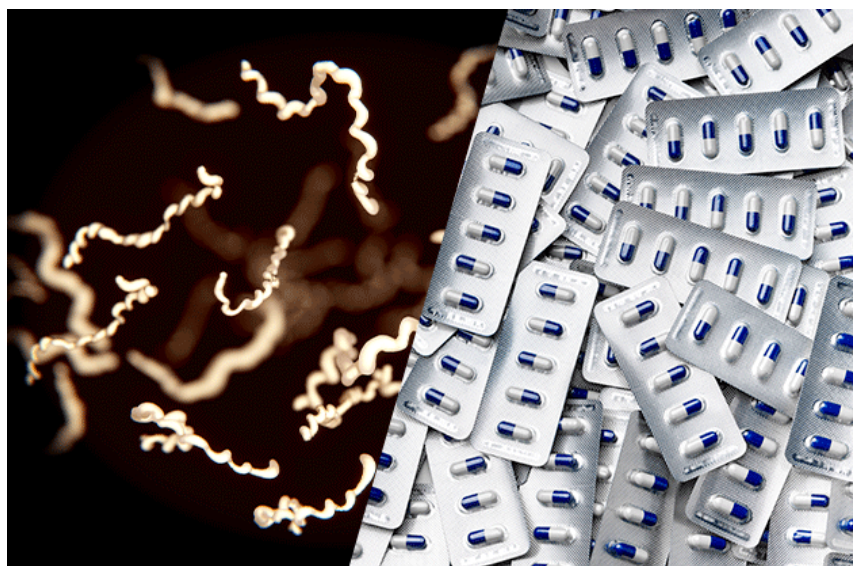
The widespread idea that Lyme disease is easily cured with a 10- to 14-day course of [antibiotics](#) persists within most corners of mainstream medicine today. But there is a growing body of evidence to suggest the contrary: For example, in 2013, the *International Journal of General Medicine* [published](#) findings that the **Lyme spirochete *Borrelia* is stealthy enough to evade immune detection and even survive attacks from antibiotics.**

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Anyone experienced with this illness knows, too, that Lyme disease is so much more than a single microbe. With multiple strains of *Borrelia* in the mix and other common tick-borne [coinfections](#) like [Bartonella](#), [Babesia](#), [Ehrlichia](#), and [Mycoplasma](#), understanding the full effects of neurological Lyme is truly complex. However, thanks to the ongoing work of independent researchers and scientists, **our understanding continues to unfold and offer helpful clues to the challenging neurological symptoms that so many people deal with.**

The Impact of Neurological Lyme on Memory

On average, **your brain has [86 billion neurons](#)**, each sending out numerous signals from head to toe at breakneck speed to process and store information, control movement and balance, and utilize your five senses, among other crucial tasks. Neurological Lyme can directly impact those functions, including memory, and here's how.

How Memories are Formed

The study of human memory stretches as far back as 2,000 years to the times of Aristotle, with the first

responsible for classifying the memory types still relevant today. He discovered we actually have **three different memory types**, giving valuable insight into how the brain works:

1. **Sensory Memory (SM):** Formed by how we see, hear, touch, smell, and taste things, **SM allows you to remember by stimulating your five senses**. After the stimulation, the sensing is assigned to short-term or long-term memory. Smelling your favorite food cooking, hearing a dog bark in the distance, or feeling the texture of wet grass beneath your feet after a spring rain are examples of sensory stimulation we attach to our short-term and long-term memory.
2. **Short-Term Memory (STM):** Less fleeting than sensory memory and less permanent than long-term memory, **STM helps you recall specific information about anything for just a brief period**. Where you park your car at a shopping center is considered a STM due to the “short-term” need to retain the information. STM will get you to your car after you exit the store, but if there is no need to save the information to long-term memory, the memory quickly fades.
3. **Long Term Memory (LTM):** There are two types of LTM: explicit and implicit. **Explicit LTM is when we consciously and deliberately try to memorize something**, like someone’s birthday, phone number, or lyrics to a new song. **Implicit LTM is what we remember unconsciously by repetition without even trying**, like riding a bike or taking a specific route to work. Any memory we can recall after 30 seconds is considered “long-term,” which is a majority of our memories.

Our memories form in three distinct stages— encoding, storage, and recall. Encoding is how the information enters

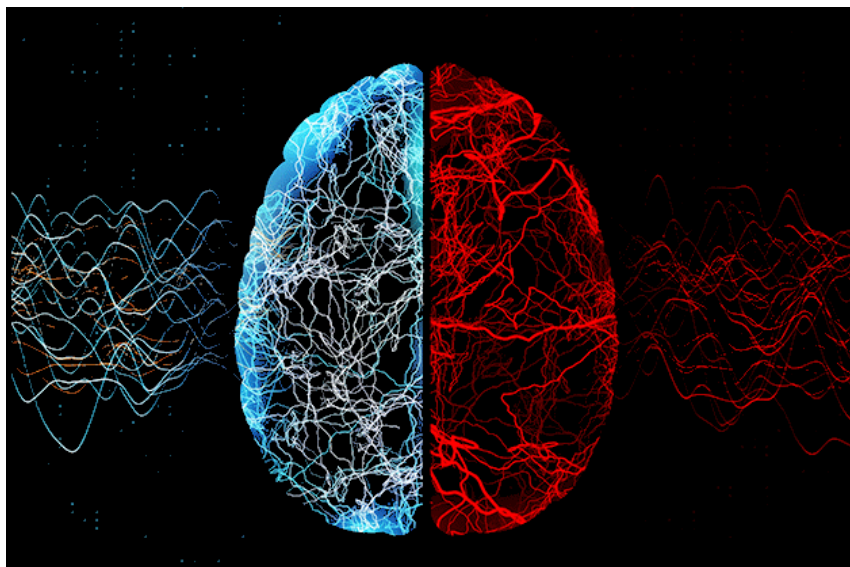
senses. Storage is when that incoming information is briefly stored into STM, or more permanently, into LTM. The final stage is recall, how we retrieve the information after it's stored.

When stealth microbes like *Borrelia* make their way to the CNS, they become savage disruptors, creating a breakdown of communication across multiple body systems by damaging nerve cells, kicking up [inflammation](#), and disorganizing neurotransmitters and hormones, thereby instigating memory problems over time. Here are some of the top known ways neurological Lyme impedes your memory.

Neuroinflammation in the Brain

A recent [study](#) probing the brains of Lyme patients with chronic symptoms showed the presence of high levels of a substance called inflammatory translocator protein (TSPO), an inflammatory chemical released by two specific types of brain immune cells.

What does this mean for your memory? **High levels of neuroinflammatory chemicals may decrease brain function, manifesting in such problems as brain fog and memory loss.** Though the study was small-scale, it demonstrates a physiological basis for cognitive problems and **validates the experience of countless people living with Lyme.**



Demyelination of Nerves

Much like electrical wires require insulation to keep the electrical current contained, **the nerves in our brains are protected with an outer sheath called myelin, which protects nerves for other electrical impulses.** Because microbes like *Borrelia* and *Mycoplasma* consider myelin a high-value resource to snack on, people with neurological Lyme are vulnerable to demyelination — deterioration of the nerve coating. When this happens, raw nerves are eventually exposed, and signaling between the nerves diminishes, resulting in communication breakdown.

Demyelination caused by Lyme disease has been [documented](#) as early as 1989, suggesting the probability of CNS involvement, even after the initial infection appeared to be resolved.

Possible Dementia Connection

Although some [studies](#) have suggested dementia-like syndromes may exist as rare manifestations of neurological Lyme, recent research points to a more direct connection. [Findings](#) in *Frontiers in Neurology* support **the possibility that neurological Lyme might be linked to [Lewy body dementia](#), a condition where abnormal protein deposits to the nerve cells in the brain cause**

severely impaired reasoning, mood changes, and memory loss.

While there's still a lot to learn about this manifestation, this is the first time a persistent neurological Lyme infection has been directly linked to the presence of dementia-inducing antibodies.

6 Effective Solutions to Restore Your Memory

Unfortunately, the current CDC treatment guidelines for neurological Lyme are [antibiotics](#) that are often ineffective in later stages of the illness, but all hope is not lost. If you're experiencing Lyme-related memory problems, **there are lifestyle habits and natural remedies like herbs that can help normalize [disrupted communications](#) in the brain and nervous system and enhance your memory.** Here's how.



1. Eat Brain Food.

Nourishing your body with a balanced, [anti-inflammatory diet](#) rich in **vegetables, healthy omega-3 fats, and choline-dense protein** like poultry, fish, and eggs is one of the best ways to begin nourishing a vibrant memory and curb unwanted inflammation. As for brain fruit, **blueberries** full of flavonoids top the list. Furthermore, adding **anti-inflammatory spices** to your food is another way to benefit the brain. [Turmeric](#) and **saffron** win by supporting the vascular system and boosting blood flow to the brain. Fun tip: Have fun trying out new recipes by focusing on one new brain food per week to find your favorites.



2. Get Creative with Brain Games.

While cognitive exercise apps such as

mind to make up your own activities. For example, make a game out of everyday events like shopping for groceries. Tally up the prices in your head as you shop, starting with just a few items and working your way up to see if you can calculate the amount you'll pay at the register. Over time, you'll sense improvements, and the process will get easier. However, if you prefer a break from the digital realm, classic crossword puzzles are another great (and inexpensive) option to challenge your memory.



3. Try Interactive Metronome Therapy (IMT).

Take brain games to the next level with [Interactive Metronome \(IM\)](#), a therapy that is used to enhance memory, attention, focus, speech, and sensory skills in those struggling with cognitive impairment from various forms of brain injuries — even those associated with Lyme disease. **By resetting your internal brain clock and [retraining neural pathways](#), the therapy improves communication and desensitizes hyperactive areas of the brain while activating the sluggish areas.** The brain-balancing exercises are often covered by insurance and can be performed under the supervision of a variety of professional therapists to increase the brain's ability to record, store, and recall memories.



4. Use Brain Supportive Herbs.

Balancing the brain with **herbs will naturally boost your memory by creating healthy stress responses and sleep-wake cycles and reducing the microbial load.** Some top herbs to suppress infectious microbes, reduce neuroinflammation, and increase needed blood circulation to the brain include:

- [Andrographis](#)
- [Cat's claw](#)

- [Cryptolepis](#)
- [Neem](#)
- Lion's mane
- [Bacopa](#)
- [CBD](#)

Need a boost of clean energy in the morning to feel awake and alert? Herbs can help there, too. Try [rhodiola](#) or [licorice](#) root in the morning to get your day going without caffeine. And for a nightcap to gently unwind, try herbs with balancing and soothing properties like [ashwagandha](#) and [l-theanine](#) to regulate the HPA-axis and calm the nervous system for better [quality sleep](#).



5. Reduce Excess Brain Stimulation.

We live in a noisy world and are probably the most overloaded with stimuli than

ever before in human history, but there are steps you can take to reduce the noise and help you focus. Try setting a specific time to digitally unplug every night, and consider setting your smartphone outside of your bedroom on the charger.

Need your phone for an alarm clock? Set it on airplane mode to avoid distracting notifications — or go minimalist with a simple alarm clock. Additionally, infuse your nightly routine with calming scents like [rosemary](#), frankincense, and lavender. When delivered through the olfactory system, these essential oils can cool an inflamed nervous system, creating a clearer mind able to retain and recall information.



6. Cultivate a Mind-Body Connection.

Mind-body practices like hypnosis, [yoga](#), tai-chi, and meditation combine mental and

physical focus with breathing and body movements, and

scientific evidence supporting their positive effects on the nervous system is growing:

[Research](#) published by the *Journal of Alzheimer's* found that after only 8 weeks of daily meditation, a small group of participants ages 52 to 77 experienced a **significant increase in cerebral blood flow to the frontal and parietal lobes of the brain — two areas responsible for retrieving stored memories**. If beginning a mind-body practice has been on your Lyme recovery to-do list for a while, the health of your brain and better memory are two great reasons to get started!

Healing Takes Time

If you've been struggling with memory problems from Lyme, you've likely come to find that **healing is a marathon, not a sprint**. Because our brain cells take the longest to repair, improving Lyme-related memory issues isn't easy, but it's possible — and worth it.

To sharpen your memory, combine these tips with the essentials, like a comprehensive natural protocol to suppress microbes, a reparative sleep schedule, and [exercise as tolerated](#). If you remember nothing else, remember to keep it simple, pace yourself, and (gently) keep going.

Dr. Rawls is a physician who overcame Lyme disease through natural herbal therapy. You can learn more about Lyme disease in Dr. Rawls' new best selling book, [Unlocking Lyme](#).

You can also learn about Dr. Rawls' personal journey in overcoming Lyme disease and fibromyalgia in his popular blog post, [My Chronic Lyme Journey](#).

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