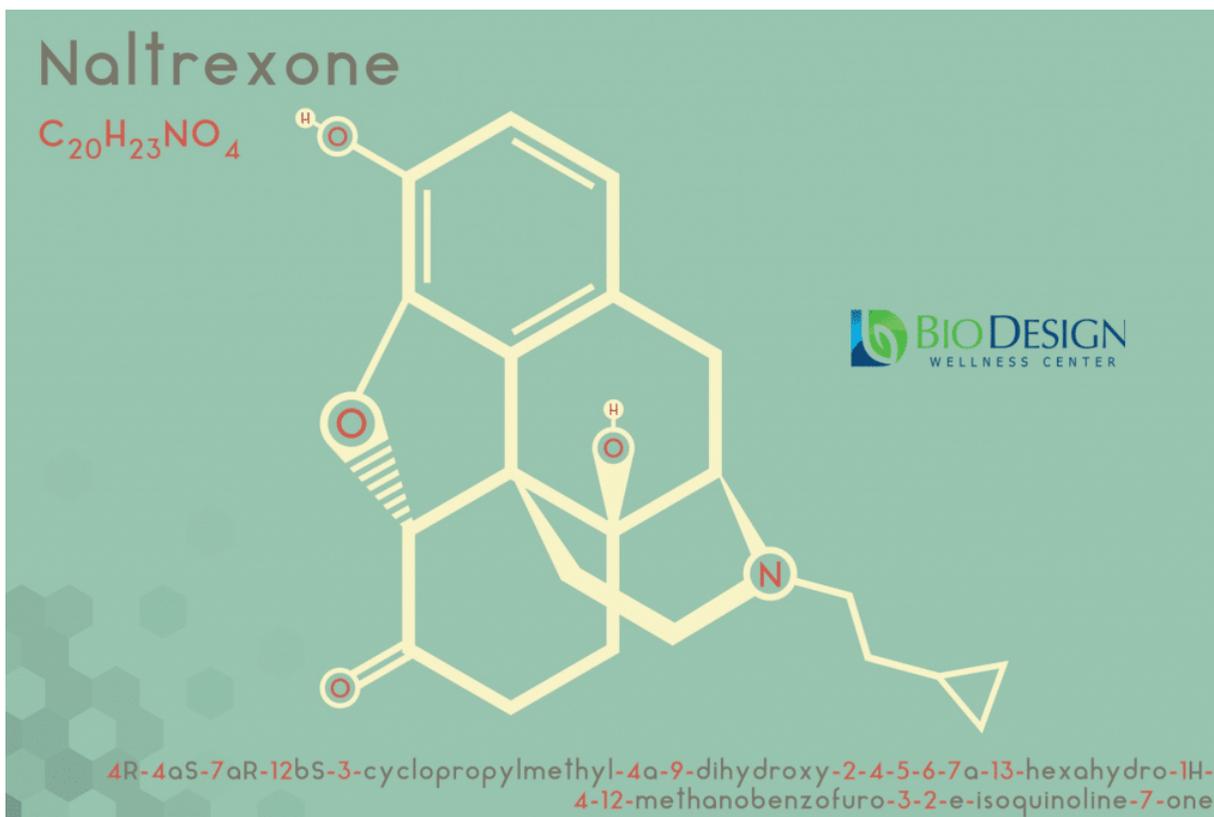


Low-Dose Naltrexone (LDN) as an Adjunct Treatment for Autoimmunity

Over the last year or so, Low-Dose Naltrexone (LDN) has received a lot of press. From an NPR story asserting in [tiny doses, LDN – traditionally thought of as an addiction medication – is now moonlighting as a treatment for chronic pain](#), to an article appearing on Medscape.com suggesting [LDN may be an affordable medicine for many chronic health conditions](#), there's no shortage of thoughts about the potential LDN holds for those suffering from chronic illness and pain.



So what is *Naltrexone* and what do we here at BioDesign Wellness, a [Tampa Functional Medicine](#) practice, think about the possibility of this medication playing a role in your battle to

overcome chronic illness? Well for starters, naltrexone, which was synthesized and patented in 1961, is an opioid antagonist that was first used about 10 years later primarily to prevent relapse into opioid abuse. But we mentioned above, naltrexone has generated interest lately in the treatment of other diseases, including disorders related to immune system dysfunction, such as the following:

- Autism
- Celiac disease
- Chronic fatigue syndrome (CFS)
- Crohn's disease
- Fibromyalgia
- Hashimoto's thyroiditis
- Lupus
- Multiple sclerosis
- Psoriasis
- Rheumatoid arthritis
- Scleroderma
- Sjogren's syndrome
- Ulcerative colitis

In this post, we explain how naltrexone may help to prevent relapse into opioid abuse and how it may be helpful, at significantly lower doses, to restore healthy immune function, at least temporarily while the underlying causes of immune system dysfunction are identified and treated.

Historically Speaking – Naltrexone in the Treatment of Opioid Abuse

Classified as an opioid antagonist, naltrexone blocks opioid receptors on cells in the brain, spinal cord, and other parts of the body. If you're unfamiliar, *opioids* are a class of drugs including heroin (which is illegal); synthetic opioids such as fentanyl; and prescription pain relievers, including oxycodone

(OxyContin), hydrocodone (Vicodin), codeine, morphine, and others. These drugs bind to and activate opioid receptors throughout the body to alleviate pain, slow breathing, and calm the mind and body, but as you probably already know, they are highly addictive.

Imagine opioid receptors as parking spaces in a parking lot. Naltrexone takes up all the parking spaces, so the opioid molecules have no place to park. While on naltrexone, someone taking an opioid won't feel the "rush" or "high" of the drug, because the opioid molecules have no vacant opioid receptors to bind to. As a result, the opioid becomes a much less attractive drug to the user.

Naltrexone isn't used early in treatment, because it can cause withdrawal symptoms. Other medications may be used during the 7- to 10-day withdrawal period to help reduce cravings. Then, naltrexone is prescribed, at doses of 50 to 100 mg to suppress the euphoria and other pleasurable sensations of opioids. Naltrexone works in a similar manner to prevent relapse in alcoholics, removing the "reward" for drinking.

Unfortunately, blocking opioid receptors in the brain also blocks *endorphins* – the body's own feel-good hormones, which help to alleviate pain, fear, and anxiety. Without the benefits of endorphins, people taking 50 to 100 mg of naltrexone commonly experience extreme fatigue, stomach pains, anxiety, and joint and muscle pain. As a result, one of the drawbacks of using naltrexone to treat addiction is compliance – patients simply stop taking it because it makes them feel lousy.

Discovering the Potential Immune-Boosting Properties of Naltrexone

In 1984, Naltrexone was introduced as the FDA-approved drug Trexan to help patients overcome their addiction to heroin. A

year later, Dr. Bernard Bihari – a Harvard Medical School graduate (1957) treating HIV-infected patients – discovered that his patients had less than 20 percent of the normal levels of endorphins and that this low level of endorphins contributed to patients weakened immune systems. He reasoned that naltrexone could be used at significantly lower doses to temporarily block opioid receptors, which would stimulate the body's release of endorphins, thereby improving immune function.

After experimenting with various low doses, ranging from 1 to 4.5 mg, Dr. Bihari discovered that low dose naltrexone (LDN) doubled or even tripled endorphin levels in his patients. He then conducted a placebo-controlled trial with 50 HIV patients and found that after about nine months, the group that received LDN experienced fewer deaths (eight percent vs. 33 percent death rate) and fewer infections compared to the group that received the placebo.

However, at the time, the effectiveness of any HIV treatment was measured by the increase in a patient's CD4 cell count, which is used to gauge immune system health. LDN stopped the decline in CD4 cells, but it didn't reverse it, so the medical community deemed it ineffective in the treatment for HIV.

The Endorphin-Immune System Connection

We don't know the mechanism for how endorphins help to modulate the immune system. What we do know is that endorphin levels are typically lower in people with autoimmune diseases than in people without them, and that LDN increases endorphin levels and reduces inflammation, which results when the immune system attacks health cells in the body.

Here at BioDesign Wellness Center, we frequently prescribe naltrexone to patients suffering from immune dysfunction. We may prescribe it immediately to relieve symptoms or later if a

patient has hit a plateau with other treatments. However, we prescribe it always in combination with supportive care to address the underlying cause, such as heavy metal toxicity, mold, hormone imbalance, infection, stress, food allergies, or other conditions that triggered or contributed to the development of the autoimmune condition.

Naltrexone seems to benefit some patients more than others. Those who benefit most are those who have reported muscle aches, joint pains, restless sleep, mold exposure, and Hashimoto's thyroiditis. Among patients who experience improvement, the benefits are often dramatic.

How to Take Low Dose Naltrexone (LDN)

LDN is not FDA-approved for autoimmunity, so you cannot get it at conventional pharmacies. If we determine LDN is the right for your individual treatment plan, we will use a compounding pharmacy to fill your prescription.

Once prescribed, it's best to take LDN at 9 p.m. Why? Because your endorphin levels are typically highest from 3 a.m. to 4 a.m. Taking the medication at 9 p.m. gives it enough time to bind to your opioid receptors, so when your endorphin level is highest, your brain is tricked into thinking the level is too low, and it signals for production of more endorphins. The increase in endorphins helps to modulate immune system function.

Addressing Root Causes of Autoimmunity

At BioDesign Wellness Center, when we use LDN, it's always *alongside* our 30-day Autoimmune Solution, which helps to restore your immune system naturally, using dietary and lifestyle changes. By addressing the root cause, you can reverse your condition *and* prevent another one from developing. Our Autoimmune Solution is a three-part protocol consisting of:

- **Part 1 – Discover:** Together we meet to discuss your health objectives so that we, as practitioners, can design a personalized plan to help you achieve those objectives. We use comprehensive lab testing focusing on hormones, vitamin levels, and brain testing to discover the root cause of your symptoms. Addressing the root cause is key to being able to create long lasting results.
- **Part 2 – Repair:** In this phase, our practitioners design a personalized plan for you based on *BioDesign's 5 Pillars of Health* (Nutrition, Fitness, Gut Health, Stress Management, and Hormones). Addressing all 5 pillars is the best way to achieve long lasting results. The first step is a detox, which every person needs in order to enable the body to heal itself. Then based on your goals and lab results, our medical team will mentor you one-on-one or virtually through each additional step of your plan to ensure that you have all the support you need. We not only help you resolve your chronic health issues, but we remove the confusion out there about how to truly live a healthy life.
- **Part 3 – Optimize:** Now that the foundation for your health has been repaired, it's time to fine-tune your plan to sustain your results. The process starts with follow-up lab tests so we can evaluate how to fine-tune your treatment plan. This often includes reducing old medications, adding revitalizing hormones, and creating a healthy lifestyle plan that enables you to maintain optimal health and fitness for the rest of your life. You will be empowered with the tools and support from our team to help you become the best version of yourself, so you can live a healthier and happier life!

Don't settle for symptom relief, which only masks the underlying causes and allows illness to worsen over time. Here at BioDesign, we dig deep to identify and treat the root causes of

whatever is ailing you, and we work closely with you to restore optimal health.

Disclaimer: *The information in this blog post about low-dose naltrexone for the treatment of chronic illness is provided for general informational purposes only and may not reflect current medical thinking or practices. No information contained in this post should be construed as medical advice from the medical staff at BioDesign Wellness Center, Inc., nor is this post intended to be a substitute for medical counsel on any subject matter. No reader of this post should act or refrain from acting on the basis of any information included in, or accessible through, this post without seeking the appropriate medical advice on the particular facts and circumstances at issue from a licensed medical professional in the recipient's state, country or other appropriate licensing jurisdiction.*