

# LOW-DOSE NALTREXONE (LDN)



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As of 2016, LDN is most commonly being used for Chronic Fatigue, Multiple Sclerosis, Myelagic Encephalopathy, autoimmune thyroid diseases and various cancers. Many autoimmune diseases seem to respond to LDN.

Naltrexone was first approved by the FDA in 1984 as a 50mg dose for the purpose of helping heroin or opium addicts, by blocking the effect of such drugs. By blocking opioid receptors, naltrexone also blocks the reception of the opioid hormones that our brain and adrenal glands produce: beta-endorphin and met-enkephalin. Many body tissues have receptors for these endorphins and enkephalins, including virtually every cell of the body's immune system.

In 1985, Bernard Bihari, MD, a physician with a clinical practice in New York City, discovered the effects of a much smaller dose of naltrexone (approximately 3mg once a day) on the body's immune system. He found that this low dose, taken at bedtime, was able to enhance a patient's response to infection by HIV.

In the mid-1990's, Dr. Bihari found that patients in his practice with cancer (such as lymphoma or pancreatic cancer) could benefit, in some cases dramatically, from LDN. In addition, he found that people who had an autoimmune disease (such as lupus) often showed prompt control of disease activity while taking LDN.

## HOW DOES LDN WORK?

A body of research over the past two decades has pointed repeatedly to one's own endorphin secretions (our internal opioids) as playing the central role in the beneficial orchestration of the immune system, and recognition of the facts is growing.

According to the November 13, 2003 issue of the New England Journal of Medicine: "Opioid-Induced Immune Modulation: .... Preclinical evidence indicates overwhelmingly that opioids alter the development, differentiation, and function of immune cells, and that both innate and adaptive systems are affected. 1,2 Bone marrow progenitor cells, macrophages, natural killer cells, immature thymocytes and T cells, and B cells are all involved. The relatively recent identification of opioid-related receptors on immune cells makes it even more likely that opioids have direct effects on the immune system."

Taking LDN at bedtime each night is believed to produce a temporary inhibition of endorphins. This results in a reactive up-regulation of vital elements of the immune system by causing an increase in endorphin and enkephalin production, increased opioid receptor production and increased opioid receptor sensitivity. Normal volunteers who have taken LDN in this fashion have been found to have much higher levels of beta-endorphins circulating in their blood in the following days. Animal research by I. Zagon, PhD, and his colleagues has shown a marked increase in met-enkephalin levels as well. These elevated levels of endorphins will usually last around 18-20 hours.

## WHAT DISEASES HAS LDN BEEN USEFUL FOR?

The disorders listed below all share a particular feature: in all of them, the immune system plays a central role. Low blood levels of endorphins are generally present, contributing to the disease-associated immune deficiencies. These findings suggest the possibility for a beneficial LDN effect in a wide variety of common cancers and autoimmune diseases.

## CANCER

- Bladder Cancer
- Breast Cancer
- Carcinoid
- Colon & Rectal Cancer
- Glioblastoma
- Liver Cancer
- Lung Cancer (Non-Small Cell)
- Lymphocytic Leukemia (chronic)
- Malignant Melanoma
- Multiple Myeloma
- Neuroblastoma
- Ovarian Cancer
- Pancreatic Cancer
- Prostate Cancer (untreated)
- Renal Cell Carcinoma
- Throat Cancer
- Uterine Cancer
- Lymphoma (Hodgkin's and Non-Hodgkin's)

## AUTOIMMUNE

- Autoimmune Neurodegenerative:
- ALS (Lou Gehrig's Disease)
- Alzheimer's Disease
- Autism Spectrum Disorders
- Hereditary Spastic Paraparesis
- Multiple Sclerosis (MS)
- Parkinson's Disease
- Post-Traumatic Stress Disorder (PTSD)
- Primary Lateral Sclerosis (PLS)
- Progressive Supranuclear Palsy
- Transverse Myelitis

## OTHER AUTOIMMUNE DISEASES

- Ankylosing Spondylitis
- Behcet's Disease
- Celiac Disease
- Chronic Fatigue Syndrome
- CREST syndrome
- Crohn's Disease
- Dermatomyositis
- Dystonia
- Endometriosis
- Fibromyalgia
- Hashimoto's Thyroiditis
- Irritable Bowel Syndrome (IBS)
- Myasthenia Gravis (MG)
- Nephrotic Syndrome
- Pemphigoid
- Primary Biliary Cirrhosis
- Psoriasis
- Rheumatoid Arthritis
- Sarcoidosis
- Scleroderma
- Sjogren's Syndrome
- Stiff Person Syndrome (SPS)
- Systemic Lupus (SLE)
- Ulcerative Colitis
- Wegener's Granulomatosis

## LDN HAS DEMONSTRATED EFFICACY IN THOUSANDS OF CASES

Cancer. Although prospective, controlled clinical trials on LDN in the treatment of cancer are yet to be accomplished, as of March 2004 clinical "off-label" use of this medication by Dr. Bihari in some 450 patients with cancer almost all of whom had failed to respond to standard treatments suggests that more than 60% of patients with cancer may significantly benefit from LDN.

Of the 354 patients with whom Dr. Bihari had regular follow-up, 86 have shown objective signs of significant tumor shrinkage, at least a 75% reduction. 125 patients have stabilized and/or are moving toward remission.



Dr. Bihari's results sharply contrast to prior usual cancer treatment outcomes: either a cancer-induced death or a total cure. LDN therapy, therefore, may present as a viable third alternative, the possible long-term stabilization and/or gradual reduction of tumor mass volume.

## AUTOIMMUNE DISEASES

Within Dr. Bihari's group of patients who presented with an autoimmune disease (see above list), none have failed to respond to LDN; all have experienced a halt in progression of their illness. In many patients there was a marked remission in signs and symptoms of the disease. The greatest number of patients within the autoimmune group are people with multiple sclerosis, of whom there were some 400 in Dr. Bihari's practice. Dr. Buhari reported that less than 1% of these patients has ever experienced a fresh attack of MS while they maintained their regular LDN nightly therapy.

HIV/AIDS. Since the mid-1980's, low dose naltrexone (LDN) has consistently demonstrated a markedly beneficial effect in the treatment of HIV/AIDS. There are a score of such patients who, even today, continue to successfully use only LDN. When combined with HAART, LDN has shown itself to be an absolute preventive for lipodystrophy, as well as a synergistic therapy that diminishes viral breakthroughs and bolsters the restoration of CD4 cell levels. As of September 2003, Dr. Bihari had been treating 350 AIDS patients using LDN in conjunction with accepted AIDS therapies. Over the prior 7 years, he reported that over 85% of these patients showed no detectable levels of the HIV virus – a much higher success rate than most current AIDS treatments, and with no significant side effects. It is also worth noting that many HIV/AIDS patients have been living symptom-free for years taking only LDN with no other medications.

In May 2016, Nigeria Approved a LDN for Prescription for HIV. Following a very successful three month bridge trial by NAFDAC, Nigerias equivalent to the USAs FDA, approval is being granted to Immune Therapeutics, Inc. (previously named TNIB) to market its patented Lodonal (LDN) as a non-toxic adjunct therapy both in the treatment of HIV/AIDS and as an immune system regulator. Central Nervous System disorders. Anecdotal reports continue to be received concerning beneficial effects of LDN on the course of Parkinsons disease, Alzheimers disease, amyotrophic lateral sclerosis (ALS Lou Gehrigs disease), and primary lateral sclerosis. Dr. Jaquelyn McCandless has found a very positive effect of LDN, in appropriately reduced dosage and applied as a transdermal cream, in children with autism.

## AT WHAT DOSAGE AND FREQUENCY IS LDN TYPICALLY PRESCRIBED?

Treatment starting doses can vary from 0.5-1.5mg, and is usually increased to the usual adult dosage of 4.5mg taken once daily at night. Because of the rhythms of the body's production of master hormones, LDN is best taken between 9pm and 3am. Most patients take it at bedtime.

- For Hashimotos Thyroiditis, Chronic Fatigue Syndrome or Fibromyalgia, the starting dose is usually 0.5mg and is increased by 0.5mg every week until a daily dose of 4.5mg is reached.
- For autoimmune diseases, patients typically start at 1mg and increase to 4.5mg daily over a period of 4 weeks.
- People who have Multiple Sclerosis that has led to muscle spasms are advised to use only 3mg daily and to maintain that dosage.
- For initial dosage of LDN in those patients who have Hashimotos Thyroiditis with hypothyroidism and who are taking thyroid hormone replacement medication, please read cautionary warnings, below.
- For Cancer, LDN can be taken at similar doses, but must be avoided the week before and the week after cancer chemotherapy. This does not include tamoxifen or daily medications for prostate cancer.

The therapeutic dosage range for LDN is from 1.5mg to 4.5mg every night. Dosages below this range are likely to have no effect at all, and dosages above this range are likely to block endorphins for too long a period of time and interfere with its effectiveness.

## TYPES OF LDN

- Capsules – It is important to NOT provide LDN in an SR or slow release form, and that the capsules are filled with a neutral inactive filler such as avicel or lactose
- Sublingual Drops – Rarely, LDN may need to be purchased as a solution in distilled water with 1mg/ml dispensed in a medicine dropper. It is important to keep this refrigerated.
- Cream – LDN is most typically available in a 0.5mg/ml cream and is available for application to the skin. This is helpful for children or for patients allergic to colorings, flavorings, or any excipients that may be found in other forms of LDN.

## ARE THERE ANY SIDE EFFECTS OR CAUTIONARY WARNINGS?

LDN usage has virtually reported no side effects. Occasionally, during the first week's use of LDN, patients may complain of some difficulty sleeping. This rarely persists after the first week. Should it do so, dosage can be reduced from 4.5mg to 3mg nightly.

## CAUTIONARY WARNINGS

1. Because LDN blocks opioid receptors throughout the body for three or four hours, people using medicine that is an opioid agonist, i.e. narcotic medication such as Ultram (tramadol), morphine, Percocet, Duragesic patch or codeine-containing medication should not take LDN until such medicine is completely out of one's system. Patients who have become dependent on daily use of narcotic-containing pain medication may require 10 days to 2 weeks of slowly weaning off of such drugs entirely (while first substituting full doses of non-narcotic pain medications) before being able to begin LDN safely.

2. Those patients who are taking thyroid hormone replacement for a diagnosis of Hashimotos thyroiditis with hypothyroidism ought to begin LDN at the lowest range (1.5mg for an adult). Be aware that LDN may lead to a prompt decrease in the autoimmune disorder, which then may require a rapid reduction in the dose of thyroid hormone replacement in order to avoid symptoms of hyperthyroidism.

3. Full-dose naltrexone (50mg) carries a cautionary warning against its use in those with liver disease. This warning was placed because of adverse liver effects that were found in experiments involving 300mg daily. The 50mg dose does not apparently produce impairment of liver function nor, of course, do the much smaller 3mg and 4.5mg doses.

4. People who have received organ transplants and who therefore are taking immunosuppressive medication on a permanent basis are cautioned against the use of LDN because it may act to counter the effect of those medications.

5. In many cases, LDN is taken along with other standard medications for multiple sclerosis. However, all of the standard MS drugs, with the probable exception of Copaxone, are immunosuppressant and thus tend to oppose the beneficial immune system up-regulation induced by LDN. Therefore, many people with MS try to wean themselves away from these other medications when they find that they are doing well on LDN.

## REFERENCE

*Presented material taken directly from:*

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