



Committed to trials of LDN as a treatment for Autoimmune Disease

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Low-dose Naltrexone (**LDN**) Fact Sheet

Naltrexone is a class of drug known as an opiate antagonist. Its normal use is in treating addiction to opiate drugs such as heroin or morphine. The dose used for this purpose is usually between 50 and 150 mg daily.

Low-dose Naltrexone (LDN) has been used in the treatment of autoimmune diseases in the USA since 1985, but is relatively new in the United Kingdom and Europe. Despite the fact that the drug is used at a very low dose, the occurrence of significant introductory or long-term side effects cannot be excluded.

This method was devised and subsequently developed by Dr Bernard Bihari, a neurophysician in New York, USA. Dr Bihari is qualified in Internal Medicine, Psychiatry and Neurology, but has recently retired from practice. The main website is www.lowdosenaltrexone.org

Suggested Method of Therapy:

The introductory dose is 1.5 mg of liquid LDN for the first 2 weeks of treatment, increasing by .5 mg every 2 weeks until the individual find the dose that suits them best. If there is an increase in symptoms when taking a higher dose, it might indicate that this dose is too high. Lower the dose, and improvements should become apparent. The maximum dose is 4.5 mg.

LDN only stays in the system for 4 hours. Most people take it before bed, while other prefer to take it in the morning as it can cause sleeplessness.

How Naltrexone Works:

The benefits of the drug are apparently due to the temporary inhibition of endorphins. This results in a reactive increase in the production of endorphins, which should result in a reduction of painful symptoms, and an increased sense of wellbeing.

Increased levels of endorphins should be expected to stimulate the immune system, promoting an increase in the number of T lymphocytes. This effect was observed in Dr Bihari's research. This increase in T-cell numbers apparently restores a more normal balance of the T-cells such that the effects of the disease process are significantly reduced. It has been observed that in those suffering the relapsing-remitting form of MS the number of relapses is reduced, and the rate of progression of the disease is diminished. In chronic progressive MS (either primary or secondary) there seems to be a similar reduction in the progression of disease symptoms

The Use of Low-dose Naltrexone in MS, and the Occurrence of Side Effects

When starting LDN there might be a temporary increase in symptoms such as weakness, changes in sensation, muscle spasm, pain, fatigue or tiredness. These initial symptoms may also include changes due directly to the altered level of brain endorphins, such as disturbed sleep, occasionally with vivid, bizarre and disturbing dreams. These symptoms usually disappear within the first week of treatment, and are replaced by improvements in specific symptoms.

The initial increase in symptoms can also be explained when we consider the manner in which the drug works. Contrary to the common belief that MS is due to over-activity of the immune system, MS actually occurs due to a reduction in immune system activity. Specifically, it is the reduction in the number of the suppressor T-cells within the immune system that allows CD4 helper T-cells to do damage. Thus, during an acute relapse the overall number of T-cells is reduced, the normal balance of helper and suppressor T-cells is disrupted, and helper T-cells tend to predominate. This is most pronounced during an acute relapse, but a similar situation occurs although perhaps to a lesser extent, in chronic progressive MS.

It has been demonstrated that in the presence of LDN, the numbers of T-cells may increase by more than 300%. Therefore, when the number of T-cells is initially increased, the predominance of CD4 helper T-cells may increase the intensity of the MS, temporarily increasing some symptoms. However, as the number of T-cells continues to increase the normal balance of suppressor to helper T-cells is restored, the activity and intensity of the disease process is reduced, and symptoms once again diminish.

In less than five percent of cases treated, increased introductory symptoms may be more severe or more prolonged than usual, lasting sometimes for several weeks. Rarely, symptoms may persist for two or three months before the appropriate beneficial response is achieved.

Symptoms Related to the Endorphin Response

If the endorphin response is rapid and significant, there may also be some additional symptoms related to the increased level of endorphins, including nausea and constipation. The nausea usually fades within a few days, and can be minimized by taking a lower dose of the drug until the symptoms lessen. The constipation may take two or three weeks to resolve, during which time additional supportive measures may be required.

Intrinsic Toxicity of the Drug

From toxicity studies of naltrexone in the early 1980's, reversible liver changes were found to occur only in those receiving doses higher than 300 mg per day. This is on average one hundred times the dose used in LDN. The possibility of adverse side effects due to drug toxicity cannot be entirely excluded, but the likelihood of damaging side-effects is believed to be minimal.

Long-term use of LDN has not yet been evaluated by a trial. Due to possible toxic effects of long-term use of LDN on the liver and kidneys, it is required that anyone suffering previous liver or kidney problems should report this condition before starting therapy. The risk is believed to be minimal, however, as the dose of the drug is extremely low, and it is expected to be metabolized and excreted from the body within three or four hours of ingestion.

Contraindications and Special Precautions:

LDN regulates the immune system. LDN cannot be used whilst taking steroids, opiate base painkillers, or immune-suppressant drugs.

LDN has been used for:

Alzheimer's Disease	Amyotrophic lateral sclerosis (ALS)	Ankylosing Spondylitis	Autism Spectrum Disorders
Autoimmune Polyendocrinopathy-candidiasis-ectodermal dystrophy (APECED)	Behcet's Disease	Bipolar Disorder	Some Cancers
Celiac Disease	Chronic Fatigue Syndrome	CREST Syndrome	Crohn's Disease
Chronic Obstructive Pulmonary Disease (COPD)	Depression	Endometriosis	Fibromyalgia
HIV/AIDS	Infertility	Irritable Bowel Syndrome	Multiple Sclerosis
Murine Inflammatory Bowel Disease	Myalgic Encephalomyelitis (ME)	Obsessive Compulsive Disorder (OCD)	Parkinson's Disease
Pemphigoid	Premenstrual Syndrome (PMS)	Polycystic Ovarian Disease (PCOD) or Syndrome (PCOS)	Polymyalgia Rheumatica (PMR)
Primary Lateral Sclerosis (PLS)	Psoriasis	Rheumatoid Arthritis (RA)	Sacoidosis
Scleroderma	Stiff Person Syndrome (SPS)	Systemic Lupus Erythematosus (SLE)	Transverse Myelitis
Ulcerative Colitis	Wegener's Granulomatosis		

Filling an LDN Prescription in the UK:

Phone Paula at Dickson's Pharmacy in Glasgow on: 0141 647 8032, she will organise everything for you. Or email homedeliverypharmacy@yahoo.co.uk

The liquid LDN suspension cost £15 a month and is sent monthly recorded delivery to your home.

There are no problems with fillers; it keeps 28 days out of the fridge, 56 days inside.

Capsules are also available at £30 monthly with Avicel filler. Further costs are involved if you live outside of the UK.

LDN is available in liquid form or capsule, privately or with an NHS Prescription from Dickson's Chemist in Glasgow.

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