

# CHOOICES

## LOW DOSE NALTREXONE (LDN)

LDN has been used in the treatment of MS in the USA since 1985 but it is relatively new in the United Kingdom. Despite the fact that the drug is at a very low dose, significant introductory or prolonged side effects cannot be excluded. Naltrexone is a drug referred to as an opiate antagonist. Its normal use is to treat opiate drug addicts addicted to drugs such as heroin or morphine. The dose used for this purpose is usually between 50 and 150mg per day. The low dose method was devised, and later developed, by Dr Bernard Bihari, a neurophysician from New York, USA. Dr Bihari was qualified in Internal Medicine, Psychiatry and Neurology. Sadly, Dr Bihari passed away in May 2010; but his website can still be accessed at [www.lowdosenaltrexone.org](http://www.lowdosenaltrexone.org)

### How to take LDN

The introductory dose is usually 1.5mg per day for the first two weeks of treatment, increasing by 0.5mg every two weeks until the individual finds the dose that suits them best, as the optimum dosage varies from person to person. If there is an increase in symptoms when taking a higher dose, it may indicate that the dose is too high. Lower the dose and improvements should become apparent.

Those taking it have experienced a range of benefits, including reduced spasm and fatigue, improvements in bladder control, heat tolerance, mobility, sleep, pain, tremor and other symptoms. The two main symptoms that appear to improve most significantly are muscle spasm and fatigue.

LDN can be taken at any time of the day. If a dose is missed, carry on as normal, DO NOT take a double dose. LDN is not thought to be harmful or addictive and it does not appear to have a negative effect on Disease Modifying Drugs as was previously thought.

It is thought that LDN works best when taken along with dietary supplements and a restricted diet.

### How Naltrexone Works

The benefits of this drug are apparently due to the temporary inhibition of endorphins (a natural pain-killer, produced in the brain). This results in a reactive increase in the production of endorphins, which would expectedly result in a reduction in painful symptoms and an increase in the sense of wellbeing. In addition, increased levels of endorphins would also be expected to stimulate the immune system, promoting an overall increase in the numbers of T lymphocytes. This increase in T-cell numbers apparently restores a more normal balance of the T-cells so that the effects of the disease process are significantly reduced.

Contrary to the common belief that MS is due to over-activity of the immune system, it is thought that MS may actually occur due to a reduction in immune system activity and may be the reason why LDN is



effective as a treatment. Specifically, it is the reduction in the number of the suppressor T-cells within the immune system that permits the 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 T-cells and suppressor T-cells is disrupted and the CD-4 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. In the presence of LDN it has been demonstrated that the number of T-cells may increase by more than 300%. Thus, when the number of T-cells is initially increased, the overall predominance of CD4 helper T-cells at this time may expectedly increase the intensity of the MS, therefore 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 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 appears to be a similar reduction in the progression of disease symptoms. In fact, Dr Bihari's research suggests that no-one receiving this treatment as a regular therapy, has experienced a relapse while actually on the treatment. Occasionally however, there may be a short-term increase in symptoms during, for example, periods of infection or stress, arising from previously active lesions already present in the brain or spinal cord.

**Despite these promising findings it must be emphasized that a positive beneficial response to this treatment cannot be assured or guaranteed.**

### **Side-Effects**

LDN improves some symptoms of MS immediately – especially bladder issues – however for some symptoms it can take 6-9 months for the treatment to work effectively. In some cases it can take up to 12-18 months to see if the treatment is actually working. For example, some people feel that they are not seeing any reduction in symptoms, however they may be benefiting from lessened disease progression. If this person then stopped their LDN treatment and suddenly became worse, it would show that LDN is in fact working very well to halt disease progression.

Introductory symptoms, on starting this treatment, may include disturbed sleep, occasionally with vivid, bizarre and disturbing dreams, headache, stomach pain, tiredness, fatigue, spasm and pain. These increased symptoms are usually temporary and fade and disappear within the first week of treatment, when they are replaced by improvements in specific symptoms. In less than two percent of cases treated, these increased symptoms may be more prolonged, lasting perhaps for several weeks. Rarely, symptoms have persisted for two or even three months before the appropriate beneficial response is gained. In this situation, an ultra-low dose may be introduced to provide a more gentle introduction to the method. Occasionally, other transient symptoms have included more severe pain and spasm, headache, diarrhoea or vomiting. These additional symptoms would appear to be associated with the previous frequent use of strong analgesics, which effectively create an addiction and dependency, thus increasing the body's sensitivity to pain. Constipation may also be a problem and may take two to three weeks to resolve naturally, during which time some additional supportive measures may be required. If lactose filler is used in the capsules some individuals may be sensitive to this sugar and usually, after a few weeks of treatment, will develop diffuse but persistent muscle or joint pain. This may be avoided by using alternative filler, such as calcium carbonate or Avicel (methyl cellulose). To avoid any doubts regarding this question Avicel would be the preferred choice. The latest supplies of Naltrexone capsules use Avicel filler. Despite dispersal testing showing that calcium

carbonate capsules will dissolve as quickly as Avicel there has been much discussion suggesting that calcium carbonate filler may be subject to compaction problems, which can potentially reduce the dispersal and absorption rate.

The long term use of LDN has not yet been statistically evaluated by a trial but it is hoped that one may be conducted in the very near future, when adequate funding has been established. According to Dr Bob Lawrence, men aged between 20-30 sometimes have an erratic response to LDN. This is thought to be due to raised testosterone levels; therefore it can take longer to adjust.

### **Special Precautions**

LDN should NOT be used at the same time as Morphine treatment or a derivative of Morphine.

On starting LDN the recent use of opiate analgesics will result in an opiate withdrawal syndrome with increased pain, muscle spasm and possible vomiting and diarrhoea. It is therefore advisable that any opiate analgesics be discontinued at least two weeks before starting LDN. These include drugs such as Co-Codamol, Oxycodone, Fentanyl and Buprenorphine Patches. Tramadol CAN be used; however, they must be taken 4-6 hours apart. The use of LDN at the same time as sustained release pain killers is NOT recommended.

When starting the treatment please report any untoward or adverse side-effects immediately so that the treatment process may be re-assessed and, if necessary, modified.

### **Availability of Low-dose Naltrexone (LDN) in the United Kingdom.**

Unfortunately, thus far, many GP's and Neurologists seem unwilling to prescribe LDN as they have little experience or knowledge of Naltrexone being used in this way at such a low dosage for the treatment of MS symptoms. Nevertheless, with the enclosed information and an increase in patients demanding LDN, gradually more doctors are prescribing.

Dr. Bob Lawrence is experienced with the use of this therapy and if your GP is willing to provide treatment on the NHS he will be pleased to provide advice and guidance to introduce, and effectively maintain, this method of treatment. Dr Lawrence is available for consultations and you can contact him for information and advice on [bob.lawrence@ntlworld.com](mailto:bob.lawrence@ntlworld.com) or 01792 790531. You can also contact the LDN Research Trust on 0844 4145 295 or [contact@ldnresearchtrust.org](mailto:contact@ldnresearchtrust.org) who may be able to advise you further on where to obtain a prescription.

Following its successful use in the USA, and many other countries, in the treatment of Multiple Sclerosis since 1985, LDN is produced in response to private or NHS prescriptions, by a company in the UK:

**Dickson's Pharmacy, 35 Mitchell Arcade, Glasgow, G73 2LS**

**E-mail: [homedeliverypharmacy@yahoo.co.uk](mailto:homedeliverypharmacy@yahoo.co.uk)**

Dickson's produce the liquid suspension, at whatever dose required, for approximately £15.00 per month of treatment, including postage. They also supply LDN capsules at either 3mg or 4.5mg doses at £30.00 for 30, including postage.

This much reduced cost will hopefully encourage more doctors to prescribe LDN. If you are able to obtain a prescription for LDN from your local GP you will be able to get it dispensed as described above, at the standard prescription rate. Although LDN is well known in General Practice, as it is used in higher doses for conditions such as cancer, AIDS or chronic

infection, it is not on the NHS blacklist of drugs. GP's are often unfamiliar with LDN so please take whatever information you have with you in order to familiarise your doctor with this method of treatment.

Your GP may suggest that LDN is not licensed for the purpose of treating MS but he, or she, will be aware that many other drugs are already used for treating this condition, although they remain unlicensed for that purpose. Examples include Amantadine, Gabapentin and Modafinil. There is therefore no valid reason why LDN should not be used in the treatment of MS.

It is worth pointing out that LDN, at the low dose, is virtually non-toxic and once the method is established, has absolutely no side-effects. At just one capsule per day, it is simple to administer and compared to many of the conventional alternatives, such as beta interferon, currently approved by the NHS for the treatment of MS, considerably less expensive in cost.

If you obtain a supply from your GP please remember to specify the nature of the filler (Avicel) and the dose that you require.

If you are unable to obtain a prescription from your GP, e-med offer an LDN prescription service. You will need to register with e-med (current annual charge is £20) and provide them with a letter from your GP confirming that you have MS. There is a charge of £15 per prescription issued (usually for a 3 month supply). Further details can be found at [www.e-med.co.uk/ldn.php](http://www.e-med.co.uk/ldn.php)

### **Republic of Ireland**

If you are an Irish resident and have a prescription you can obtain LDN from **Quinns Pharmacies, Bridge Street, Gort, Co. Galway, telephone +35391 631272 or Granary Court, Edenderry, Co. Offaly, telephone +35346 9773005. 4.5mg retails at approximately 30 Euros.**

### **Obtaining LDN in the USA and Canada**

One of the first pharmacies to supply LDN in the USA was **Bigelow Pharmacy** in Manhattan. Bigelow will ship it anywhere, in the US or to other countries, and will accept prescriptions from any licensed physician. They prepare LDN using any filler; Lactose, Calcium Carbonate or Hypromellose or any other preferred filler. **Their telephone number is (212) 533 2700.**

### **If able to obtain a private prescription**

The Pharmacy most commonly used appears to be **IRMAT** – you can scan or fax the prescription to them – **fax no. 001 212 532 6596 or tel: 001 212 685 0500.** If you e-mail they require you to send your mailing address, phone number, date of birth and indicate if you have any allergies to any medications or if you are lactose intolerant. Their e-mail address is [anne\\_p64@hotmail.com](mailto:anne_p64@hotmail.com). Other pharmacies in the USA that also supply LDN are:-

**Village Apothecary, NYC**  
**212 807 7566**

**Key Pharmacy**  
**800 878 1322 or 206 878 3900**  
e-mail [info@keynutritionrx.com](mailto:info@keynutritionrx.com)

**The Medicine Shoppe, Canandaigua, New York State**  
Pharmacist: Mr. Kim Tenreiro  
e-mail [0914@medicineshoppe.com](mailto:0914@medicineshoppe.com)

**Tel: 001 585 396 9970**

**Larry Frieders Pharmacy**, Illinois  
e-mail [larry@thecompounder.dyndns.org](mailto:larry@thecompounder.dyndns.org)  
**Tel: 001 630 859 0333**

**Smith's Pharmacy**  
3463 Yonge Street, Toronto, Ontario M4N 2N3  
**Tel: 416 488 2600 Fax: 416 484 8855**  
e-mail [info@smithspharmacy.com](mailto:info@smithspharmacy.com)

Reports have been received from patients that their pharmacies have been supplying a slow release form of naltrexone. They should be instructed **NOT** to provide LDN in an **"SR" or slow-release or timed-release form**. Unless the low dose of naltrexone is in an unaltered form, which permits it to reach a prompt "spike" in the blood stream, its therapeutic effects may be inhibited.

### **If unable to obtain a private prescription**

#### **The under mentioned contacts in USA we believe will perform telephone consultations:-**

**Dr. Shanthra**, Georgia.

Tel: 001 770 474 4029

**Dr. Steele**

Tel: 001 866 609 4362

**Dr. Sullivan**

Tel: 001 717 697 5050

#### **When will the low-dose use of naltrexone become FDA approved?**

Although naltrexone itself is an FDA-approved drug, LDN still awaits clinical trials. The FDA approved naltrexone at the 50mg dosage in 1984. LDN (in the 3mg or 4.5mg dosage) has not yet been submitted for approval because the prospective clinical trials that are required for FDA approval need to be funded at the cost of many millions of dollars. All physicians understand that appropriate off-label use of an already FDA-approved medication such as naltrexone is perfectly ethical and legal. Because naltrexone itself has already passed animal toxicity studies, one could expect that once testing is able to begin, LDN could complete its clinical trials in humans and receive FDA approval for one or more uses within two to four years.