



## The Multiple Sclerosis Resource Centre

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PATRON: ALASTAIR HIGNELL CBE

Dear Friend,

Please find enclosed an information pack about Low Dose Naltrexone (LDN).

As always, we urge you to gather information and decide on your own judgement whether or not you want to try LDN. Personal experiences and views on LDN can be found by visiting the [message board](#) at the MSRC website [www.msrc.co.uk](http://www.msrc.co.uk) and searching under 'LDN'.

Dr. Bob Lawrence is unable to take on new patients at present but you can contact him for information and advice by e-mailing [bob.lawrence@ntlworld.com](mailto:bob.lawrence@ntlworld.com). 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.

Dr Tom Gilhooly who runs the Essential Health Clinic in Glasgow is happy to talk to anyone about how to go about obtaining a prescription locally but is unable to offer telephone consultations or prescriptions. He is, however, willing to speak to GP's and Neurologists and can be contacted at [centrenstudies@aol.com](mailto:centrenstudies@aol.com)

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.

The enclosed pack has been formulated in order to provide your GP or Neurologist with the information they need to be able to consider prescribing you with LDN on an NHS Script. This can be done on an "off licence" basis (sometimes referred to as "off label").

Please do let us know if you are able to obtain a GP or Neurologist's prescription – this information may help other people with MS to obtain LDN on prescription.

In the meantime, if you need any further information, please call us on 0800 783 0518 or 01206 505444.

Yours sincerely,

*Helen Yates*

Helen Yates  
Chief Executive

*P.S. Please find at the end of this pack, a specimen letter for you to complete, to the Rt Hon Andy Burnham MP, should you wish to...*

## **LOW DOSE NALTREXONE IN THE TREATMENT OF MULTIPLE SCLEROSIS**

**These notes are important. It is essential that you read and thoroughly understand them before starting the low-dose naltrexone (LDN) treatment.**

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 neuro-physician from New York, USA, who retired in March 2007. Dr Bihari is qualified in Internal Medicine, Psychiatry and Neurology. His website can be accessed at [www.lowdosenaltrexone.org](http://www.lowdosenaltrexone.org)

The introductory dose is just 3mg per day for the first month of treatment and 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.

After one month, in the absence of any side effects and for greater therapeutic response, the daily dose may be increased to 4.5mg, the current maximum recommended dose, and should be taken between 9pm at night and 3am in the morning.

For those unable to tolerate the 3 mg dose, either of the lower doses of 1 or 2mg may be used instead, until the body becomes adjusted. Exceptionally, a higher dose of 6mg is also available for those needing a dose of this magnitude.

In anticipation of a possible addictive dependency on this drug, where a progressively higher dose may be required to maintain the same effect, it had previously been suggested that a method of intermittent therapy be used, taking a break every seven to ten days. In practice, because the drug remains in the body for just three to four hours, experience has clearly demonstrated that a dependency does not occur. In fact, it has been found that the prolonged use of LDN tends to increase the response of the drug, thus necessitating a progressive reduction in dose in order to maintain the same effect.

Current advice, therefore, is that although an occasional break of just a day or two will not significantly affect the positive response to the treatment, it is now no longer considered necessary to take such regular breaks.

### **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**

When starting LDN treatment for MS, the possibility of adverse side-effects cannot be entirely excluded. The likelihood of damaging side-effects is believed to be minimal however, as the drug is used at such a low dose.

Reversible liver damage has been found to occur only in those receiving doses greater than 300 mg per day.

Due to the remote but possible toxic effects of this drug upon the liver and kidneys it is required that **anyone previously suffering previous liver or kidney problems should report this condition before starting therapy.**

Introductory symptoms, on starting this treatment, may include disturbed sleep, occasionally with vivid, bizarre and disturbing dreams, 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 constipation has been a problem prior to treatment with LDN it is vital that measures should be taken to minimize this symptom before starting the LDN. You should eat plenty of fresh or dried fruit and fresh vegetables. Additionally, food sensitivities should be resolved by avoiding the foods most likely to cause problems, such as dairy and wheat products.

Stool softeners, such as Lactulose, Codalax, Docusate Sodium (Dioctyl or Docusol) may be used. Bowel stimulants, such as Dulcolax or Senokot may be more effective, but should be used only occasionally as there will be a tendency to become more dependent upon these agents. Commercial laxatives, which can be bought over the counter without a prescription, often contain the drug phenolphthalein. There are many different preparations and brands available and they should be avoided completely as the substance is highly addictive, with a rapidly acquired dependency. Although they appear to solve the problem initially, continued use of these products will inevitably make the constipation much worse.

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 an 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.

### **Contraindications and Special Precautions**

Because LDN stimulates the immune system and many of the drugs routinely used by the NHS in the treatment of MS further suppress the immune system, LDN cannot be used in company with steroids, beta interferon, methotrexate, azathioprine, mitoxantrone or any other immune suppressant drug. If there is any doubt, please submit a full list of the drugs you are presently taking to your doctor so that compatibility may be assessed.

LDN **can** be taken with **Copaxone** as this is not an **Interferon**.

On starting LDN the recent use of opiate analgesics (including codeine, dihydrocodeine, tramadol, morphine, pethidine or diamorphine) 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.

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.**

Following its successful use in the USA, and many other countries, in the treatment of multiple sclerosis since 1985, you may be interested in the recent news that LDN is now also 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 £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.

These prices are the same for private or NHS prescriptions. Obviously, for NHS prescriptions, the cost to the patient will be only the standard NHS prescription charge, currently £7.10.

The maximum cost to the NHS would be £30.00 per month of treatment; much less than the £107.77 per month currently being charged by Cardinal Health (previously Martindales Pharmaceuticals) for 4mg capsules or £96.97 for 3mg capsules. It is possible, however, to purchase a pack of 100 4mg capsules for £127.24. Therefore, if you have a prescription previously sent to Martindales this may now be sent to Dickson's Pharmacy, although it may be advisable to call them initially to confirm the actual cost so that the appropriate payment may be sent with the prescription.

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.

Dr. 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.

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 (either 3 or 4.5mg) that you require.

## **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) There is an underscore between anne and p64.

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.

Your Name  
Your address  
Your Telephone Number

The Rt Hon Andy Burnham MP  
The Department of Health  
Richmond House  
79 Whitehall  
London  
SW1A 2N

Date

Dear Mr Burnham

I am a (*your details, eg, 51 yr old female, with primary progressive multiple sclerosis, diagnosed in 1995*). I am sure that you are already aware that many of the drugs used to treat MS are either toxic or ineffective in suitably stabilising the disease. As you will know there are an estimated 80,000 to 100,000 people in the UK with this disease.

I have now discovered that in the USA there was a New York Neurologist, Dr Bernard Bihari, who has recently retired, who discovered in 1985, that a very low dose of a drug called Naltrexone, was effective in slowing down or stopping the progression of MS. The dose of the drug, used for this purpose, is usually either 3 or 4.5 mg per day. At this dose there is no significant toxicity and once the method is established, absolutely no side-effects.

Both FDA approval in the USA, and MCA approval within the UK, have been given to Naltrexone for treating addictions to substances like heroin, using 50 to 150mg per day, but low-dose naltrexone (LDN) for treating MS or other conditions, has not yet been granted approval in either country.

The low-dose drug method has however been prescribed widely in the US by many doctors in the treatment of MS, and has been shown to be very effective at stabilising the disease process.

Within the UK, relatively few GPs or neurologists seem even aware of the method and, although the drug can be legally prescribed under its present license, and on the basis of clinical freedom, the adoption of the method within the UK has been slow and not widespread.

A common excuse for its refusal is that the drug is not licensed for treating MS.

There are however, many other drugs that are already being prescribed for MS without an appropriate product license. Several drugs, such as Gabapentin, Amantadine or Modafinil, are frequently prescribed for MS, despite the fact that they too are unlicensed for the condition and are only minimally effective in this disease. It must logically be suggested therefore, that a far more effective method, such as LDN, might similarly be made available.

For those doctors in the UK that are willing to prescribe it, the drug is already available, and is presently being prescribed in a suitable formulation, from Dickson's Pharmacy in Glasgow.

Information describing the use and benefits of this method may be obtained from Dr Bihari's website, [www.lowdosenaltrexone.org](http://www.lowdosenaltrexone.org), or other similar websites, such as [www.ldnresearchtrust.org](http://www.ldnresearchtrust.org) and [www.remedyfind.com](http://www.remedyfind.com).

Without a doubt, this method is obviously in need of full clinical trials to prove its validity but because the drug is used at such a low dose and is therefore cheap to produce, there appears to be little opportunity for profit for the company producing it. Certainly Dupont, the company that developed naltrexone, has no plans to market or test the drug for the purpose of treating MS, or anything else.

There is one doctor, Dr M R Lawrence MRCS; LRCP, in Wales, who has MS himself and has been distributing LDN privately and achieving great success for his patients. Unfortunately, due to the recent MHRA ruling on importing LDN he may no longer be able to supply it. However, in my opinion, it should not be necessary to rely on private practice to provide such a simple, safe, and very effective method.

A fully established trial of this method could readily confirm its benefits, when it could replace other more toxic and hazardous methods, such as beta interferon, copaxone or the immune suppressants, thus saving the NHS many millions of pounds.

I hope that I have given some insight into this method with an indication of the problems faced by so many people affected by MS in the UK.

As Minister for Health, you are in a position of ultimate power in being able to promote clinical trials and instigate further investigation of this unique and very effective method. I trust that you will use this power to benefit the many thousands of people presently faced with ever increasing disability and the eventual destruction of their personal and working lives.

I look forward to your supportive and positive reply.

Yours sincerely,