

Low dose naltrexone (LDN)

Fact Sheet

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Low dose naltrexone (LDN)

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1. What is LDN?

Naltrexone (Nalorex) is a drug used to treat people with addictions. In the 1980s, Dr Bernard Bihari discovered that low doses seemed to help the symptoms of people with a wide range of conditions, including cancer, AIDS and MS.

It is thought that LDN works by encouraging the body to produce endorphins and by stimulating the immune system - an approach that differs from most MS treatments, which attempt to reduce immune activity.

2. Research

The first formal clinical research into LDN took place at Penn State University's Hershey Medical Center. This was looking at its effect on people with Crohn's Disease, an inflammatory disease of the digestive tract. In the open label study, 17 people took LDN daily in addition to their other medication. All bar two of the participants exhibited a response to therapy. The treatment was well tolerated with the most common side effect being sleep disturbances, which affected seven participants¹.

3. Trials involving LDN and MS

An Italian pilot study involved 40 people with primary progressive MS. Participants received 4mg of LDN for six months, with researchers looking primarily at safety but also at the effect on spasticity, pain, fatigue, depression

and quality of life. The results were published in September 2008 and showed LDN was safe and well-tolerated. There was a significant reduction of spasticity during the trial, but half the participants reported an increase in pain. There were no significant changes to measures of fatigue, depression or quality of life².

The University of California in San Francisco (UCSF) has studied the effects of LDN on quality of life in 80 people with MS. Results showed LDN significantly improved quality of life (specifically mental health, pain, and self-reported cognitive function) as measured by the MS Quality of Life Inventory. However, no impact was observed on symptoms such as fatigue, bowel and bladder control, sexual satisfaction, and visual function. Vivid dreaming was reported during the first week of treatment, but no other adverse effects were reported³.

A British group called the LDN Research Trust has been established by users of the treatment to raise money to fund a trial of LDN for use in MS.

4. Treatment with LDN

As naltrexone is a licensed drug in the UK, it can be prescribed for conditions other than that for which it is licensed if a doctor feels that it is an appropriate treatment. Drugs prescribed 'off licence' are the direct responsibility of the prescribing doctor, who will need to be convinced that the treatment is safe and potentially effective. Although LDN is relatively inexpensive, funding for off licence prescriptions may or may not be accepted by the local primary care trust.

The full strength drug should not be used in conjunction with an opioid-containing medication, or by people with hepatitis or liver problems. The low dose used in MS is less than a tenth of the dose used to treat addictions, and the trials that have taken place report that LDN is not associated with any significant side effects.

Because LDN stimulates the immune system, it is suggested that it should not be taken by people also taking immunosuppressant drugs, or other drugs that reduce the activity of the immune system such as steroids.

5. References

1. Smith JP, Stock H, Bingaman S, et al. Low-dose naltrexone therapy improves active Crohn's Disease. *American Journal of Gastroenterology* 2007;102:1-9.
2. Gironi M, Martinelli-Boneschi F, Sacerdote P, et al. A pilot trial of low-dose naltrexone in primary progressive multiple sclerosis. *Multiple Sclerosis* 2008;14(8):1076-1083.
3. Cree B, Kornyeveva E, Goodin DS. Pilot trial of low dose naltrexone and quality of life in MS. *Annals Of Neurology* 2010;68(2):145-150.

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If you would like to speak with someone about any aspect of MS, contact the MS Trust information team and they will help find answers to your questions.

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