



LOW DOSE NALTREXONE

What is Low Dose Naltrexone:

Naltrexone is an opioid antagonist. Currently in Australia it is most commonly seen being used at a dose of 50mg daily for patients with alcohol dependence to help reduce the craving for alcohol and possibly reduce the pleasurable effects by blocking the endogenous opioids. It is also used in the treatment of opioid abstinence at a dose of 25mg-50mg daily, where it reversibly blocks opioid receptors preventing opioid effects like euphoria ⁽¹⁾

However, in other countries such as the USA, *low-dose naltrexone* (LDN) has been used as a novel anti-inflammatory treatment due to its belief that it may help to modulate the immune system, thus potentially being a useful treatment for chronic pain conditions that are suspected to be associated with inflammatory processes ⁽⁴⁾ and patients with nervous system disorders, auto-immune diseases ⁽³⁾.

LDN refers to the daily dosages of naltrexone that is approximately 1/10th or less of the typical opioid addiction treatment dosage ⁽⁴⁾. At the low dosage level, naltrexone exhibits paradoxical properties, including analgesia and anti-inflammatory actions which have not been reported at larger dosages ⁽⁴⁾. LDN was reported to have interesting physiological properties (primarily enhancement of endogenous opioid production) in the 1980s, and the treatment approach was reported to be used clinically since then, with the first published LDN trial in humans was presented in 2007 ⁽⁴⁾.

How does LDN Work:

It is thought that within a specific dosage window, opioid antagonists such as naltrexone can exert a “paradoxical” analgesic effect ⁽⁴⁾. The brief blockade of opioid receptors between 2



a.m. and 4 a.m. that is caused by taking LDN at bedtime each night is believed to produce a prolonged up-regulation of vital elements of the immune system by causing an increase in endorphin and enkephalin production ⁽²⁾

Dosing:

It is important to note that there are currently no guidelines for the clinical use of LDN the treatment of chronic pain and inflammatory diseases ⁽⁴⁾

The typical dosage of LDN in published research is 4.5 mg, given 1 hour before bedtime, with estimated efficacy being observed 1-2 months after initiating treatment ⁽⁴⁾. However LDN dosing is patient and condition dependent so a therapeutic range that is commonly seen is between 1.5mg-4.5 nightly, with 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 ⁽³⁾

LDN is not available on the PBS, and to ensure accurate dosing it must be compounded by a compounding pharmacy. It is also important to note that in order to achieve the correct effect of LDN therapy, capsules must be compounded to be immediate release not slow release ⁽³⁾.

Adverse Effects and Drug Interactions:

Currently there are no reports of LDN drug-interactions with other medications, however sample sizes are small so there is potential for future interactions to be discovered ⁽⁴⁾

It is advised though to avoid LDN co-administered with an opioid analgesic, due to the potential of naltrexone causing a sufficient blockade of opioid receptors to reduce the effectiveness of opioid analgesics ⁽⁴⁾.

As of late there is a small number reported incidence of adverse side effects with LDN use, and no withdrawal symptoms recorded when LDN treatment are stopped, although sample





sizes are small, so data is limited ⁽⁴⁾. Some side effects that have been reported with LDN include: more vivid dreams but this decreased over time, headaches and some physicians have anecdotally reported anxiety and tachycardia as adverse reactions to LDN ⁽⁴⁾

Resources

- 1) [AMH 2016](#)
- 2) <https://custommedicine.com.au/information/low-dose-naltrexone/>
- 3) <http://www.lowdosenaltrexone.org/>
- 4) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3962576/>

