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INFORMATION ON LOW DOSE NALTREXONE (LDN)

What is naltrexone?

- This is a medication that was approved in 1984 (at a dose of 50 mg) for treating addiction to opioids. Many patients with opioid dependency use 50-100 mg daily.
- At 50 - 100 mg doses, naltrexone does not appear to help immune based disease
- At low doses, the possibility exists that it could benefit.

What is low dose naltrexone?

- It has come to be understood that low doses of naltrexone (i.e. much lower than 50 mg) have a remarkable effect on some people's immune systems.
- Studies have shown that LDN can help people respond better to many immunological conditions including HIV, cancer, and autoimmune diseases like lupus, Crohn's disease. It has also been used in chronic pain. New evidence suggested benefit in lichen planopilaris as well.
- Some of the best evidence exists in the use of LDN for Crohn's disease, multiple sclerosis and fibromyalgia.
- It is believed that our internal opioid and endorphins have an important effect on the immune system. It is now understood that various immune system cells also have opioid receptors on their surface.
- It is the ability to block opioid receptors in the body between 2 am and 4 am that is proposed to give the beneficial effects. Blockade in this manner lead to changes in the immune system and increase in the body's endorphin and enkephalin levels These are powerful modulators of the immune system.
- Many autoimmune diseases are believed to be associated with lower levels of endorphins
- The typical dose of "low dose naltrexone" is 1.5 to 4.5 mg. It is this dose specifically that naltrexone has anti-inflammatory and analgesic properties.

LOW DOSE NALTREXONE (LDN)

Who should not take LDN?

LDN is not for everyone. The following individuals should not use

1. patients who are pregnant
2. patients who are allergic to the drug
3. patients who have organ transplants and take immunosuppressive medications
4. patients with liver disease (generally naltrexone at the 50 mg is concerning for those with existing liver disease. The lower doses of 4.5 mg does not appear to pose risk).
5. Individuals with heart disease
6. Patients who use narcotics (one must wait for the narcotics to be completely out of the system). This includes pain killers, in addition to heroin.

What is the typical dose of LDN?

- Check with Dr. Donovan to determine the proper starting dose.
- Generally, 3 mg to 4.5 mg daily is a normal starting dose but lower doses are often used for patients with thyroid disorders
- The drug should be taken between 9 pm and 3 am to block the opioid response overnight (between 2 am and 4 am)

What side effects are possible with LDN?

Many patients take LDN without side effects. However, the following is a partial list of side effects. Other side effects may be possible. Dr. Donovan will take them time to review the most common possible side effects. Side effects include:

1. **Difficultly sleeping.** This is usually just for the first week. If troubles sleeping go beyond this, one can reduce the dose to 3 mg or 1.5 mg
2. **More vivid dreams.** This is seen in approximately 37 % of LDN users and can decrease over time.
3. **Reduced need for thyroid medication.** Patients with autoimmune thyroid disease who take thyroid medications may want to start with a 1.5 mg dose and monitor their TSH every 2-4 weeks. This is to prevent a change from a hypothyroid/euthyroid state to a hyperthyroid state. Many patients with LDN require less thyroid supplementation while on LDN.
4. **Rarely headaches.**
5. **Anxiety (rare)**
6. **Tachycardia (increased heart rate) – rare**

LOW DOSE NALTREXONE (LDN)

What tests are needed before starting LDN?

- Dr. Donovan will order liver function tests (in some users), as well as ESR, TSH
- These may be repeated 2-3 months later and more often in individuals with thyroid disorders.

What drugs interact with LDN?

- There do not appear to be any drugs which interact.
- The medication must not be taken by users of narcotics, including those using pain killers.

Where do I get my prescription filled for LDN?

- You'll want to go to a compounding pharmacy. We have several in Vancouver that have helped our patients.
- LDN tends to be relatively inexpensive compared to many medications.
- Dr. Donovan will advise the pharmacist ***not*** to use the slow release or timed released or extended release form of naltrexone. He will also advise the pharmacist not to use calcium carbonate as filler as this can interfere with absorption. It is advised that the LDN be made up with lactose (if the patient is not lactose intolerant), sucrose or Avicel

Reference

Strazzulla LC, et al. Novel Treatment Using Low-Dose Naltrexone for Lichen Planopilaris. J Drugs Dermatol. 2017.

