

## ENDLESS BENEFITS OF LDN

Low Dose Naltrexone (LDN), a medication known primarily for its immunoregulatory, anti-inflammatory and neurological benefits, is continually proving to have a wide range of benefits for our patients.

Due to its central anti-inflammatory action in the body, LDN has many uses including Hashimoto's thyroiditis, Sjögren's syndrome, Lyme disease, mast cell activation syndrome, eczema, psoriasis, ulcerative colitis, Crohn's disease, weight loss, pain, cancer and depression...to mention a few.

LDN is available exclusively at compounding pharmacies and the dosing is customized for the patient based on the clinical indication and patient tolerance.

### Mechanisms of Action of LDN

LDN has a similar chemical structure to our body's own endorphins, known as our endogenous "opioids." Therefore, LDN shares the same binding site with our endogenous endorphins as well as exogenously dosed opioids.

The Opioid Growth Factor (OGF) receptor is present throughout the body including the brain, spinal cord, stomach, small intestines and immune cells. When LDN binds to the OGF receptor, the receptor is bound for roughly 4–6 hours and endorphin production increases. In short, LDN works by increasing the body's release of endorphins to modulate the immune system and control inflammation.

## HOW TO ORDER

Call or fax your prescriptions:

 Fax 281.828.9669

 Tel 281.828.9088

## NEED SUPPLIES?

For Rx sheets, product catalogs, and supportive materials, please call or email us:

 281.828.9088

 [pharmacy@physicianspreferencrx.com](mailto:pharmacy@physicianspreferencrx.com)

 [physicianspreferencrx.com](http://physicianspreferencrx.com)

## TAKE A VIRTUAL TOUR

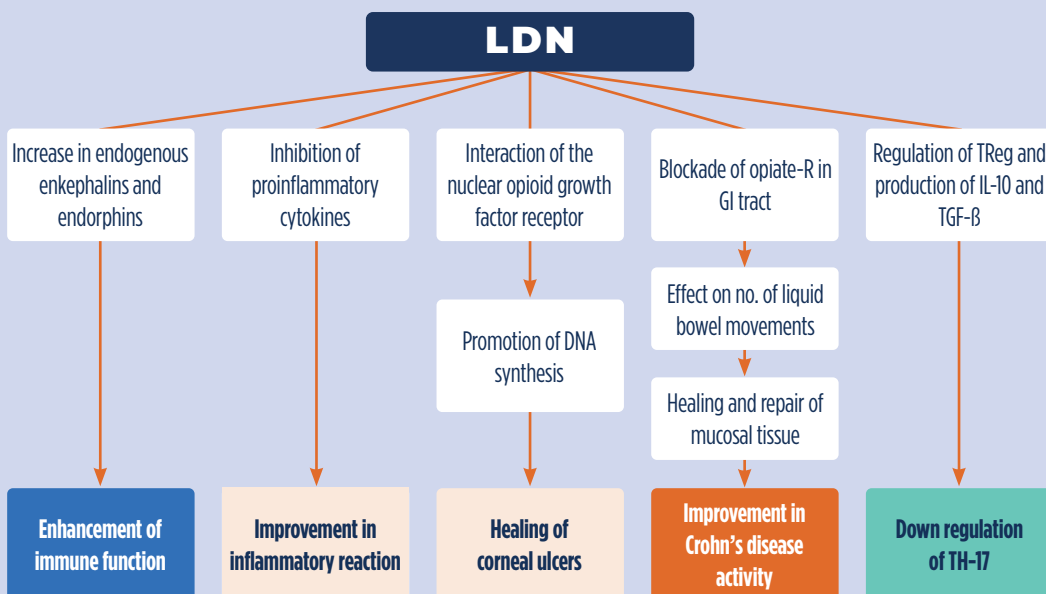
 [An inside look at our new compounding labs](#)



**ACCREDITED**

*Physicians Preference Pharmacy is a Houston-based, PCAB-accredited compounding pharmacy serving physicians and patients since 2001. We are licensed to work with and ship to doctors and patients in 48 states (excludes NV, AL). Our standards are more stringent than those of the United States Pharmacopeia (USP). Physicians Preference Pharmacy ranks first in Houston for the number of samples sent for potency testing and in the top 8% of pharmacies nationwide.*

## MECHANISM OF ACTION OF LDN



## Common Uses for LDN

LDN has a wide range of uses, rooted in its anti-inflammatory and immune-modulating activity throughout the body.

## Dosing of LDN

Oral dosing of LDN is most common due to its ease of use and lower cost. Regardless of the dosage form, LDN is started

The “target” dose of oral LDN has long been recognized as 4.5mg daily, as this dose is a sweet spot for most patients to modulate the immune system and decrease inflammation while remaining free of side effects. However, in the past few years, with the increase in immune-threatening viruses, weight

gain, autoimmune conditions and Lyme disease, LDN doses are now more commonly required to be 6mg–9mg given orally daily for full efficacy.

Most patients will tolerate a starting dose of 1.5mg orally, increasing to the next titration point with the addition of another 1.5mg capsule. If patients experience side effects that are intolerable, they should back down to the previously tolerated dose for 10 days, then rechallenge the next higher dose. Typically, rechallenging results in toleration of the higher dose.

Once patients have reached their final anticipated dose, they should request a consolidation of their dose to be compounded into one capsule, so they can take just one capsule daily. Consolidation will improve both pill burden and cost to the patient.

AUTO-IMMUNE	GASTROINTESTINAL	DERMATOLOGICAL	NEUROLOGICAL	OTHER
Hashimoto’s Thyroiditis Sjögren’s Syndrome Lyme Disease	Celiac Disease Crohn’s Disease Ulcerative Colitis	Eczema Psoriasis Atopic Allergies	ALS Multiple Sclerosis Parkinson’s Disease	Weight loss Pain Depression

For a full list of literature-based indications, visit [LDNresearchtrust.org](http://LDNresearchtrust.org).

According to clinically reported feedback from patients and the ability of LDN to inhibit activated macrophages, monocytes and microglia, it outperforms any other prescription or over-the-counter products for symptom resolution related to the long-term consequences of viral infections.

## Available Formulations

Physicians Preference Pharmacy compounds LDN in many dosage forms to accommodate the unique needs of your patients. Dosage forms include:

- Oral capsules
- Sublingual tablets
- 1% Topical cream
- Phys Pref Eczema & Psoriasis Cream (LDN/Zinc pyrithione/ivermectin/hydrocortisone; can be made without hydrocortisone as well)

at a low dose and increased slowly, generally over a 30-day period. LDN is titrated up every 7–10 days. Some patients may require a slower titration while others tolerate a faster titration very well. Titrating every 10 days can make this process very simple for the patient. It also comes in handy if the patient experiences side effects and needs to decrease dosing for 10 days, then resume.

It used to be a standard recommendation to dose LDN at bedtime due to increased endorphin activity during sleeping hours. However, many patients do better with morning dosing, exhibiting fewer side effects.

## A TYPICAL TITRATION OF EVERY 10 DAYS LOOKS LIKE THE FOLLOWING:

**Week 1:** One 1.5mg cap PO QD = 1.5mg daily

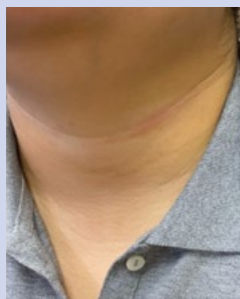
**Week 2:** Two 1.5mg caps PO QD = 3mg daily

**Weeks 3-4:** Three 1.5mg caps PO QD = 4.5mg daily

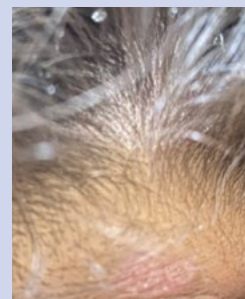
*Significant improvements were noted in psoriasis after using Phys Pref Eczema & Psoriasis Support Cream for 7 days.*



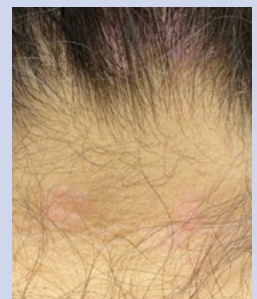
Before



After 7 Days



Before



After 7 Days

## Implementation and Time to Improvement

Note that patients may feel worse before feeling better, especially in the first two months, but this is not a reason to discontinue the medication unless side effects are intolerable. Remember that immunomodulation is a balancing act and looks different for each patient. LDN may take 2–3 months to reach its full effect but should be given at least a 6-month trial to confirm efficacy.

Time to symptom improvement and resolution varies between patients, but for most:

**Pain/inflammation:** Patients typically note improvements of their pain and inflammation after just a few doses, or within the initial days and weeks of starting LDN.

**Brain fog:** In patients with Lyme disease, improvements in brain fog are generally reported by 6 months of use.

**Immune stabilization:** Changes in cell count levels (CD4) are usually observed within 6 months after beginning treatment.

## Potential Side Effects and Drug Interactions

Although side effects are uncommon with LDN, the most common are GI upset and vivid dreams. If GI upset occurs, take LDN with food. If vivid dreams occur, switch from an evening dose to a morning dose. If patients incur flu-like symptoms which are not bearable, the patient should return to the previously tolerated dose for 10 days and then try increasing the dose again to challenge tolerance of the next highest dose.

LDN exhibits short-term opioid blockade for 4–6 hours, so separate LDN from opioids or tramadol by 4–6 hours between doses.

LDN should not be prescribed for patients taking slow-release opiates who require around-the-clock coverage for pain, as

LDN and opiates compete for the same binding sites and LDN may decrease the efficacy of the opiate medication.

## Experience Matters!

It is important that your pharmacy has experience compounding LDN and helping patients navigate their LDN titration for full efficacy. At Physicians Preference Pharmacy, we are acknowledged by The LDN Research Trust as a trusted compounded pharmacy experienced in compounding LDN in several dosage forms.

Please call us with any questions you have regarding LDN. It would be our privilege to serve you!



## REFERENCES

Hughes, J. Low Dose Naltrexone and the Theorized Treatment... Medicine Center Pharmacy. [tinyurl.com/3n3jvppv](https://tinyurl.com/3n3jvppv)

FLCCC Alliance. I-Recover: Management Protocol... [tinyurl.com/mpt7md8k](https://tinyurl.com/mpt7md8k)