PATIENT GUIDE | VEROS HEALTH | IMMUNOe HEALTH & RESEARCH

Low-Dose Naltrexone (LDN)

Immune-modulating therapy for chronic inflammatory & immune conditions

SCAN FOR RESEARCH

THE IMMUNE CONNECTION

LDN works directly on the immune system — reducing neuroinflammation, stabilizing mast cells, and rebalancing immune pathways. It is one of the most versatile immune-modulating tools available for the complex conditions we treat at Veros.

WHAT IS LDN?

Naltrexone is FDA-approved at 50mg for addiction. At very low doses (1-4.5mg) it has distinct immune-modulating and anti-inflammatory effects. LDN is compounded by a specialty pharmacy, taken once daily at bedtime, and typically costs $30-60/month.

HOW IT WORKS — MECHANISM

- **Glial modulation (TLR4 antagonism) —** suppresses microglial & astrocyte activation, reducing neuroinflammation that drives pain, brain fog & fatigue
- **Endorphin upregulation —** brief opioid receptor blockade triggers a rebound increase in the body's own endorphins, supporting immune regulation
- **Mast cell stabilization —** directly inhibits mast cell degranulation via opioid receptor modulation — particularly valuable in MCAS
- **Cytokine regulation —** reduces TNF-α, IL-6, IL-12; increases anti-inflammatory IL-10
- **Gut immune axis —** reduces intestinal permeability and gut immune dysregulation

CONDITIONS TREATED AT VEROS

- **MCAS —** mast cell stabilization; reduces reaction frequency
- **Long COVID —** neuroinflammation, immune dysregulation, fatigue
- **ME/CFS —** fatigue, pain, cognitive symptoms; growing evidence
- **hEDS —** chronic pain, central sensitization, MCAS overlap
- **Fibromyalgia —** evidence is mixed; see Key Evidence
- **POTS / Dysautonomia —** anti-neuroinflammatory effects
- **Autoimmune conditions —** Crohn's, MS, lupus, Sjogren's
- **Chronic pain —** central sensitization, neuropathic pain

LDN'S EVIDENCE, HONESTLY

A comprehensive 2026 review of 105 studies (15 RCTs) found LDN was safe, inexpensive, and well tolerated — but early positive results from small, uncontrolled studies have rarely been replicated in rigorous placebo-controlled trials. Most evidence relies on subjective outcomes. LDN may still help in treatment-resistant cases where standard therapies haven't worked, provided its experimental status is clear.

COLORADO COMPOUNDING PHARMACIES

LDN requires a compounding pharmacy. Ask for a 90-day supply — significantly more affordable than monthly fills (~$60-120/90 days). Request MCC filler, no dyes (especially MCAS patients).

Belmar Compounding
Golden 303-763-5533

ClearSpring Pharmacy
Littleton 303-707-1500

ITC Compounding
Castle Rock 888-349-5453

Alpine Compounding
Arvada 303-399-5157

Pencol Compounding
Denver 303-388-3613

Good Day Pharmacy
Ft Collins 970-224-1212

Good Day Pharmacy
Loveland 970-669-7500

Medicine Shoppe
Colo Springs 719-471-3600

DOSING & HOW TO START

Starting dose:
1-1.5mg at bedtime. Start at 0.5mg for MCAS or highly sensitive patients.

Titration:
Increase by 0.5-1mg every 2-4 weeks as tolerated. Optimal titration varies widely by patient.

Therapeutic dose:
3-4.5mg daily. Some patients do best at 1.5-3mg.

Timing:
Bedtime is standard. If vivid dreams persist, try 5-6pm instead.

Form:
Compounded capsule or liquid. Request MCC filler — no dyes or flavors (MCAS).

Cost:
$30-60/month from compounding pharmacy. Usually not covered by insurance.

Important:
Do NOT take with opioid pain medications (tramadol, oxycodone, hydrocodone, etc.). If surgery is planned, stop LDN a few days prior and consult your surgeon and Veros provider.

SIDE EFFECTS & TIMELINE

- Vivid dreams — most common early side effect; usually resolves in 1-3 weeks
- Initial fatigue or mood changes — often improves after the first few weeks
- Mild nausea — uncommon; take with a small snack if needed
- Timeline: some notice changes in 1-3 months; full benefit at 3-6 months
- No organ toxicity or abuse potential reported at low doses

KEY EVIDENCE

- **Fibromyalgia —** mixed: a 2024 meta-analysis (4 RCTs) showed pain reduction, but the largest trial to date (INNOVA, 2026, 98 patients, 12mo) found no benefit over placebo
- **Crohn's disease —** Cochrane review (2 studies): higher clinical response (83% vs. 38%) and endoscopic response (72% vs. 25%) vs. placebo; evidence quality rated low
- **ME/CFS (Stanford 2023) —** significant fatigue & pain reduction
- **Long COVID —** retrospective study found strong symptom improvement vs. PT alone; Phase 2 RCTs underway (NCT05430152, NCT06366724)
- **Multiple sclerosis (Cree 2010) —** quality of life improvement; RCT efficacy data still limited
- Scan QR for full literature list & research resources

WHY VEROS HEALTH?

- Experience with LDN across MCAS, Long COVID, hEDS & ME/CFS
- Ultra-low dosing protocols for MCAS & sensitive patients
- We integrate LDN with your full immune treatment plan
- 30+ years immune expertise — IMMUNOe Health & Research