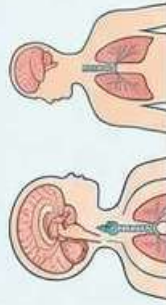


UNDERSTANDING THE MECHANISM OF ACTION (MOA) OF LOW-DOSE NALTREXONE (LDN) IN IMMUNE HEALTH

OVERVIEW: THE DUAL-ACTION MODULATOR



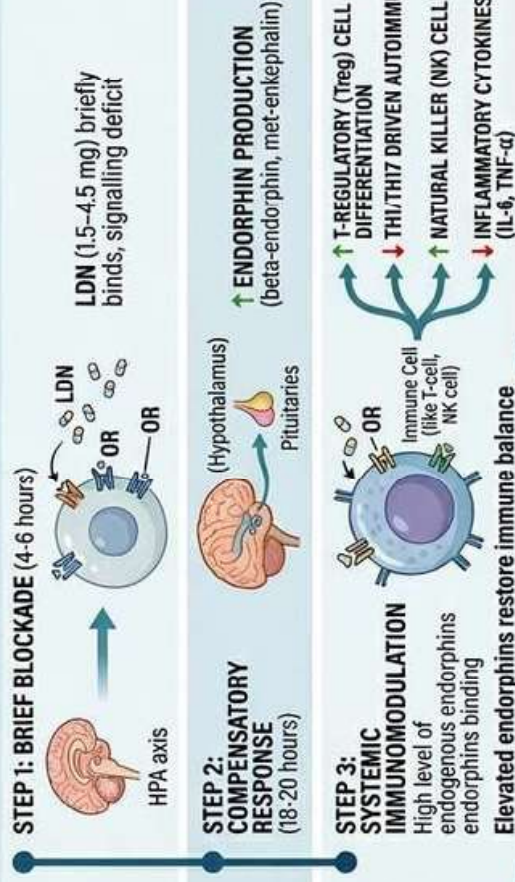
1. TRANSIENT OPIOID RECEPTOR BLOCKADE & ENDORPHIN REBOUND

2. NON-OPIOID TLR4 ANTAGONISM & ANTI-INFLAMMATORY EFFECT

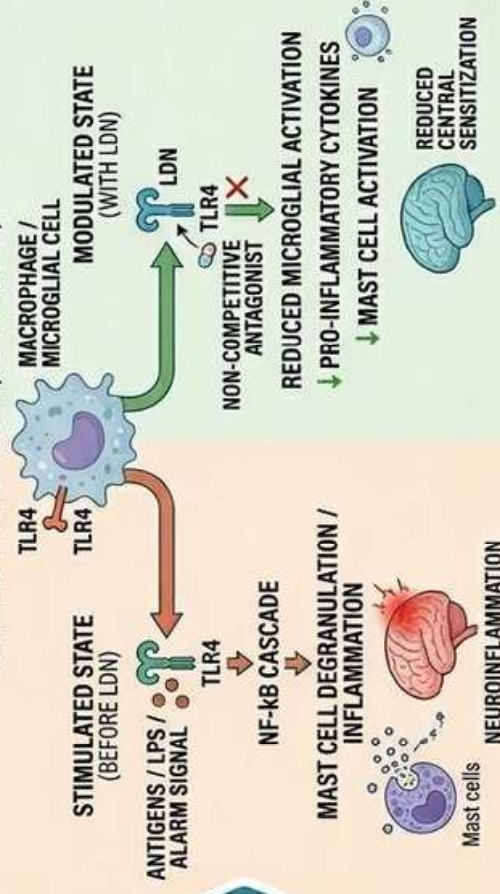


DETAILED MECHANISM

1. ENDORPHIN REBOUND (TIMED AT BEDTIME)



2. TLR4 ANTAGONISM (CONTINUOUS)



1

IMPROVED ENERGY (Consolidated)

Consolidated outcomes: Sustained energy levels, reduced fatigue, enhanced daily functioning and strong capacity.

- Restored HPA Axis function.
- Optimised beta-endorphin signaling.



2

MAST CELL ACTIVATION SYNDROME (MCAS) (Consolidated)

Key result: Systemic stabilization of mast cells and immune response to specific triggers.

- Decreased MC degranulation.
- Reduced inflammatory mediators.



3

FIBROMYALGIA & AUTOIMMUNITY

Alleviation of chronic pain and modulation of specific autoimmune processes.

- Reduced CNS sensitization.
- Balanced Th1/Th17 immune responses. (e.g., Hashimoto's, Rheumatoid Arthritis, and other systemic autoimmune conditions).



4

DIGESTIVE ISSUES (e.g., SIBO, Leaky Gut)

Targeted support for gut barrier integrity and reduced intestinal inflammatory states.

- Improved gut-brain axis function.
- Stabilised gut wall mast cells.

