

LDN Dosing

By Elaine Moore

The drug naltrexone is a member of the family of opiate antagonists. Opiate antagonists work by blocking the opiate receptor on immune and nervous system cells. This prevents opiate peptides from causing their intended actions. The FDA first approved naltrexone in 1984 as a treatment for opiate addiction.

Naltrexone Dosages

For opiate addiction, a daily dose ranging from 50-300 mg is used. In the protocol known as low dose naltrexone (LDN), naltrexone is prescribed off-label in doses ranging from 1.5-10 mg daily, depending on body weight and symptoms. A dose of 4.5 mg is generally recommended for patients weighing approximately 150 lbs. However, in patients who notice muscle stiffness, it's recommended that the dose be lowered. In some cases, particularly in rheumatoid arthritis, LDN can be taken every other day or every third day.

Effects of LDN

In low doses, naltrexone blocks the opiate receptor on nervous system and immune system cells for a shorter duration. This temporary blockade prevents both exogenous (from outside the body) and endogenous (natural occurring endorphins) opioid peptide compounds from reacting with the opiate receptor. Normally, our endorphins promote well-being. And normally, our endorphin levels increase after certain events, such as acupuncture, sexual intercourse, eating chocolate and exercise. Because the effects of endorphins are diminished during the opiate receptor blockade, Dr. Bihari originally proposed that LDN be taken at night.

LDN Timeframe

Studies show that the effects of endogenous opiates last from 24-72 hours. Therefore, taking LDN at night is not necessary. A 4.5 mg dose of naltrexone blocks the opiate receptor for about 6 hours. After this temporary blockade, endogenous opiate production increases dramatically.

Increased Endogenous Opiates

It's suspected that the primary effects of LDN are related to the increased production of endogenous opiates. Endogenous opiates include endorphins, enkephalins, and met-enkephalins. These compounds act as neurotransmitters and as cytokines. Cytokines are chemicals that modulate the immune response. Cytokines have different functions depending on different circumstances. For instance, in high concentrations, met-5-enkephalin causes increased cell growth. In low concentrations, such as those produced by LDN, met-5-enkephalin inhibits cell growth. For this reason, low dose naltrexone effectively inhibits the growth of certain tumors.

LDN and Thyroid Function

To date, although there is a limited amount of anecdotal information, there are no formal studies of LDN in autoimmune thyroid disease. In other autoimmune diseases, LDN has been shown to reduce inflammation and promote tissue healing. In addition, studies of endorphins, show that beta endorphins increase antibody production when antibody production is low and decrease antibody production when it's excessive. It's expected, but not proven, that the increased endorphins resulting

from LDN will reduce thyroid antibody production and help induce remission in autoimmune diseases.

There are no studies showing that LDN has an effect on thyroid hormone levels. In my experience, used short-term (4-5 months) for radioiodine-induced hypothyroidism, LDN has no effect on thyroid hormone levels. However, increased endorphins can cause an increased heart rate in some patients. This and other symptoms related to increased endorphins can be confused with changes in thyroid hormone levels. LDN also increases feelings of well being, and it reduces inflammation, which can reduce the size of goiters.