## Low Dose Naltrexone (LDN)

Doctors who have trained in restorative reproductive medicine often recommend Low Dose Naltrexone (LDN) as part of the overall treatment program. Patients that are most likely to benefit from treatment are those with:

1. Premenstrual symptoms (lasting for 4 or more days each cycle)

- 2. Endometriosis
- 3. Polycystic ovarian disease
- 4. Persistent brown menstrual bleeding
- 5. Persistent fatigue
- 6. Sleep disturbance
- 7. Low mood
- 8. Excessive anxiety

9. Personal/Family History of Autoimmune disorders: Multiple Sclerosis, Lupus, Rheumatoid Arthritis, Insulin dependent Diabetes, Hashimoto's or Hypothyroidism, Psoriasis, gluten sensitivity, IBS, etc.

## **Adverse Effects**

The majority of people taking LDN tolerate it well with few or no adverse effects. About 3% of patients cannot tolerate LDN at all and must stop. If you do experience mild side effects, they usually subside after 2 weeks of treatment. Tapering up the dose slowly in 0.5mg or 1.5mg increments every 1-2 weeks may help prevent or lower them.

<ul> <li>Sleep disturbance</li> <li>Vivid Dreams</li> </ul>	50% 50%
· Nausea	10%
· Headache	10%
· Dry mouth	10%

# **LDN Not Suitable**

LDN cannot be taken with opioids such as codeine, morphine or tramadol. If you mix LDN with these pain relieving medications you can become acutely ill with persistent vomiting lasting up to 48 hours.

You should stop LDN 2 days before any surgery and recommence 24 hours after discontinuing pain relieving medication after surgery. If you have poor liver or Kidney function you cannot take LDN. Taking with alcohol may increase a hangover effect.

# LDN in pregnancy

Results of new research suggest that naltrexone may be an option for pregnant women who use opioids. Published in the American Journal of Obstetrics and Gynaecology in 2020, 121/230 patients were given naltrexone. No differences in incidence of birth anomalies were seen between the naltrexone and standard-care groups

# Off label use

It is common practice in medicine to use medications for different purposes than what they were originally intended to treat. This is called "Drug Repurposing"". Although a growing number of scientific papers have been published in peer reviewed medical journals, it is unlikely to be widely used until further clinical trials are conducted and published. Until that time the medical community regards LDN as an experimental treatment. This treatment is likely safe and beneficial for many patients, including those with infertility and repeated miscarriage.

# Low Dose Naltrexone

Novel uses for an existing prescription medication

Gonadotropin Deficiency Ovarian Hormone Dysfunction Beta Endorphin Deficiency Auto Immune Disorders Immune System Dysfunction Chronic Pain and Inflammation Insulin Resistance

www.fertilitycarecanada.com

www.lowdosenaltrexone.org

www.iirrm.org



## NALTREXONE: used since the 1980's

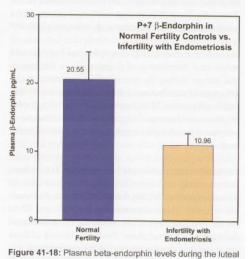
High dose naltrexone (HDN), similar to the drug naloxone, is a treatment for alcohol and opioid dependent drug addicts. It is an opioid receptor antagonist which blocks endorphin receptors to prevent them from working. These substances stimulate the endorphin receptors to give a "Rush, Buzz or Kick", but this effect does not occur if a patient has taken naltrexone. In contrast, low dose naltrexone (LDN) treats endorphin *deficiency*, stimulating the body to increase natural opioid production. Endorphin stimulation results in a wide range of beneficial effects such as improving immune function, general health and fertility.

## NALTREXONE RESEARCH: over the years

Doctors working independently of each other have been using Naltrexone to stimulate the body's endorphin system to treat a number of different "Endorphin-Deficiency states".

## Dr. Thomas Hilgers, pioneer of

NaProTechnology and Professor in Obstetrics and Gynecology from Creighton University in Omaha, Nebraska, has used Naltrexone since 1985 to enhance the natural Endorphin surge and improve fertility rates in his infertility program. It has been known for some time that endorphin deficiency will result in reduced fertility and that improving endorphin levels can improve fertility. If you block the endorphin receptors at night the body responds by giving an increased natural endorphin surge the following day. Dr. Hilgers has shown through his research efforts that treatment with naltrexone will increase endorphin levels the following day.



Pigure 41-16: Plasma beta-encorphin levels during the luteal phase (Peak +7) in women of normal fertility versus those with infertility due to endometriosis (p<.01) (From: Pope Paul VI Institute research, 2004).

Naltrexone has been shown to dramatically improve severe premenstrual symptoms, increase fertility rates, as well as reduce the likelihood of miscarriage, when used as part of a comprehensive NaProTechnology fertility program in Dr. Hilger's practice. Naltrexone has also been given safely during pregnancy at a dose of 50mg daily without causing any adverse effect to either mother or baby.

**Dr.Brigitte J. Roozenburg**, an Obstetrician and Gynecologist from the Netherlands, published a study in 1997 in which 19/22 infertile patients ovulated when HDN was added to their treatment. When too many endogenous opioids are produced, this impairs a woman's ability to ovulate. This is referred to as excessive opioid tone. Blocking opioids with HDN frees the hypothalamus allowing ovulation to resume. HDN is useful in extremes of weight, high stress, and for some women with polycystic ovaries.

Dr. Bernard Bahari, a retired Neurologist and Immunologist based in New York, had found that naltrexone could also be used to treat patients with autoimmune diseases such as Multiple Sclerosis, fibromylagia, Rheumatoid Arthritis, Crohn's Disease, etc. Dr. Bahari has a group of over 200 patients with MS that have not had any progression of their disease since commencing naltrexone. Some patients have been on treatment for 20 years. Dr. Bahari uses a low dose of Naltrexone (LDN) ranging from 1.5 to 4.5mg nightly and has found this to be very effective to improve endorphin levels and halt the autoimmune disease process. Interestingly a number of conditions that cause infertility have been shown to have a possible autoimmune component. So the positive effect of treating endorphin deficiency related to *infertility may* be partly through improving immune function.

**Professor Jill Smith** from Penn State University, USA, published a study in 2011 showing LDN to be vastly superior to placebo as an immune modulator for patients with Chron's Disease as well as inexpensive and safe alternative.

**Dr. Phil Boyle** of Neo Fertility in Ireland, has used LDN as a component of fertility treatment since 2004 in treatment of endometriosis, PMS, polycystic ovarian disease, and miscarriage.

#### **ADDITIONAL PUBLICATIONS:**

HDN has improved ovulation rates in women resistant to stimulation with clomiphene. Currently, LDN is being researched for its adjunctive use in prevention and treatment of cytokine storm in viral infections such as influenza and coronavirus.