



Low Dose Naltrexone

Naltrexone is an FDA-approved drug used as an opiate antagonist for treating opiate drug and alcohol addiction since the 1970's. At regular dosing, usually 50mg a day, it blocks the euphoric response to opiate drugs such as heroin or morphine. Opioids are known to operate as cytokines, the principal communication signalers of the immune system, creating immunomodulatory effects through opioid receptors on immune cells. A popular immune classification method is referred to as the Th1/Th2 balance; Th1 cells promote cell-mediated immunity while Th2 cells induce humoral immunity. The inability to respond adequately with a Th1 response can result in chronic infection and cancer; an overactive Th2 response can contribute to allergies and various syndromes and play a role in autoimmune disease, which most ASD children show on immune testing. From the 11-13-2003 issue of New England Journal of Medicine: "Opioid-Induced Immune Modulation...Preclinical evidence indicates overwhelmingly that opioids alter the development, differentiation, and function of immune cells, and that both innate and adaptive systems are affected."

Bernard Bihari, MD, discovered that a very low dose of naltrexone boosts the immune system and helps fight diseases characterized by inadequate immune function. Low-dose naltrexone (LDN) tends to normalize the immune system by elevating the body's endorphin levels and accomplishes its results with virtually no side effects or toxicity; It is considered very safe and is not addicting. The dose is given between 9-12pm at night the body attempts to overcome the opioid block and the endorphins rise, to stay elevated throughout the next 18 hours. Studies in human cancer patients show that LDN acts to increase natural killer cells and other healthy immune defenses against cancer. Restoration of the body's normal production of endorphins in those with cancer or autoimmune diseases is the major therapeutic action of LDN.

Some of the improvements noted in autistic individuals who have taken naltrexone include: increased socialization, eye contact, and general happiness; normalized pain sensitivity; and a reduction in self-injury and stereotypic (self-stimulatory) behaviors.

According to Dr. Jaak Panksepp of Bowling Green University, a leading investigator into the effects of naltrexone on reducing symptoms of autism, children who cry rarely, lack pain sensitivity, and enjoy eating hot, spicy food may benefit most from naltrexone.

Websites

<http://www.autism.org/naltrex.html>

http://health.groups.yahoo.com/group/Autism_LDN/

http://www.lowdosenaltrexone.org/ldn_latest_news.htm

http://www.Trying_Low_Oxalates@yahoogroups.com



Past Studies/Higher doses

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[Opiate hypothesis in infantile autism? Therapeutic trials with naltrexone].

[Article in French]

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The opioid hypothesis suggests that childhood autism may result from excessive brain opioid activity during neonatal period which may constitutionally inhibit social motivation, yielding autistic isolation and aloofness (Panksepp, 1979). This hypothesis has now received strong support and is currently based on three types of arguments: (1) similarity between autistic symptomatology and abnormal behaviors induced in young animals by injections of exogenous opioids, such as increasing social aloofness and decreasing social vocalization; (2) direct biochemical evidence of abnormalities of peripheral endogenous opioids being reported in autism and (3) therapeutic effects of the long lasting opioid receptor blocking agent naltrexone in autism. In this article, we give description of open and double-blind studies of naltrexone in autism. Naltrexone has been tested in several open studies. We performed an open trial with naltrexone in 2 autistic girls, displaying serious self-injurious behavior, reduced crying and a marked preference for salty and spicy foods, symptoms that could be related to a dysfunction of the opioid system. With dosages of 1 mg/kg/day, we observed an immediate reduction of hyperactivity, self-injurious behavior and aggressiveness, while attention improved. In addition, social behaviors, smiling, social seeking behaviors and play interactions increased (Leboyer, Bouvard et Dugas, 1988). Campbell et al. (1988) has also reported a tranquilizing and a stimulating effect in 6 out of 8 children with autism. We did confirm these preliminary results in a double-blind study performed on 4 children with autism. In a cross-over double-blind study, three dosages of naltrexone (0.5, 1 and 2 mg/kg/day) and placebo were compared.

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Naltrexone in young autistic children: replication study and learning measures.

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OBJECTIVE: This study expanded upon previous work on naltrexone efficacy and safety in young autistic children and assessed performance on learning measures. **METHOD:** Eleven children with autistic disorder, aged 3.0 to 8.3 years, were studied in home, school, and outpatient laboratory, bringing to 24 the combined study sample. Naltrexone, 1.0 mg/kg, was given daily in a randomized, double-blind, crossover design. Dependent



measures were parent and teacher Clinical Global Impressions (CGI) and Naltrexone Side Effects Rating Scale (SE), Conners Parent Impulsivity/Hyperactivity Factor, Teacher Hyperactivity Factor, laboratory CGI, and analysis of videotaped behavior. Learning measures were the Early Intervention Developmental Profile-Language and paired-associate learning. RESULTS: Comparisons between naltrexone and baseline, but not naltrexone and placebo, on parent and teacher ratings showed statistical significance. Three of 11 subjects improved in two or more settings. Side effects were mild. Administering naltrexone was a challenge. The combined study sample showed improvement on all parent measures and on Teacher CGI and SE-Restlessness compared with baseline and placebo. Eleven of the 24 children improved in two or more settings. Scores on learning measures did not change across conditions. CONCLUSIONS: Naltrexone was associated with modest improvement of behavior in 11 of 24 children, but learning did not improve.

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Naltrexone in young autistic children: a double-blind, placebo-controlled crossover study.
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OBJECTIVE: This study evaluated the efficacy and safety of naltrexone, an opiate blocker, in the treatment of autism. METHOD: Thirteen children with autistic disorder, aged 3.4 to 8.3 years (mean 5.4), were studied in home, school, and outpatient laboratory. Naltrexone, 1.0 mg/kg, was given daily in a randomized, double-blind, placebo-controlled crossover design. Dependent measures included parent and teacher Clinical Global Impressions (CGI), Conners Rating Scales, and Naltrexone Side-Effects (SE) Rating Scale; laboratory CGI, movement actometer readings, and a 10-second interval recording system analysis of on-task, communication initiations, disruptive behavior, and self-stimulation. RESULTS: Eight of 13 subjects improved in two or more settings. Changes in parent measures (CGI, Conners Impulsivity-Hyperactivity Factor, and SE-Restlessness) and Teacher CGI achieved statistical significance. Teacher SE-Restlessness and initiation of communication in the clinic showed a trend toward improvement. Actometer readings improved in two children who were very active at baseline. Adverse side effects were behavioral, mild, and transient. Administering the bitter tablet was a challenge. CONCLUSIONS: Naltrexone offers promise as an agent for modest improvement of behavior and social communication in young children with autism. Parent and teacher measures can be useful in outpatient trials to evaluate change.