AOR CODE: AOR04060

Premium

Inositol Powder

Improve Your Outlook

- Helps improve mental disorders
- Helps regulate brain signaling systems
- Available in capsule and powder form for varied dose and therapeutic effect

Gluten Free  Vegan  Non-GMO

Cellular Health  Menstrual Cycle/PMS Mood

AOR Code  Variant
AOR04060  500 G POWDER

Details

Inositol (or myo-inositol) is a B-vitamin-like molecule often used to help regulate blood sugar, manage polycystic ovarian syndrome (PCOS), and alleviate the symptoms of mood disorders such as low mood or anxiousness. Inositol is essential to multiple brain signaling systems, as it helps improve the sensitivity of various receptors, therefore enhancing the delivery of messages from a variety of hormones and neurotransmitters (brain messenger-molecules). Essentially, this helps hormones such as insulin and neurotransmitters such as serotonin and dopamine work more effectively.

Research suggests that high doses of inositol can address the symptoms of behavioural and compulsive disorders, particularly those related to mood imbalances. Recent research also supports a role for lower doses of inositol in cellular defense and normal cell growth and differentiation, especially in combination with I-P-6 (inositol hexaphosphate or phytate).

Those suffering with poor regulation of blood sugar, polycystic ovarian syndrome (PCOS), or mood disorders may benefit from AOR Inositol. It can also be used as a preventive, for people concerned with healthy cellular growth and differentiation.

Label Info

Discussion
Inositol is a B-vitamin-like compound. Clinical research indicates that high dose inositol supplementation supports positive mood balance.

**Product Variation**

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**Supplements Facts**

- **Serving Size:** 1 Tablespoon (Heaping)
- **myo-Inositol:** 9.0 g

**Non-medical ingredients:**

None.

**Guarantees**

AOR™ guarantees that all ingredients have been declared on the label. Contains no wheat, gluten, corn, nuts, peanuts, sesame seeds, sulphites, mustard, soy, dairy, eggs, fish, shellfish or any animal byproduct.

**Adult Dosage**

Take 1 heaping tablespoon mixed with juice or water, twice daily with food, or as directed by a qualified health care practitioner.

**Cautions**

For adult use only. Consult a health care practitioner prior to use if pregnant, breastfeeding, or for use beyond 3 weeks. May cause side effects such as nausea, tiredness, headaches and dizziness.

**Source**

Oryza sativa (rice bran)

**Main Application**

- Healthy cellular growth
- Mood

**Disclaimer**

The information and product descriptions appearing on this website are for information purposes only, and are not intended to provide or replace medical advice to individuals from a qualified health care professional. Consult with your physician if you have any health concerns, and before initiating any new diet, exercise, supplement, or other lifestyle changes.

**Research**
Background

Inositol (myo-inositol) is a B-vitamin-like simple polyol. Most people take small quantities of this nutrient in their multivitamins or B-complex pills without thinking about it – not for any reason, but just because it’s there. But in recent years, research has uncovered the powerful influence of very high doses of this nutrient on the mind – and its potential to heal wounded souls.

The Key to Healthy Mood Processes

Inositol is a precursor to the key neuronal phospholipid phosphatidylinositol 4,5-bisphosphate (PIP2), which occupies a lynchpin place in the phosphoinositide cycle. This cycle is essential to multiple brain signaling systems, delivering messages from a variety of hormones and neurotransmitters (brain messenger-molecules) from receptors on the neuronal membrane into the heart of the cell. Signaling systems dependent on the phosphoinositide system include neurotransmitters, which are key targets to antidepressant drugs.

Neurotransmitters and Mood Disorders

One such neurotransmitter is serotonin, the target of the selective serotonin reuptake inhibitor (SSRI) drugs, like fluoxetine (Prozac®), citalopram (Celexa®), sertraline (Zoloft®), and paroxetine (Paxil®). Another is norepinephrine, which is important to feeling energized, and a main target of both the older tricyclic antidepressants and the new selective noradrenaline reuptake inhibitors (NARIs, such as Vestra®/Edronax® (reboxetine)). Still other, “dual inhibitor” drugs act on both of these neurotransmitter systems; these include venlafaxine (Effexor®) and duloxetine (Cymbalta®).

Because the brain needs the cycle to transmit messages from neurotransmitters into the neuron, any weakness in the system means that neuronal communication breaks down, even if neurotransmitter levels are adequate.

Support for Psychological Disorders

A decade ago, scientists armed with an emerging understanding of the phosphoinoside cycle began studies of high-dose supplementation with inositol powder by people suffering with a variety of psychological disorders linked to abnormal phosphoinositide signaling. These trials have found inositol to be a safe, natural nutritional approach which delivers effective relief for many of these diseases – often providing results as effective as psychiatric drugs, but without the side effects and potential for addiction.

Research

Depression

In one of the first clinical trials, researchers assembled 39 people with major depression or bipolar depression, who quit taking their antidepressant medications three days to a week before the trial began. For the next four weeks, sufferers took either twelve grams of inositol powder a day (two teaspoons, twice daily, in juice) or a placebo powder (glucose).
Hamilton depression Rating Scale (HAM-D) scores fell during the first two weeks in both groups. An initial response even on a dummy substance is often seen early on in clinical trials for depression, because of the power of hope actually affects brain function. But while those assigned to take the stand-in powder remained stuck at this plateau from then on, people taking inositol powder experienced an additional 20.5% drop in their depression scores by the end of the trial. Plus, inositol was not associated with manic episodes in the victims of bipolar depression – an important result, since many treatments for this disorder push its victims into the opposite pole, with disastrous consequences.

Inositol had loosened the jaws of the black dog of depression. And this was just the beginning.

**Bipolar Depression**

Buoyed by the success of patients with bipolar affective disorder depression who had taken inositol in the first trial, scientists next initiated a trial using only victims of this specific disease. In this trial, 24 men and women suffering with bipolar depression were randomly placed into groups supplementing with either 12 grams of inositol powder or an equal amount of glucose powder as a placebo for six weeks. All patients kept up their standard medications throughout the trial.

At the end of the trial, half of the people taking the inositol powder supplement enjoyed a 50% or greater relief of their depression as measured on the HAM-D; likewise on the Clinical Global Improvement (CGI) scale, the same inositol supplementers were seen to be “much” or “very much” improved. By contrast, only 30% of those taking the placebo experienced such benefits. Similarly, twice as many people supplementing with the inositol powder improved by 50% or more on the Montgomery-Asberg Depression Rating Scale (MADRS) as people stuck with the placebo.

The numbers did not meet the statisticians’ criteria for “significance;” however, they were so consistent that the researchers concluded that this was likely just the result of the small number of participants, and perhaps reflected the need for a more precise way of evaluating this specific class of depression. The effects the physicians saw in their patients lives left them confident that the power of inositol in victims of bipolar depression is real.

**Eating Disorders**

Twenty-four bulimic or binge eating patients took part in a double-blind, placebo-controlled crossover trial in which, after an initial run-in period, they took either 18 grams of inositol powder or a sugar placebo for six weeks each. They then switched over to taking the substance, which they had not taken in the previous period, again for six weeks. No one knew which sweet powder a given person was taking at a given time.

When the “blinds” came off at the end of the study, it was revealed that these eating disorder victims experienced a 45% alleviation in their Visual Analog Scale of severity of binge eating (VAS-B) scores, along with a 30% improvement on their CGI scores, a 24% better Eating Disorder Inventory (EDI) result, and a 28% healthier Eating Attitude Test (EAT) result while supplementing with inositol powder. While patients were also slightly better off during their time on the sugar powder than they had been before the trial began, the differences were the weak effects to be expected from a mild “placebo effect:” just a 15.5% shift on the VAS-B, no improvement on the CGI, a 9.9% blip on the EDI, and an 18.6% change on the EAT. None of the changes associated with the placebo period was
strong enough to be statistically significant, unlike the potentially life-saving effects seen with inositol.

**Panic Disorder**

In yet another study, 21 people with panic disorder who wanted to escape the side effects of their drug therapies completed a double-blind trial of inositol powder. All stopped taking their standard medications one week before starting the study; after a one week run-in period, the participants supplemented with one of two sweet powders – either inositol or a placebo powder (6 grams of glucose or mannitol, twice daily) – for four weeks, after which they switched over to the alternative powder for the remaining four weeks. Their initial condition, and their progress, was quantified using the HAM-D, along with the Hamilton Rating Scale for Anxiety (HAM-A) and a panic score that was based on the number of panic attacks a person suffered weekly and the severity and number of symptoms associated with each attack.

Every outcome was improved while people were supplementing with inositol powder. Inositol users suffered over 40% fewer panic attacks per week than they did when only taking a sugar. Their panic scores were only a third as high as they were during their time on a placebo, and their phobia scores were more than a third lower. And while the results did not cross the threshold of statistical significance, raw HAM-D and HAM-S scores also fell more in the inositol supplementation period than when they were swallowing the powdered sweeteners. Clearly, inositol powder lifted much of the desperate burden of nameless anxiety from the shoulders of people who took it.

In a second trial, researchers pitted inositol head-to-head against fluvoxamine (Luvox®) in a double-blind, placebo-controlled, random-order crossover study. For one month, twenty victims of panic disorder took either a dummy Luvox® tablet and real inositol powder (18 grams), or real Luvox® and powdered sugar as a stand-in for inositol; then, they were switched to the opposite combination for a second month.

It was exciting enough when the study revealed that by most criteria, people got just as much relief from panic by using inositol supplements as they did from taking the drug: HAM-A, phobia, and CGI scores all improved by about the same amount in both groups. This alone is enough to merit the attention of panic disorder victims and their physicians – especially when you consider how much more often drug users traded symptomatic relief for side effects such as nausea (twice as common) and tiredness (nine times more likely).

But in fact, the study revealed that inositol is actually more effective than fluvoxamine in reducing the number of panic attacks suffered, cutting weekly attacks by 57% while the drug only reduced them by 41%.

**Obsessive-Compulsive Disorder (OCD)**

Inositol powder has also been documented to relieve the maddening fixations of OCD. In a double-blind, placebo-controlled crossover study, thirteen obsessive-compulsive men and women completed a cycle of taking 18 grams of either inositol powder or a sugar placebo each day for six weeks, followed by using the other treatment for the next six weeks.

Even on a preliminary analysis, people experienced 12.5% greater relief of obsessive symptoms while taking inositol powder, as measured on the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), than when taking the placebo. Even this was a statistically significant difference. But the full
power of inositol was only revealed when the researchers re-analyzed the data after excluding the patients who had initially been referred from a clinic’s “resistant” patients only, looking instead at patients from clinics whose patients had a wider spectrum of patients. Looking at these “mixed” obsessive-compulsive patients, the improvement experienced from taking inositol powder was nearly double that reported for the placebo period (181% as great an improvement).

**Important Notes About Inositol Powder**

In all of the placebo-controlled trials, safety was monitored using various blood and urine tests for things like liver enzymes, blood cell counts, and indicators of kidney function; no significant changes were noted, nor was there any difference between the people taking real inositol powder and those just swallowing sugar. Side effects were all minor, and were just as common in the placebo group as in the people taking inositol. As is common in psychological disturbances responsive to SSRI drugs, there was a high dropout rate in the trials – but it was equally spread out among groups taking inositol and groups fed sugars. In every respect assayed, the studies found high-dose inositol to be an extremely safe, well-tolerated supplement.

**Market Trends**

Some of the more common treatments for anxiety and depression and other forms of mental illness include the use of medications such as selective serotonin reuptake inhibitors (SSRIs). However, these medications can have side effects and may not be effective when used over an extended period of time.

Inositol is a simple B-like vitamin with a phenomenal therapeutic capacity that is underappreciated. Inositol is also marketed under the name myo-inositol, which is essentially inositol. Inositol has various configurations in 3-dimensional space, one of them being myo-inositol. All inostiol molecules will take on the configuartion of myo-inositol at one time or another.

Another form of inositol is inositol hexaphosphate (IP6). This is a different compound, but the two combined have excellent synergism for healthy cellular growth and differentiation.

**AOR Advantage**

It is a B-vitamin that has more recently been applauded for its ability to support a healthy mood balance and normal cellular growth and differentiation. AOR offers inositol in both capsule and powder form because different doses of inositol have varying therapeutic effects. For people bound by mood disorders, inositol powder is a new orthomolecular key to the shackles that bind their minds.

However exciting the results of the studies on high-dose inositol may be, inositol powder is not a panacea for psychic ills. Inositol is of no benefit in premenstrual dysphoric disorder, anergic schizophrenics, Alzheimer’s disease victims, or children with autism; and in fact, high-dose inositol made children with attention deficit disorder worse. It appears that inositol is effective nutritional support for people with disorders that usually respond to SSRI drugs, and not to those that don’t. That also probably explains why trials have found that adding inositol supplementation to existing SSRI
usage does not yield further improvements in people with depression, partially-responsive OCD, or depression that is immune to the effects of the SSRIs themselves.

References


Abstract

Phosphoinositides, inositol phosphates, and phospholipase C in embryonic stem cells.


Quinlan LR.

The stimulation of inositol phospholipid metabolism via phospholipase C (PLC) is an important signal transduction pathway in a wide variety of cell types. Activation of the pathway is associated with many aspects of cellular activity, including cell growth and differentiation. Activation of hormone-sensitive PLC results in the rapid breakdown of polyphosphoinositides to generate two second messengers: inositol trisphosphate and diacylglycerol. The water-soluble inositol trisphosphate is involved in the release of intracellular calcium from internal stores, whereas the lipophilic diacylglycerol is involved in protein kinase C activation. Inositol supplementation is essential for the in vitro growth of rabbit blastocysts, and studies have shown that the components of the signaling system are present in mouse and cattle embryos and in mouse embryonic stem (ES) cells. In ES cells, the signaling system appears to be constitutively active and essential for normal ES cell proliferation. Here, we describe in detail the materials required and some of techniques involved in studying the phosphoinositide signaling system in mouse ES cells. Furthermore, we describe methods of analyzing the effects of modulating the PtdIns signaling system on ES cell proliferation and the induction of apoptosis.
Double-blind, controlled, crossover trial of inositol versus fluvoxamine for the treatment of panic disorder.


Palatnik A, Frolov K, Fux M, Benjamin J.

Only 70% of patients respond to current treatments for panic disorder, and many discontinue drugs because of side effects. myo-Inositol, a natural isomer of glucose and a precursor for the second-messenger phosphatidyl-inositol system, has previously been found superior to placebo in the treatment of depression, panic disorder, and obsessive-compulsive disorder (OCD), but a direct comparison with an established drug has never been performed. A double-blind, controlled, random-order crossover study was undertaken to compare the effect of inositol with that of fluvoxamine in panic disorder. Twenty patients completed 1 month of inositol up to 18 g/day and 1 month of fluvoxamine up to 150 mg/day. Improvements on Hamilton Rating Scale for Anxiety scores, agoraphobia scores, and Clinical Global Impressions Scale scores were similar for both treatments. In the first month, inositol reduced the number of panic attacks per week (mean and SD) by 4.0 (2) compared with a reduction of 2.4 (2) with fluvoxamine (p = 0.049). Nausea and tiredness were more common with fluvoxamine (p = 0.02 and p = 0.01, respectively). Because inositol is a natural compound with few known side effects, it is attractive to patients who are ambivalent about taking psychiatric medication. Continuing reports of inositol's efficacy in the treatment of depression, panic disorder, and OCD should stimulate replication studies.

Effect of inositol on bulimia nervosa and binge eating.


Gelber D, Levine J, Belmaker RH.

OBJECTIVES: This study aimed to determine whether inositol has therapeutic value in patients with bulimia nervosa and binge eating. METHOD: A double-blind crossover trial using 18 g inositol versus placebo was performed in 12 patients for 6 weeks in each arm. RESULTS: Inositol was significantly better than placebo on the Global Clinical Impression, the Visual Analogue Scale, and the Eating Disorders Inventory.

DISCUSSION: Inositol is as therapeutic in patients with bulimia nervosa and binge eating as it is in patients with depression and panic and obsessive-compulsive disorders. This increases its parallelism with serotonin selective reuptake inhibitors.

Controlled trials of inositol in psychiatry.


Levine J.
Inositol is a simple polyol precursor in a second messenger system important in the brain. Cerebrospinal fluid inositol has been reported as decreased in depression. A double-blind controlled trial of 12 g daily of inositol in 28 depressed patients for four weeks was performed. Significant overall benefit for inositol compared to placebo was found at week 4 on the Hamilton Depression Scale. No changes were noted in hematologic, kidney or liver function. Since many antidepressants are effective in panic disorder, twenty-one patients with panic disorder with or without agoraphobia completed a double-blind, placebo-controlled, four week, random-assignment crossover treatment trial of inositol 12 g per day. Frequency and severity of panic attacks and severity of agoraphobia declined significantly with inositol compared to placebo. Side-effects were minimal. Since serotonin re-uptake inhibitors benefit obsessive compulsive disorder (OCD) and inositol is reported to reverse desensitization of serotonin receptors, thirteen patients with OCD completed a double-blind controlled crossover trial of 18 g inositol or placebo for six weeks each. Inositol significantly reduced scores of OCD symptoms compared with placebo. A controlled double-blind crossover trial of 12 g daily of inositol for a month in twelve anergic schizophrenic patients, did not show any beneficial effects. A double-blind controlled crossover trial of 6 g of inositol daily vs. glucose for one month each was carried out in eleven Alzheimer patients, with no clearly significant therapeutic effects. Antidepressant drugs have been reported to improve attention deficit disorder (ADDH) with hyperactivity symptomatology. We studied oral inositol in children with ADDH in a double-blind, crossover, placebo-controlled manner. Eleven children, mean age 8.9 +/- 3.6 years were enrolled in an eight week trial of inositol or placebo at a dose of 200 mg/kg body weight. Results show a trend for aggravation of the syndrome with myo-inositol as compared to placebo. Recent studies suggest that serotonin re-uptake inhibitors are helpful in at least some symptoms of autism. However a controlled double-blind crossover trial of inositol 200 mg/kg per day showed no benefit in nine children with autism. Cholinergic agonists have been reported to ameliorate electroconvulsive therapy (ECT)-induced memory impairment. Inositol metabolism is involved in the second messenger system for several muscarinic cholinergic receptors. Inositol 6 g daily was given in a crossover-double-blind manner for five days before the fifth or sixth ECT to a series of twelve patients, without effect. These results suggest that inositol has therapeutic effects in the spectrum of illness responsive to serotonin selective re-uptake inhibitors, including depression, panic and OCD, and is not beneficial in schizophrenia, Alzheimer’s ADDH, autism or ECT-induced cognitive impairment.

Double-blind, controlled trial of inositol treatment of depression.


OBJECTIVE: CSF levels of inositol have been reported to be lower than normal in depressed subjects. The authors administered inositol to depressed patients in a double-blind, controlled trial.

METHOD: Under double-blind conditions, 12 g/day of inositol (N = 13) or placebo (N = 15) was administered to depressed patients for 4 weeks.
RESULTS: The overall improvement in scores on the Hamilton Depression Rating Scale was significantly greater for inositol than for placebo at week 4. No changes were noted in hematology or in kidney or liver function.

CONCLUSIONS: This may be the first use of the precursor strategy for a second messenger rather than a neurotransmitter in treating depression. Although inositol had a significant antidepressant effect in this study, replication is crucial.