

In form of *myo*-inositol, 100% natural from non-GMO rice. It is considered a part of the B vitamins and is also called Bh or B8. It's manufactured according to the strict quality standards of the United States Pharmacopeia, USP.

Ingredients: Inositol (*myo*-inositol) 100% pure.

Nutritional information:

**1 scoop
(4 g)**

Inositol (*myo*-inositol)

4 g

100 % vegan

Size and format:

125 gr.

Recommended daily dose:

1 scoop (4 g) added to 250 ml of water or juice, once daily.

Consult a health-care practitioner for use beyond 6 weeks.

Do not exceed the stated recommended daily dose.

Indications and uses:

- Helps restore normal ovarian function in Polycystic Ovary Syndrome and normalize irregularities in the menstrual cycle.
- Aids female fertility, improving the quality of embryos and oocytes.
- Aids male fertility, improving sperm quality.
- Prevents gestational diabetes.
- Improves metabolic syndrome in post-menopausal women.
- Is helpful for mood disorders such as premenstrual dysphoric disorder, depression, panic disorder, obsessive-compulsive disorder and bulimia.
- Chronic thyroiditis (Hashimoto's disease).
- Coadjuvant to chemotherapy.
- Neural tube defects.

Cautions:

Consult a health-care practitioner prior to use if you are pregnant or breast-feeding.

INOSITOL (MYO-INOSITOL): is considered a member of the B vitamin group, also called vitamin Bh or B8. It has hormonal benefits for blood sugar regulation, as well as mood-related brain signaling. It plays a very important role in fertility, especially for polycystic ovary syndrome. It is also an integral component of healthy cell membranes, strengthening their resistance to oxidative stress.

Functionally, inositol is key for intracellular signaling pathways ⁽¹⁻²⁾. This means that when hormones bind to their receptor on a cell's surface, inositol is part of the chain of events that transmit the "message" within the cell. In this way, inositol helps hormones to work better; it improves their ability to communicate within the cell. Inositol seems to strengthen the effects of FSH and LH (which indicate ovulation) and it also has a role in insulin signaling ^(1,3).

Diverse studies have shown its beneficial effects in diverse situations:

Polycystic Ovary Syndrome (PCOS):

Clinical trials show that supplementing with *myo*-inositol at doses of 4 grams per day helps normalize ovulation in women with polycystic ovary syndrome (PCOS). PCOS is a common cause of infertility, with symptoms that include irregular periods, not releasing the egg during menstruation (anovulation), ovarian cysts and undesired systemic male-pattern hair growth. *Myo*-inositol improves insulin sensitivity, one of the most important benefits for the relief of PCOS, stimulating ovarian cell growth and embryo development. It reduces oxidative stress, re-establishes ovulation and oocyte quality, normalizes the menstrual cycle and reduces serum testosterone in women with PCOS ⁽⁴⁻⁷⁾.

Female fertility / in-vitro fertilization:

It's a great alternative to prescribed medications on their own or as part of assisted reproductive therapy since it helps improve the quality of embryos and oocytes. Clinical studies show that women who received inositol required fewer r-FSH injections and had a higher count of high quality oocytes. The ovarian sensitivity index was also higher, showing improved ovarian sensitivity to gonadotropin (FSH) ^(3,8-10).

Male fertility and erectile dysfunction:

Although myo-inositol has been used mainly for treating female infertility, diverse studies have shown its potential for treating male infertility. Diverse conditions such as varicocele, hypogonadism and oxidative stress are causes of male infertility. Myo-inositol is found in high concentrations in the seminiferous tubules and is involved in sperm motility.

Diverse studies have shown that at doses of 4 grams per day it improves sperm parameters (concentration, motility, total count, etc.), as well as hormonal levels of LH, FSH and inhibin B involved in male fertility ⁽¹¹⁻¹⁵⁾.

Gestational diabetes:

In pregnant women, inositol at a dose of 4 grams per day can help prevent or decrease the effects of gestational diabetes. It improves insulin resistance/prediabetes and its associated metabolic parameters. It reduces the risk of having gestational diabetes by 67% ⁽¹⁶⁻¹⁹⁾.

Metabolic syndrome:

Clinical studies have shown that it offers benefits in the treatment of metabolic syndrome in post-menopausal women. Myo-inositol (2 grams/day) along with diet improved systolic and diastolic blood pressure, insulin resistance index (HOMA-IR) rates, serum cholesterol and triglyceride levels ⁽²⁰⁻²²⁾.

Premenstrual dysphoric disorder (PMDD):

PMDD is a mood disorder that alters the social or work life of women who suffer from it. Its aetiology is unknown, although the serotonergic system plays a fundamental role. One of the most effective treatments involves selective serotonin reuptake inhibitors. Myo-inositol is the second serotonin messenger so it seems to play a similar role.

At a dose of 4 grams, 3 times a day, myo-inositol improves PMDD symptoms, reduces the "Daily Symptoms Record" scale and improves the "Hamilton Depression Rating" and "Clinical Global Impression-Severity of Illness" scales ⁽²³⁾.

Depression

Patients with depressive disorders have lower amounts of myo-inositol in the prefrontal cortex ⁽²⁴⁾. At doses of 12-18 grams per day, it improves symptoms on different depression scales ⁽²⁵⁻²⁷⁾. It is also effective for depression in people with bipolar disorder ⁽²⁸⁾.

Panic disorder:

Treatment with myo-inositol at a dose of 12-18 grams per day has a similar effect to that of fluvoxamine, a medication used for panic disorder, at reducing the severity of panic attacks and the severity of agoraphobia (obsessive fear of open spaces) ^(25,29-30).

Obsessive-compulsive disorder:

Several studies have shown the efficacy of myo-inositol in obsessive-compulsive disorders at a dose of 18 grams per day. There are also promising preliminary results for trichotillomania (obsessive hair-pulling disorder) ^(25,31-34).

Bulimia:

Patients with bulimia nervosa have lower levels of myo-inositol in certain parts of the brain ⁽³⁵⁻³⁶⁾. Doses of 18 grams per day improve the symptoms of eating disorders such as bulimia ⁽³⁷⁾.

Chronic thyroiditis (Hashimoto's disease):

Hashimoto's disease is a chronic autoimmune disorder in which thyroid function is decreased (hypothyroidism), and is associated with a greater risk of coronary disease and myocardial infarction. Myo-inositol (600 mg) together with selenium (selenomethionine) (83 µg Se) has an immunomodulatory effect and improves thyroid function ⁽³⁸⁻⁴⁰⁾.

Cancer:

Clinical studies have shown its efficacy as coadjuvant together with inositol hexaphosphate (at a dose of 6 grams per day) in chemotherapy treatments for diverse types of cancer (breast, lung, colon), reducing adverse effects and improving patient quality of life ⁽⁴¹⁻⁴⁷⁾.

Neural tube defects:

Recent research suggests that myo-inositol can help prevent folic acid-resistant neural tube defects ⁽⁴⁸⁻⁴⁹⁾.

Summary of indications and clinical trials:

Indication	Design	Intervention	Result	Ref.
Polycystic Ovarian Syndrome (POS)	Randomised study of 50 women with PCOS and insulin resistance.	4 g/day of myo-inositol or 1,500 mg/day of metformin. Duration: 6 months.	Myo-inositol and metformin show similar efficacy in improving PCOS symptoms.	4
	Controlled study of 50 women with anovulation and PCOS.	4 g/day of myo-inositol + 400 µg/day of folic acid. Duration: 6 months.	It improved ovulation, the chance of pregnancy, as well as body mass index and insulin resistance.	6
Female infertility	Prospective controlled study of 72 women with low response to IVF (in vitro fertilization).	4 g/day myo-inositol + 400 µg/day folic acid or placebo. Duration: 3 months of treatment before IVF	Women who received myo-inositol required fewer r-FSH injections and had higher numbers of high-quality eggs. The ovarian sensitivity index was also higher, improving ovarian sensitivity to gonadotropin (FSH).	3
Male infertility	Randomised study of 194 men with idiopathic infertility.	4 g/day myo-inositol + 400 µg/day folic acid or placebo (folic acid only). Duration: 3 months	Myo-inositol increased the percentage of sperm with reacted acrosome, sperm concentration, total count and progressive motility. It also improved levels of LH, FSH and inhibin B.	11
Gestational diabetes	Randomised study of 220 overweight pregnant women.	4 g/day myo-inositol + 400 µg/day folic acid or placebo (folic acid only) from the first trimester of pregnancy Duration: the entire gestation.	Treatment with myo-inositol reduced the risk of developing gestational diabetes by 67%.	16
Metabolic syndrome	Randomised study of 80 postmenopausal women with metabolic syndrome	2 g/day of myo-inositol + diet or placebo + diet. Duration: 6 months.	Myo-inositol together with diet improved systolic and diastolic blood pressure, insulin resistance index (HOMA-IR), and serum cholesterol and triglyceride levels.	22

Premenstrual Dysphoric Disorder (PMDD)	Placebo-controlled crossover trial of 90 women with PMDD	12 g/day of myo-inositol or placebo Duration: 2 months placebo + 6 months myo-inositol or placebo	Myo-inositol improved three different scales for measuring PMDD symptoms.	23
Depression	Double-blind, placebo-controlled trial of 28 patients with depression	12 g/day of myo-inositol or placebo. Duration: 4 weeks.	After 4 weeks of treatment there was an overall improvement in the Hamilton Depression Scale score.	26
Panic disorder	Randomised, double-blind, controlled crossover trial of 20 patients with panic disorder.	1 month of 18 g/day of myo-inositol and 1 month of 150 mg/day of fluvoxamine.	Myo-inositol reduces the frequency and severity of panic attacks and the severity of agoraphobia (obsessive fear of open spaces).	29
Obsessive Compulsive Disorder	Double-blind, controlled crossover trial of 13 patients with obsessive-compulsive disorder	18 g/day of myo-inositol or placebo. Duration: 6 weeks.	Treatment with myo-inositol was effective in reducing the symptoms of obsessive-compulsive disorder.	31
	Double-blind, placebo-controlled trial of 38 patients with trichotillomania (disorder of pulling out one's own hair in a convulsive manner).	6-18 g/day of myo-inositol or placebo. Duration: 10 weeks.	In this preliminary study it appears that myo-inositol is effective in the treatment of trichotillomania.	34
Bulimia	Double-blind, placebo-controlled crossover trial of 12 patients with bulimia.	18 g/day of myo-inositol or placebo. Duration: 6 weeks.	Myo-inositol was significantly better than placebo on different scales measuring eating disorders.	37
Chronic Thyroiditis (Hashimoto's Disease)	Randomised controlled trial of 168 patients with Hashimoto's Disease.	600 mg/day myo-inositol + 83 µg/day selenium or 83 µg/day selenium. Duration: 6 months.	The combination of myo-inositol with selenium improved patients' quality of life, reducing TSH and antibody levels and increasing free serum thyroxine.	38
Cancer	Prospective randomised pilot trial of 14 patients with invasive ductal breast cancer.	6 g/day of (inositol hexaphosphate, IP6 + myo-inosite) or placebo (vitamin C). All patients received chemotherapy (6 cycles). Duration: 6 months.	IP6 + inositol reduces side effects and improves the quality of life of breast cancer patients treated with chemotherapy.	41
Neural tube defects	Randomised controlled pilot trial of 33 pregnant women.	1 g/day of myo-inositol or placebo Both received 5 mg/day of folic acid. Duration: from before conception to the 12th week of pregnancy.	No cases of neural tube defects occurred in the inositol-treated group.	48

References:

- 1) Milewska, Ewa M., et al. "Inositol and human reproduction. From cellular metabolism to clinical use." *Gynecological Endocrinology* 32.9 (2016): 690-695.
- 2) Benvenga, Salvatore, and Alessandro Antonelli. "Inositol (s) in thyroid function, growth and autoimmunity." *Reviews in Endocrine and Metabolic Disorders* 17.4 (2016): 471-484.
- 3) Caprio, Francesca, et al. "Myo-inositol therapy for poor-responders during IVF: a prospective controlled observational trial." *Journal of ovarian research* 8.1 (2015): 37.
- 4) Fruzzetti, Franca, et al. "Comparison of two insulin sensitizers, metformin and myo-inositol, in women with polycystic ovary syndrome (PCOS)." *Gynecological Endocrinology* 33.1 (2017): 39-42.
- 5) Unfer, V., et al. "Effects of myo-inositol in women with PCOS: a systematic review of randomized controlled trials." *Gynecological Endocrinology* 28.7 (2012): 509-515.
- 6) Kamenov, Zdravko, et al. "Ovulation induction with myo-inositol alone and in combination with clomiphene citrate in polycystic ovarian syndrome patients with insulin resistance." *Gynecological Endocrinology* 31.2 (2015): 131-135.
- 7) Ciotta, L., et al. "Effects of myo-inositol supplementation on oocyte's quality in PCOS patients: a double blind trial." *Eur Rev Med Pharmacol Sci* 15.5 (2011): 509-14.
- 8) Rizzo, P., E. Raffone, and V. Benedetto. "Effect of the treatment with myo-inositol plus folic acid plus melatonin in comparison with a treatment with myo-inositol plus folic acid on oocyte quality and pregnancy outcome in IVF cycles. A prospective, clinical trial." *Eur Rev Med Pharmacol Sci* 14.6 (2010): 555-561.
- 9) Chiu, Tony TY, et al. "Follicular fluid and serum concentrations of myo-inositol in patients undergoing IVF: relationship with oocyte quality." *Human reproduction* 17.6 (2002): 1591-1596.
- 10) Lisi, Franco. "Pretreatment with myo-inositol in patients undergoing gonadotropins multiple follicular stimulation for IVF." *Acta Medica International* 3.1 (2016): 8.
- 11) Calogero, A. E., et al. "Myoinositol improves sperm parameters and serum reproductive hormones in patients with idiopathic infertility: a prospective double-blind randomized placebo-controlled study." *Andrology* 3.3 (2015): 491-495.
- 12) Condorelli, R. A., et al. "Myo-inositol as a male fertility molecule: speed them up!." *Eur Rev Med Pharmacol Sci* 21.2 Suppl (2017): 30-35.
- 13) Gulino, Ferdinando Antonio, et al. "Effect of treatment with myo-inositol on semen parameters of patients undergoing an IVF cycle: in vivo study." *Gynecological Endocrinology* 32.1 (2016): 65-68.
- 14) Scarselli, Filomena, et al. "Analysis of MYO-Inositol effect on spermatozoa motility, in hyper viscous ejaculates and in patients with grades II and III varicocele." *Archivio Italiano di Urologia e Andrologia* 88.4 (2016): 279-283.
- 15) Agostini, R., F. Rossi, and R. Pajalich. "Myoinositol/folic acid combination for the treatment of erectile dysfunction in type 2 diabetes men: a double-blind, randomized, placebo-controlled study." *European review for medical and pharmacological sciences* 10.5 (2006): 247.
- 16) Santamaria, Angelo, et al. "Myo-inositol may prevent gestational diabetes onset in overweight women: a randomized, controlled trial." *The Journal of Maternal-Fetal & Neonatal Medicine* 29.19 (2016): 3234-3237.
- 17) D'Anna, Rosario, et al. "Myo-inositol supplementation for prevention of gestational diabetes in obese pregnant women: a randomized controlled trial." *Obstetrics & Gynecology* 126.2 (2015): 310-315.
- 18) D'Anna, Rosario, and Angelo Santamaria. "Myo-Inositol Supplementation in Gestational Diabetes." *Nutrition and Diet in Maternal Diabetes*. Humana Press, Cham, 2018. 229-235.
- 19) Santamaria, A., et al. "Clinical and metabolic outcomes in pregnant women at risk for Gestational Diabetes Mellitus supplemented with myo-inositol. A secondary analysis of 3 RCTs." *American journal of obstetrics and gynecology* (2018).
- 20) Santamaria, A., et al. "One-year effects of myo-inositol supplementation in postmenopausal women with metabolic syndrome." *Climacteric* 15.5 (2012): 490-495.
- 21) Facchinetti, Fabio, et al. "Results from the International Consensus Conference on Myo-inositol and d-chiro-inositol in Obstetrics and Gynecology: the link between metabolic syndrome and PCOS." *European Journal of Obstetrics and Gynecology and Reproductive Biology* 195 (2015): 72-76.
- 22) Giordano, Domenico, et al. "Effects of myo-inositol supplementation in postmenopausal women with metabolic syndrome: a perspective, randomized, placebo-controlled study." *Menopause* 18.1 (2011): 102-104.
- 23) Carlomagno, Gianfranco, et al. "Myo-inositol in the treatment of premenstrual dysphoric disorder." *Human Psychopharmacology: Clinical and Experimental* 26.7 (2011): 526-530.
- 24) Coupland, Nick J., et al. "Decreased prefrontal Myo-inositol in major depressive disorder." *Biological psychiatry* 57.12 (2005): 1526-1534.
- 25) Einat, Haim, Alona Shalubina, and R. H. Belmaker. "Epi-inositol: A potential antidepressant." *Drug development research* 50.3-4 (2000): 309-315.
- 26) Levine, Joseph, et al. "Double-blind, controlled trial of inositol treatment of depression." *The American journal of psychiatry* 152.5 (1995): 792.
- 27) Mukai, Tomohiko, et al. "A meta-analysis of inositol for depression and anxiety disorders." *Human Psychopharmacology: Clinical and Experimental* 29.1 (2014): 55-63.
- 28) Chengappa, KN Roy, et al. "Inositol as an add-on treatment for bipolar depression." *Bipolar disorders* 2.1 (2000): 47-55.
- 29) Palatnik, Alex, et al. "Double-blind, controlled, crossover trial of inositol versus fluvoxamine for the treatment of panic disorder." *Journal of clinical psychopharmacology* 21.3 (2001): 335-339.
- 30) Benjamin, Jonathan, et al. "Double-blind, placebo-controlled, crossover trial of inositol treatment for panic disorder." *The American journal of psychiatry* 152.7 (1995): 1084.
- 31) Fux, Mendel, et al. "Inositol treatment of obsessive-compulsive disorder." *The American journal of psychiatry* 153.9 (1996): 1219.
- 32) Harvey, Brian H., et al. "Defining the neuromolecular action of myo-inositol: application to obsessive-compulsive disorder." *Progress in Neuro-Psychopharmacology and Biological Psychiatry* 26.1 (2002): 21-32.
- 33) Seedat, Soraya, Dan J. Stein, and Brian H. Harvey. "Inositol in the treatment of trichotillomania and compulsive skin picking." *The Journal of clinical psychiatry* 62.1 (2001): 60-61.
- 34) Leppink, Eric W., Sarah A. Redden, and Jon E. Grant. "A double-blind, placebo-controlled study of inositol in trichotillomania." *International clinical psychopharmacology* 32.2 (2017): 107-114.
- 35) Roser, Werner, et al. "Metabolic changes in the brain of patients with anorexia and bulimia nervosa as detected by proton magnetic resonance spectroscopy." *International Journal of Eating Disorders* 26.2 (1999): 119-136.
- 36) Godlewska, Beata R., et al. "Brain glutamate in anorexia nervosa: a magnetic resonance spectroscopy case control study at 7 Tesla." *Psychopharmacology* 234.3 (2017): 421-426.
- 37) Gelber, Diana, Joseph Levine, and R. H. Belmaker. "Effect of inositol on bulimia nervosa and binge eating." *International Journal of Eating Disorders* 29.3 (2001): 345-348.
- 38) Nordio, M., and S. Basciani. "Myo-inositol plus selenium supplementation restores euthyroid state in Hashimoto's patients with subclinical hypothyroidism." *Eur Rev Med Pharmacol Sci* 21.2 Suppl (2017): 51-59.
- 39) Ferrari, S. M., et al. "Myo-inositol and selenium reduce the risk of developing overt hypothyroidism in patients with autoimmune thyroiditis." *Eur Rev Med Pharmacol Sci* 21.2 Suppl (2017): 36-42.
- 40) Nordio, Maurizio, and Sabrina Basciani. "Treatment with Myo-Inositol and Selenium Ensures Euthyroidism in Patients with Autoimmune Thyroiditis." *International journal of endocrinology* 2017 (2017).
- 41) Bačić, Ivan, et al. "Efficacy of IP 6+ inositol in the treatment of breast cancer patients receiving chemotherapy: prospective, randomized, pilot clinical study." *Journal of Experimental & Clinical Cancer Research* 29.1 (2010): 12.
- 42) Lam, Stephen, et al. "A phase I study of myo-inositol for lung cancer chemoprevention." *Cancer Epidemiology and Prevention Biomarkers* 15.8 (2006): 1526-1531.
- 43) Gesthalter, Yaron B., et al. "Chemoprevention With Myo-inositol Alters Gene-Expression In The Airway Epithelium Of Smokers With Dysplasia." D99. Novel translational biomarkers in lung cancer. *American Thoracic Society*, 2016. A7536-A7536.

- 44) Druzijanic, N., et al. "IP6+ Inositol as adjuvant to chemotherapy of colon cancer: our clinical experience." *Anticancer Research*. Vol. 24. No. 5.
- 45) Bizzarri, Mariano, et al. "Broad spectrum anticancer activity of myo-inositol and inositol hexakisphosphate." *International journal of endocrinology* 2016 (2016).
- 46) Vucenik, Ivana, and Abulkalam M. Shamsuddin. "Cancer inhibition by inositol hexaphosphate (IP6) and inositol: from laboratory to clinic." *The Journal of nutrition* 133.11 (2003): 3778S-3784S.
- 47) Lam, Stephen, et al. "A randomized phase IIb trial of myo-inositol in smokers with bronchial dysplasia." *Journal of Thoracic Oncology*. 10.9 (2015): S218.
- 48) Greene, Nicholas DE, et al. "Inositol for the prevention of neural tube defects: a pilot randomised controlled trial." *British Journal of Nutrition* 115.6 (2016): 974-983.
- 49) Greene, Nicholas DE, Kit-Yi Leung, and Andrew J. Copp. "Inositol, neural tube closure and the prevention of neural tube defects." *Birth defects research* 109.2 (2017): 68-80.