



GENESTRA
BRANDS®

Myo-Inositol

Support for ovarian health[‡]

- Helps to promote healthy ovulatory activity and oocyte quality[‡]
- Supports ovarian and healthy reproductive system function[‡]
- Promotes healthy hormone balance and menstrual regularity[‡]
- Supports healthy glucose metabolism[‡]
- Provides 4 g of myo-inositol per daily serving

Myo-inositol is a naturally occurring inositol isomer. It helps promote the activities of the ovaries through its role as a precursor to inositol 1,4,5-triphosphate (InsP₃), which regulates menstrual cycle hormones and oocyte maturation. Myo-inositol also promotes healthy glucose metabolism through the production of inositolphosphoglycans (IPG), signaling molecules involved in insulin-dependent glucose uptake. In a clinical trial involving 42 women, participants were randomized to consume 400 mcg of folic acid alone or in combination with 4 g of myo-inositol daily for six to eight weeks. When compared to placebo, myo-inositol supplementation better promoted hormonal balance, menstrual regularity, and healthy insulin function.[‡]



SUPPLEMENT FACTS

Serving Size 1 Level Scoop (4 g)
Servings per Container about 62

	AMOUNT PER SERVING	% DV
Calories	10	
Total Carbohydrate	4 g	1% ^
Myo-inositol	4 g	*

* Daily value (DV) not established

^ Percent daily values (DV) are based on a 2,000 calorie diet

Recommended Dose

In a glass, add 8 oz (250 mL) of water to 1 level scoop (1 teaspoon) of Myo-Inositol and mix. Take once daily or as recommended by your health professional.

Size

Net Weight 250 g (8.8 oz)

Product Code

02177-250U



Non
GMO



Gluten
Free



Dairy
Free



Vegan

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Myo-Inositol

Scientific Rationale:

Inositol is a carbohydrate compound that was originally considered part of the B-vitamin family, although it has since been re-classified as non-essential due to the body's ability to synthesize it from glucose.¹ Inositol can be converted into nine different forms by the body, including myo-inositol and D-chiroinositol.² Adult diets typically provide approximately 1 g of inositol each day, primarily in the form of myo-inositol from whole grains, seeds, and fruits.^{1,2†}

Ovarian function

Normal myo-inositol levels can help support healthy reproductive function, including menstrual regularity and fertility.³ Myo-inositol is a precursor of inositol 1,4,5-triphosphate (InsP₃), a signaling molecule that regulates hormones involved in the menstrual cycle and mediates intracellular calcium release.^{4,5} Mammalian cells – including oocytes – have receptors for InsP₃.⁵ As proper calcium signaling is necessary for oocyte maturation, decreased levels of inositol can impair calcium transport and oocyte development.⁵ Through an insulin-dependent reaction, myo-inositol can be converted into D-chiro-inositol by an enzyme present in the body; however, increased D-chiro-inositol formation in the ovary can decrease the availability of myo-inositol, which in turn reduces oocyte quality.² Myo-inositol supplementation can help increase both inositol levels and calcium signaling to promote oocyte maturation.⁵ As a result of its role in oocyte development, better quality oocytes are present in follicles that contain higher myo-inositol levels.^{5,6†}

In a randomized, double-blind trial involving 92 women, daily supplementation with myo-inositol significantly improved ovarian function and menstrual regularity.⁷ Participants were randomized to consume 400 mcg of folic acid alone or in combination with 4 g of myo-inositol daily for 14 weeks.⁷ Ovarian activity was measured through weekly blood samples that were analyzed for hormone levels, and ovarian ultrasounds were conducted at baseline and after 14 weeks.⁷ Myo-inositol supplementation significantly decreased the time to first ovulation (25 days compared to 41 days for the myo-inositol and placebo groups, respectively), increased the frequency of ovulation (70% of women

in the myo-inositol group established normal ovulation cycles compared to only 13% in the placebo group), and elevated the level of estradiol – a marker of follicular maturation – within the first eight days.⁷ In addition to normal ovulation frequency, myo-inositol supplementation was also associated with the promotion of hormonal balance, including a significant decrease in testosterone and free androgen levels.⁷ In a similar study, total and free serum testosterone levels decreased by 66% and 73%, respectively, after six to eight weeks of myo-inositol supplementation.^{8†}

Glucose metabolism

Inositolphosphoglycans (IPG) are signaling molecules that activate enzymes involved in insulin-dependent glucose uptake.² IPG can be formed from D-chiro-inositol, although this conversion can be impaired due to a decreased production of D-chiro-inositol from myo-inositol or an increased excretion of inositol in the urine.^{2,5} Supplementation with myo-inositol increases inositol and IPG levels to support healthy glucose metabolism.² Myo-inositol also helps to produce and stimulate phosphoinositide 3-kinase, which activates GLUT4 glucose transporters.^{4†}

Myo-inositol and D-chiro-inositol supplementation

The uptake of both myo-inositol and D-chiro-inositol in most tissues is dependent upon the membrane-associated sodium dependent inositol co-transporter.² As myo-inositol has approximately 10 times more affinity for this transporter than D-chiro-inositol, it is significantly better absorbed.² Research also demonstrates that myo-inositol supplementation may better improve certain metabolic and hormonal markers when compared to D-chiro-inositol.^{9,10} In a double-blind study involving 60 women, participants were randomized to consume 400 mcg of folic acid with 4 g of either myo-inositol or D-chiro-inositol daily for six months.⁹ In comparison with D-chiro-inositol, supplementation with myo-inositol significantly better promoted hormonal balance – including total testosterone levels and the ratio of luteinizing hormone to follicle stimulating hormone – and promoting healthy insulin function.^{9†}

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