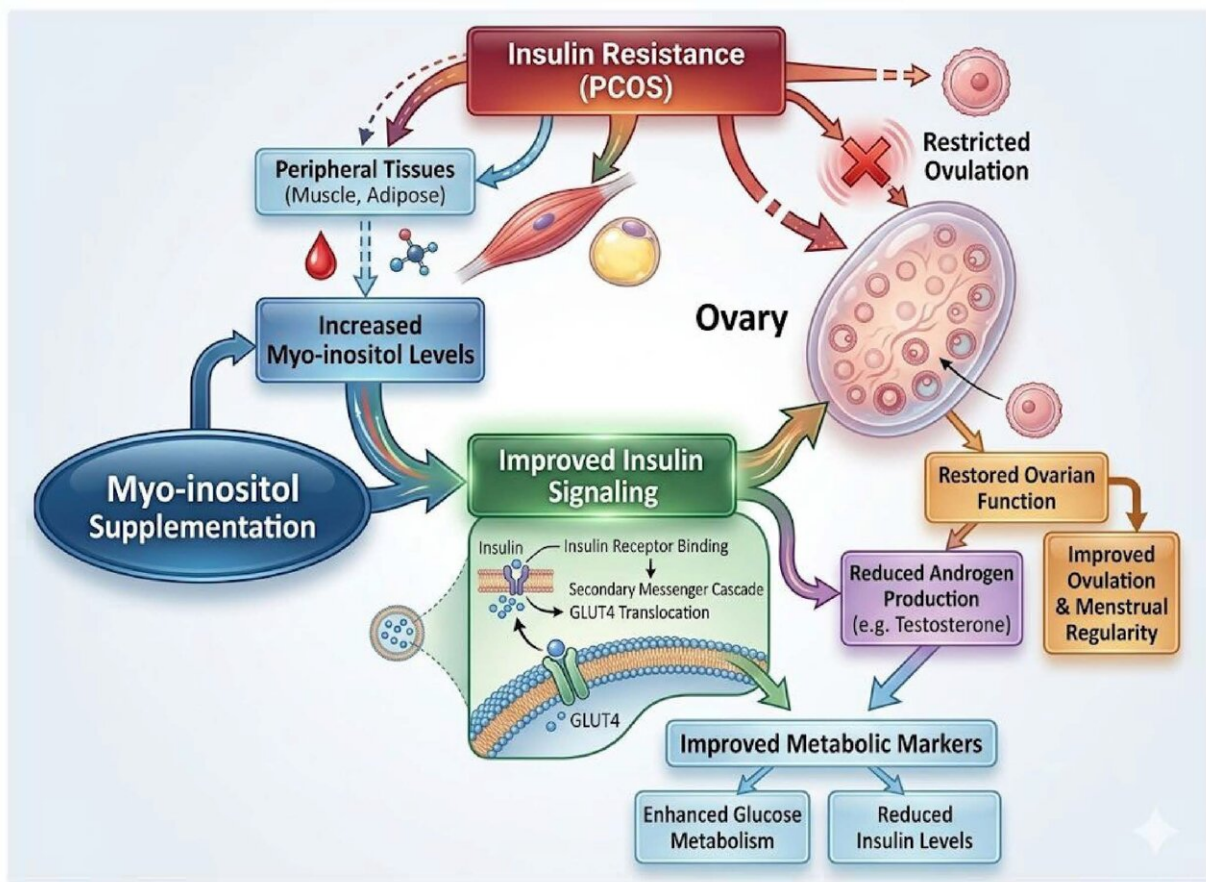


This widely used PCOS supplement shows promise for fertility, but the evidence isn't settled

June 30 2026, by Sayan Tribedi



Mechanism of action of MI supplementation in patients suffering from PCOS. Key molecular events include the restoration of insulin receptor signaling and GLUT4 translocation, adapted from established physiological frameworks. Credit: AI generated, from *Nutrients* (2026). DOI: 10.3390/nu18132093

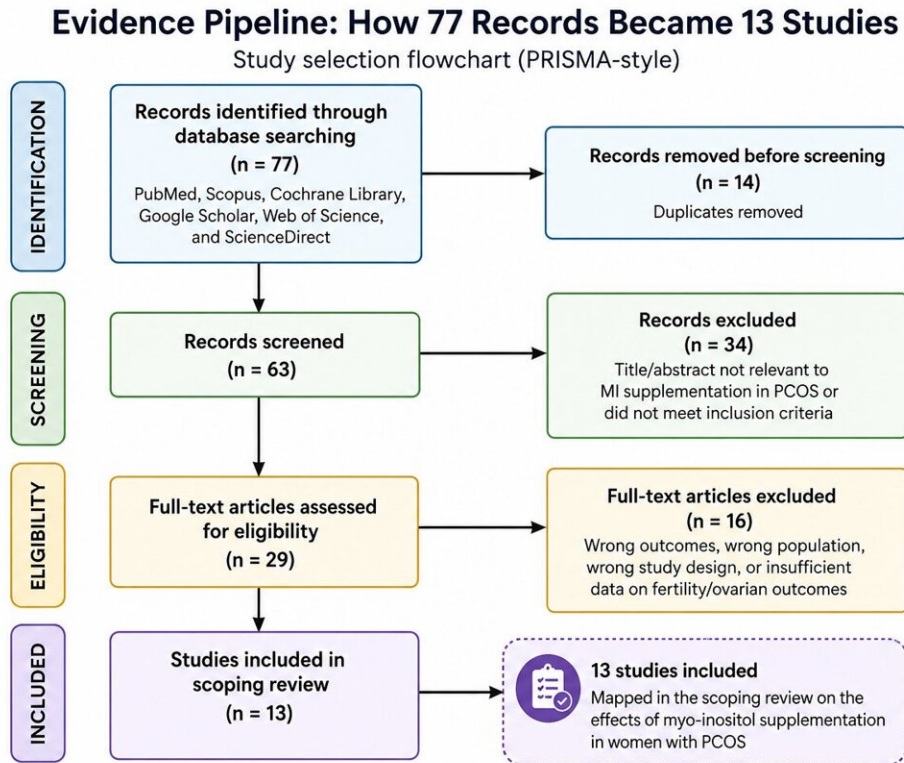
For women with polycystic ovary syndrome (PCOS), the journey to fertility can be difficult. But what if a simple, natural supplement could provide a big boost? This hopeful question has focused attention on myo-inositol, a nutrient already popular with many women with PCOS.

In a recent wide-ranging review of research on myo-inositol, published in the journal [Nutrients](#) and designed to map the available evidence, researchers found that it generally improved ovulation and pregnancy rates. But scientists emphasize the evidence is still patchy, and more robust trials are needed to confirm these promising early findings.

The PCOS fertility puzzle

PCOS affects 10%–13% of women globally. The condition interferes with hormonal balance and leads to problems such as irregular or missed periods, high androgen levels and insulin resistance. More importantly, 70% of infertility cases associated with a lack of ovulation are related to PCOS. Many women find themselves trapped in a frustrating cycle of futile treatments and unexplained symptoms, hoping for better methods of treatment.

PCOS encompasses a variety of metabolic and reproductive abnormalities. It is not only about irregular menstruation and ovarian cysts, but also about higher risks of developing conditions like obesity, diabetes and heart disease. Thus, scientists have started to consider possible ways of helping people with PCOS, including analyzing diet and supplements.



A PRISMA-style study selection flowchart showing how researchers narrowed the evidence base for the review. The diagram begins with 77 records identified through database searches, then moves through the stages of screening, eligibility assessment, and inclusion. At each step, studies are excluded based on predefined criteria, ultimately leaving 13 studies in the final scoping review. The figure visually illustrates the review's evidence pipeline and highlights the systematic process used to identify the research that informed the paper's conclusions. Credit: Image generated by the author using AI tools for illustrative purposes

Inositol: A natural candidate

Inositol, a sugar-like molecule abundant in fruits, grains and nuts, plays a role in insulin signaling. Early research suggests that supplemental myo-

inositol helps glucose enter cells, lowering insulin resistance in PCOS patients. It even seems to improve ovarian signaling: Inositol "plays a critical role in supporting fertility and ensuring normal embryonic development."

Encouraged by these clues, scientists combed through decades of studies. As the authors of the new review explain, "This scoping review aimed to map the available scientific literature on the effects of MI supplementation in women with PCOS, with particular emphasis on fertility and ovarian function, and to identify gaps in the current evidence base."

Early hints: Better cycles and pregnancy?

Some pooled analyses have shown striking benefits. One umbrella review found women treated with MI were about 2.75 times as likely to ovulate and 2.3 times as likely to achieve a live birth as those on placebo. In short, MI roughly doubled pregnancy success in those trials. Importantly, MI is easier on the gut: It "causes fewer gastrointestinal adverse events compared with metformin," which matters because many PCOS patients cannot tolerate metformin's stomach side effects.

Inspired by these clues, some fertility clinics now add MI to ovarian stimulation protocols. The goal is a gentler response and fewer risks like ovarian hyperstimulation syndrome (OHSS). Lab results look encouraging: MI users tend to have a calmer hormone profile (lower testosterone, higher SHBG). Yet outcomes beyond ovulation have been mixed.

In one large trial, giving MI to pregnant PCOS women did not reduce gestational diabetes or other pregnancy complications. And data on egg and embryo quality remain inconsistent.

Why the uncertainties remain

Despite these promising hints, experts caution that the evidence for myo-inositol remains patchy. The comprehensive review found that no key outcome was consistently supported by truly high-quality evidence. This isn't to say the studies are without value, but rather that they often lack the rigorous design and large participant numbers needed for definitive conclusions.

One of the major factors leading to the "patchiness" of the outcomes is substantial heterogeneity between studies. Imagine trying to compare the outcomes when some studies involve different doses of MI, some involve MI in combination with D-chiro-inositol or folic acid, and the treatment period can vary from several weeks to many months. It is impossible to draw solid conclusions in such circumstances or come up with an optimal protocol.

Another factor preventing researchers from reaching definitive conclusions is that the measured results differ greatly. While some papers assess surrogate markers like improvement in hormonal status or the ovulation rate, others investigate actual endpoints like pregnancy or birth rates.

These markers are useful, but they do not tell the whole story. Therefore, while the data obtained in this way are interesting, they remain inconclusive and prompt researchers to be cautious in their conclusions.

What's next?

So where does this leave women with PCOS? Given its low-risk profile, myo-inositol can be considered a potentially useful adjunct—especially for those hoping to improve insulin sensitivity and restore normal cycles.

It's already popular, and some doctors may suggest it for patients heading into IVF or for those who can't tolerate metformin. But it's not a cure-all.

Specialists emphasize that MI should supplement, not replace, proven therapies (like diet, exercise and guideline-recommended treatments). Cautiously optimistic, the review concludes: "MI supplementation may support PCOS management, particularly in fertility-related outcomes." That hopeful line highlights potential—but only stronger evidence will show how well the supplement really works.

More information: Julia Habryka et al, Effect of Myo-Inositol Supplementation in Polycystic Ovary Syndrome—Scoping Review, *Nutrients* (2026). [DOI: 10.3390/nu18132093](https://doi.org/10.3390/nu18132093)

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