



Comparative cardiometabolic effects of high, moderate, and low intensity exercise in polycystic ovary syndrome: a systematic review and network meta-analysis of randomized controlled trials

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This systematic review and network meta-analysis of 23 randomised control trials containing 1192 participants aimed to determine the differences between moderate-intensity continuous exercise (MICT), high intensity interval training (HIIT), and low-intensity training (LIT) on measures of heart and metabolic health.

The results showed that MICT significantly improved the way the body can control blood sugar as measured by the homeostatic model assessment of insulin resistance (HOMA-IR). HIIT significantly improved fitness. Both HIIT and MICT significantly improved insulin levels and low density lipoprotein (LDL) cholesterol. No significant effects were seen on body mass index (BMI), high density

lipoprotein (HDL) cholesterol, or blood pressure. LIT had no effects on any of the measures. It was concluded that in women with PMOS, MICT improved insulin resistance, insulin levels, and LDL cholesterol, whilst HIIT improved fitness, insulin levels and LDL cholesterol. These changes were seen independent of weight loss as there were no improvements to BMI.

This study could be used by healthcare practitioners to understand that different levels of exercise can have different benefits to PMOS management. Exercise can also benefit PMOS even when body weight does not change. ■

Exploring the therapeutic impact of Salvia officinalis on lipid and oxidative stress markers in patients with polycystic ovary syndrome: a randomized placebo-controlled clinical trial

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Salvia.officinalis (S. officinalis), is recognized for its antihyperlipidemic, metabolism-regulating, and antioxidant properties in diabetic and hyperlipidemic disorders. This study examines its effects on lipid and oxidative stress (OS) markers in patients with PMOS.

This was a randomized placebo-controlled trial of 70 Iranian married women aged 15-40 years with newly diagnosed PMOS, randomized to receive either 330 mg of S. officinalis extract or placebo daily for eight weeks. Results showed significantly lower triglyceride levels and malondialdehyde after eight weeks of S. officinalis extract intake compared to placebo. Also, the mean change of triglyceride, high-density lipoprotein cholesterol, malondialdehyde, and total antioxidant capacity were statistically significant in intervention group.

The authors concluded that S. officinalis extract can significantly reduce triglyceride levels and OS in patients with PMOS, suggesting its potential as an adjunctive natural therapy for managing metabolic and oxidative imbalances associated with this condition. ■



The Association Between Vitamin D and Polycystic Ovary Syndrome (PCOS) in Women: a Systematic Review

BATOUL JAAFAR, NOUR CHAMI, MOHAMAD TLAIS, ET AL
JOURNAL: NUTRIENTS 2026;18(6):

This systematic review examined the relationship between vitamin D levels and PMOS, particularly looking at how vitamin D might influence metabolic health and reproductive functions.

The results showed that there is a notable association between vitamin D deficiency and PMOS, and supplementation may benefit insulin sensitivity. While vitamin D may play a role in the condition, its effectiveness as a treatment is still uncertain.

It was concluded that vitamin D deficiency is common in women with PMOS and correlates with metabolism and reproduction but should not be considered a stand alone therapy. ■

The effectiveness of digital health interventions on anthropometric and healthy behavior in women with polycystic ovarian syndrome: a systematic review with meta-analysis

HUI-FANG ZENG, ZHEN DOU, YI-NUO ZHANG, ET AL.
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Women with PMOS commonly experience obesity, insulin resistance, and an increased risk for heart disease. Lifestyle modifications are essential to PMOS management. However, many women experience poor long-term adherence due to an inability to access support systems.

This systematic review and meta-analysis of 10 randomised control trials with 930 women with PMOS aimed to determine the impact of digital health interventions (DHIs) on body measurements and healthy behaviours.

The results showed that DHIs can lead to positive changes in both body measurements, such as weight and waist circumference, and healthy behaviours, including diet and physical activity. It was concluded that DHIs confer significant benefits in the short- and long-term to the health and well being of women with PMOS. ■