

The Effects of Exercise Programs on Metabolic and Reproductive Health in Women with Polycystic Ovary Syndrome (PCOS)

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Abstract

Objective: Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders among women of reproductive age, associated with insulin resistance, obesity, hormonal imbalances, and fertility issues. This study aims to evaluate the effects of exercise programs on metabolic and reproductive health in women with PCOS. By examining the role of exercise in insulin sensitivity, hormone levels, body composition, and ovulation, this review highlights the significance of lifestyle interventions in PCOS management.

Methods: This review analyzes recent clinical studies, meta-analyses, and literature reviews on the subject. The inclusion criteria focused on studies investigating the impact of physical activity on metabolic parameters (insulin sensitivity, glucose metabolism, body mass index) and reproductive health (hormone levels, menstrual regularity, ovulation) in women diagnosed with PCOS. The effects of different types of exercise, including aerobic training, resistance training, and high-intensity interval training (HIIT), were compared.

Results: The reviewed studies indicate that regular physical activity reduces insulin resistance, supports weight management, and lowers androgen levels, particularly testosterone, in women with PCOS. A combination of aerobic and resistance exercises has been shown to improve both metabolic health and menstrual regularity. High-intensity exercise appears to be more effective in enhancing insulin sensitivity; however, its long-term sustainability varies among individuals.

Conclusion: Exercise is a powerful complementary intervention alongside pharmacological treatments for PCOS management. Regular physical activity improves metabolic health by reducing insulin resistance while also promoting hormonal balance and reproductive function. Clinical studies suggest that individualized exercise programs play a crucial role in managing PCOS symptoms. Therefore, encouraging women with PCOS to incorporate physical activity as part of their lifestyle modifications is of great importance.

Keywords

Polycystic ovary syndrome, exercise programs, metabolic health, reproductive health.