

REPRODUCTIVE ENDOCRINOLOGY
BENEFITS OF
METFORMIN IN PCOS

Metformin therapy can reduce the occurrence of the metabolic syndrome among overweight patients with hyperinsulinemic polycystic ovarian syndrome (PCOS) presenting with non-alcoholic fatty liver disease (NAFLD), according to a new study.

Gangale *et al.* evaluated the metabolic and hepatic effects of metformin when prescribed to overweight (BMI ≥ 25) women with hyperinsulinemic PCOS. All women recruited were in their reproductive age (18–40 years). Metformin 500 mg three times per day was prescribed over a 12-month period.

Among the 140 women recruited, 57.85% presented with NAFLD and 32.09% had the metabolic syndrome at baseline. Of note, the metabolic syndrome occurred within the NAFLD subgroup only and its occurrence was significantly reduced after 12 months of metformin therapy. In addition, a 66.7% decrease in the occurrence of oligomenorrhea was observed in this subgroup at the end of the study period.

The factors that compose the metabolic syndrome substantially increase an individual's likelihood of developing type 2 diabetes mellitus, chronic kidney disease and cardiovascular disease, and are also associated with fatty liver. Gangale *et al.* show that more than half of overweight women with hyperinsulinemic PCOS might have NAFLD and that the risk of developing the metabolic syndrome is increased in this group. Long-term treatment with metformin could reduce the complications associated with the metabolic syndrome and normalize the menstrual cycle in this group of patients. The authors point out that similar studies in lean women with hyperinsulinemic PCOS would be useful to establish whether metformin therapy could be of benefit also within this group.

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Original article Gangale, M. D. *et al.* Long term metformin treatment is able to reduce the prevalence of metabolic syndrome and its hepatic involvement in young hyperinsulinaemic overweight patients with polycystic ovarian syndrome. *Clin. Endocrinol. (Oxf.)* doi:10.1111/j.1365-2265.2011.04093.x