

## **INDUCTION OF OVULATION IN PCOS: IS THERE A FIRST LINE TREATMENT?**

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The best first line therapy for PCOS is uncertain. However ASRM/ESHRE guidelines recommend clomiphene as the first line pharmacological treatment and weight loss prior to this if women are obese. The evidence is stronger for clomiphene than for weight loss. Clomiphene remains the first choice for infertility therapy and the gold standard for women with PCOS. Metformin does result in modest improvements in the PCOS phenotype with reductions in circulating insulin and testosterone levels, weight loss, and improved menstrual/ovulatory frequency. It is relatively ineffective as a solo agent to treat infertility, and further has a relative anti-fecundity compared to clomiphene alone. There may be benefits of combined therapy with clomiphene and metformin on live birth rates in a very obese population, and metformin use may be associated with fewer multiple pregnancies. Metformin may be useful to prevent Ovarian Hyperstimulation Syndrome when used in conjunction with gonadotropins.

Modest weight loss has been associated with improved ovulatory rates and pregnancies in women with PCOS. There are a variety of therapies to achieve weight loss in women with PCOS including changes in diet and exercise, pharmacologic, and bariatric surgery. None of these has been rigorously examined as a primary treatment for infertility in properly designed trials. Weight loss may have mixed effects on the chance and outcomes of pregnancies in women with PCOS.