

# Acupuncture for ovulation induction in polycystic ovary syndrome: a randomized controlled trial.

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## **Abstract**

Acupuncture has been demonstrated to improve menstrual frequency and to decrease circulating testosterone in women with polycystic ovary syndrome (PCOS). Our aim was to investigate whether acupuncture affects ovulation frequency and to understand the underlying mechanisms of any such effect by analyzing LH and sex steroid secretion in women with PCOS. This prospective, randomized, controlled clinical trial was conducted between June 2009 and September 2010. Thirty-two women with PCOS were randomized to receive either acupuncture with manual and low-frequency electrical stimulation or to meetings with a physical therapist twice a week for 10-13 wk. Main outcome measures were changes in LH secretion patterns from baseline to after 10-13 wk of treatment and ovulation frequency during the treatment period. Secondary outcomes were changes in the secretion of sex steroids, anti-Müllerian hormone, inhibin B, and serum cortisol. Ovulation frequency during treatment was higher in the acupuncture group than in the control group. After 10-13 wk of intervention, circulating levels of estrone, estrone sulfate, estradiol, dehydroepiandrosterone, dehydroepiandrosterone sulfate, androstenedione, testosterone, free testosterone, dihydrotestosterone, androsterone glucuronide, androstane-3 $\alpha$ ,17 $\beta$ -diol-3-glucuronide, and androstane-3 $\alpha$ ,17 $\beta$ -diol-17-glucuronide decreased within the acupuncture group and were significantly lower than in the control group for all of these except androstenedione. We conclude that repeated acupuncture treatments resulted in higher ovulation frequency in lean/overweight women with PCOS and were more effective than just meeting with the therapist. Ovarian and adrenal sex steroid serum levels were reduced with no effect on LH secretion.

## **KEYWORDS:**

acupuncture; lh pulsatility; ovulation; polycystic ovary syndrome; sex steroids

PMID:

23482444

[PubMed - indexed for MEDLINE]

<http://www.ncbi.nlm.nih.gov/pubmed/23482444>