



Randomized Controlled Trial [J Obstet Gynaecol Res.](#) 2016 Mar;42(3):279-85.

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Chromium picolinate reduces insulin resistance in polycystic ovary syndrome: Randomized controlled trial

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Abstract

Aim: To investigate the effect of chromium picolinate (CrP) on insulin resistance (IR) in polycystic ovary syndrome (PCOS).

Methods: This double blinded randomized controlled trial was conducted in the Gynecology outpatient clinics at Ain Shams University Women's Hospital. Using closed and randomly mixed envelopes, 100 women were selected out of 400 PCOS patients. Eighty-five patients finished the study and were analyzed, 44 in group I and 41 in group II. They were randomly allocated to 6 months of either 1000 µg CrP (50 patients), or placebo capsules (50 patients). Patients were seen monthly to encourage similar diet control and physical exercise plans. The primary outcome was fasting glucose insulin ratio (FGIR), secondary outcomes included ovulation, regularity of the cycle, body mass index (BMI), fasting blood sugar (FBS), fasting serum insulin (FSI), and serum testosterone level.

Results: There were no significant differences between women of both groups regarding pretreatment levels of FBS, FSI, FGIR, and serum testosterone. Use of CrP for 6 months was associated with significant reduction of BMI ($P < 0.001$) and FSI ($P = 0.007$), and significant rise in FGIR ($P = 0.045$). CrP significantly increased the chances of ovulation ($P = 0.011$) and regular menstruation ($P = 0.002$) by almost twofold after the fifth month of treatment.

Conclusion: Chromium picolinate is useful in PCOS to reduce IR and stimulate ovulation.

Keywords: chromium picolinate; infertility; insulin resistance; ovulation; polycystic ovary.

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