

1. Fertil Steril. 2009 May;91(5):1785-92. Epub 2008 Apr 8.

Coenzyme Q10 treatment in infertile men with idiopathic asthenozoospermia: a placebo-controlled, double-blind randomized trial.

Balercia G, Buldreghini E, Vignini A, Tiano L, Paggi F, Amoroso S, Ricciardo-Lamonica G, Boscaro M, Lenzi A, Littarru G.

Department of Internal Medicine and Applied Biotechnologies, Andrology Unit, Endocrinology, Umberto I Hospital, School of Medicine, Polytechnic University of Marche, Ancona, Italy. g.balercia@ao-umbertoprime.marche.it

**OBJECTIVE:** To evaluate the effectiveness of coenzyme Q(10) treatment in improving semen quality in men with idiopathic infertility.

**DESIGN:** Placebo-controlled, double-blind randomized trial.

**SETTING:** Andrology Unit, Department of Internal Medicine, Polytechnic University of Marche, Italy.

**PATIENT(S):** Sixty infertile patients (27-39 years of age) with the following baseline sperm selection criteria: concentration  $>20 \times 10^6$ /mL, sperm forward motility  $<50\%$ , and normal sperm morphology  $>30\%$ ; 55 patients completed the study.

**INTERVENTION(S):** Patients underwent double-blind therapy with coenzyme Q(10), 200 mg/day, or placebo; the study design was 1 month of run-in, 6 months of therapy or placebo, and 3 months of follow-up.

**MAIN OUTCOME MEASURE(S):** Variations in semen parameters used for patient selection and variations of coenzyme Q(10) and ubiquinol concentrations in seminal plasma and spermatozoa.

**RESULT(S):** Coenzyme Q(10) and ubiquinol increased significantly in both seminal plasma and sperm cells after treatment, as well as spermatozoa motility. A weak linear dependence among the relative variations, baseline and after treatment, of seminal plasma or intracellular coenzyme Q(10) and ubiquinol levels and kinetic parameters was found in the treated group. Patients with a lower baseline value of motility and levels of coenzyme Q(10) had a statistically significant higher probability to be responders to the treatment.

**CONCLUSION(S):** The exogenous administration of coenzyme Q(10) increases the level of the same and ubiquinol in semen and is effective in improving sperm kinetic features in patients affected by idiopathic asthenozoospermia.

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