

# Abstract

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## **Sperm oxidative stress and the effect of an oral vitamin E and selenium supplement on semen quality in infertile men.**

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**OBJECTIVE:** Numerous studies have reported beneficial effects of antioxidant drugs on semen quality, but there is no well-defined therapeutical protocol in male infertility. This study aimed to test the effects of vitamin E and selenium supplementation on lipid peroxidation and on sperm parameters.

**METHODS:** The study included 54 voluntary and infertile men who produced semen samples for spermiogram and for spectrophotometric measurement of a lipid peroxidation marker, the malondialdehyde (MDA), and produced blood samples for high-performance liquid chromatography assessment of serum vitamin E level. The trial was randomized and open. Twenty-eight men were supplemented daily by vitamin E (400 mg) and selenium (225 microg), during 3 months. The remaining 26 patients received vitamin B (4,5 g/day) for the same duration. Only 20 patients achieved their treatment and returned for control analysis.

**RESULTS:** MDA concentrations in sperm were much less than in seminal plasma and motility and viability were inversely correlated with semen MDA levels. In contrast to vitamin B supplementation, vitamin E and selenium supplementation produced a significant decrease in MDA concentrations and an improvement of sperm motility.

**CONCLUSION:** The results confirm the protective and beneficial effects of vitamin E and selenium on semen quality and advocate their use in male infertility treatment.

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