

Abstract

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A systematic review of the effect of oral antioxidants on male infertility.

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OBJECTIVE: The use of antioxidants in treatment of infertile men has been suggested, although the evidence base for this practice is unclear.

METHODS: A systematic review of randomized studies was conducted to evaluate the effects of oral antioxidants (vitamins C and E, zinc, selenium, folate, carnitine and carotenoids) on sperm quality and pregnancy rate in infertile men. MEDLINE, EMBASE, Cochrane Library and CINAHL were searched for relevant trials published from respective database inception dates to May 2009. Study selection, quality appraisal and data extraction were performed independently and in duplicate.

SUMMARY OF FINDINGS: Seventeen randomized trials, including a total of 1665 men, were identified, which differed in the populations studied and type, dosage and duration of antioxidants used. Only two-thirds of the studies (11/17) reported using allocation concealment and three studies (18%) used intention-to-treat analysis. Despite the methodological and clinical heterogeneity, 14 of the 17 (82%) trials showed an improvement in either sperm quality or pregnancy rate after antioxidant therapy. Ten trials examined pregnancy rate and six showed a significant improvement after antioxidant therapy.

CONCLUSIONS: The use of oral antioxidants in infertile men could improve sperm quality and pregnancy rates. Adequately powered robust trials of individual and combinations of antioxidants are needed to guide clinical practice.

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