Can supplements of zinc increase sperm quality in subfertile men? - A systematic review.

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Available data shows that about 15% of all couples in the Western world are affected by infertility (1) and according to WHO it depends to 27% on male sub-fertility (2). The concentration of zinc is higher in seminal plasma than in other tissues and there is evidence that zinc has an important role in physiological functions in sperm, therefore it is interesting to study possible positive effects on important semen parameters from the addition of zinc.

The purpose of this systematic review article is to examine if there is scientific evidence to recommend zinc supplementation as a potential treatment for sub-fertility.

PubMed, Cochrane, Scopus and the search function Scopus “citations” were used to find original articles.

Studies examining the possible effects of zinc supplementation on sperm motility and sperm concentration in men with idiopathic subfertility were included.

Articles were selected following established inclusion criterias and were reviewed and graded according to “Granskningsmall för RCT” from SBU, and the GRADE-system.

Three studies form the basis of the results. In two of these studies significant improvement in sperm motility, among subfertile men who received supplements of zinc, were observed. Significant improvement in sperm concentration were observed in one of the studies reviewed.

Since the scientific evidence is judged as moderate, more research is needed to form a conclusion about whether supplements of zinc can increase the sperm quality in subfertile men. However, two studies show that supplements of zinc could improve sperm motility. Further research focusing on idiopathic subfertility, with a clear distinction between the different types of subfertility, could provide better results.