Study Finds Antioxidants Boost Male Fertility Health

By Greg Arnold, DC, CSCS, September 22, 2010, abstracted from “A systematic review of the effect of oral antioxidants on male infertility” printed online in Reproductive BioMedicine

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Infertility has become a growing problem in the United States. Over 6 million women aged 15-44 are estimated have an impaired ability to have children, 9 million women have used infertility services and over 2 million couples are infertile (1). One cycle of in-vitro fertilization costs an average of $12,000 (2).

Although much of the concern over infertility focuses on the female, it is estimated that 25% of infertility among couples can be attributed to diminished semen quality and other male factors (3). The exact cause of diminished semen quality is generally poorly understood, but it is thought that occupation (4), lifestyle (5), age (6) and diet all play a role.

Fortunately, research has started to suggest that antioxidant supplementation may help with male infertility. A 2006 study (7) found that vitamins C, E, and beta-carotene are “critically important” for normal semen quality. Now a review of the research (8) has confirmed the benefits of antioxidants for male fertility.

In the review, researchers indentified 17 studies involving 1,665 men. They found 82% of the studies (14 of 17) showed an improvement in either sperm quality or pregnancy rate after antioxidant therapy, with doses of vitamin E between 450 (9) to 600 (10) IU per day, carnitine at 2,000 mg (11) to 3,000 mg (12) per day, and two studies finding “significant benefits” with 600 mg of N-acetyl cysteine per day (13, 14).

When they looked at pregnancy rates, 6 of the 10 studies showed “a significant improvement” after antioxidant therapy, with astaxanthin (16 mg per day produced pregnancies in 6/11 cases vs. 2/19 in the placebo group) (15), 2 grams of Carnitine with 1 gram Acetyl L-carnitine per day (22/101 pregnancies vs 2/118 in placebo group) (12), and 400 mg zinc sulphate per day (11/49 pregnancies vs. 2/48 in placebo group) (16).

For the researchers, “The use of oral antioxidants in infertile men could improve sperm quality and pregnancy rates” and that “adequately powered robust trials of individual and combinations of antioxidants are needed to guide clinical practice.”

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Reference:

1. “Infertility” posted on the National Center for Health Statistics Website www.cdc.gov/nchs/fastats/fertile.htm