

# Antioxidants may improve chances of conceiving in male subfertility

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Antioxidant supplements may benefit couples who have difficulty conceiving naturally, according to a new systematic review published today in The Cochrane Library. The review provides evidence from a small number of trials that suggest the partners of men who take antioxidants are more likely to become pregnant.

Male subfertility affects one in 20 men. Chemicals called reactive oxygen species (ROS) are said to cause damage to cells, and in particular sperm cells, which may result in lowered sperm counts and interfere with their ability to fertilise eggs. Antioxidants include natural and synthetic chemicals, including certain vitamins and minerals, which help to reduce the damage caused by ROS.

The review focused on 34 trials involving 2,876 couples undergoing assisted reproductive techniques such as in vitro fertilisation and sperm injections. Most men in the trials had low sperm counts or low sperm motility. The trials explored the use of many different types of oral antioxidants, including vitamin E, L-carnitine, zinc and magnesium.

Compared to controls, a couple was more likely to have a pregnancy or live birth if the man took antioxidants. However, these results are based on just 964 of the couples in the review for pregnancies and 214 couples for live births. Other trials tested the effects of antioxidants on sperm motility and concentration and showed mostly positive effects, although study group sizes were small.

"When trying to conceive as part of an assisted reproductive program, it may be advisable to encourage men to take oral antioxidant supplements to improve their partners' chances of becoming pregnant," said lead researcher Marian Showell, who works in Obstetrics and Gynaecology at the University of Auckland in Auckland, New Zealand. "However, these conclusions are currently based on limited evidence."

There were not enough data comparing different antioxidants to reach any conclusions about the relative effectiveness of supplements. "We need more head-to-head comparisons to understand whether any one antioxidant is performing better than any other," said Showell.