

# Antioxidants May Boost Baby Making

There are people who swear by the effects of [antioxidants](#) for everything from anti-aging to protection from cancer – whether or not science supports these claims. Now, a new study found that the tiny molecules may even boost the chances of making a baby.

Researchers from the University of Auckland in New Zealand reviewed 34 clinical trials that involved more than 2,500 couples undergoing infertility and subfertility treatments, including in vitro fertilization and sperm injections. The retrospective analysis found that men taking antioxidant supplements were more than four times more likely to get their partners pregnant than men who did not take the oral antioxidants. **The antioxidants were associated with more than a five-fold higher rate of live births**

"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 of the University of Auckland in New Zealand in a press release.

Is this reason to run to the health food store? Not so fast.

The researchers said further information is needed to confirm the findings. And some fertility doctors dismissed the study entirely, discouraging patients from putting all their eggs into the antioxidant basket.

## Doctors Question Antioxidant Benefits

"To suggest that the use of antioxidants alone without correction of the primary cause of seminal [dysfunction](#) without treatment of the primary cause is not appropriate," said Dr. Lawrence Ross, professor of urology at the University of Illinois at Chicago.

Dr. Sherman Silber, director of the Infertility Center of St. Louis, had even stronger words.

"This is all trash," said Silber. "[Antioxidants] will not help. They will only delay while the wife's eggs get older. So, this will hurt rather than help by delaying IVF for a male treatment that does not work."

Not only did doctors find the results questionable, but other doctors found the study's methodology and numbers questionable. Of the 34 studies analyzed, not one had more than 1,000 study participants. Some trials had as few as 10 participants.

## Too Much Variation

Only three of the studies provided data on the potential benefit of [antioxidants](#) on live births, and one of those three had a total of only one delivery. Several different antioxidants, including vitamins E and C, zinc, and even garlic were

analyzed in the studies. It is unclear which antioxidants were the most and least beneficial.

"The vast majority of [the] studies assessed were a hodgepodge of small studies with a non-standardized male factor evaluation," said Dr. Edward Kim, president of the Society for Male Reproduction and Urology and a professor of urology at the University of Tennessee Graduate School of Medicine. "The true benefit of antioxidant therapy is still yet to be determined."

Many fruits and vegetables are rich in antioxidants. Some with the highest levels include cranberries, blueberries, blackberries, beans, artichokes and Russet potatoes.

Showell's group said that semen contains vitamins E, C and other antioxidants, but the natural defenses can weaken due to lifestyle factors, infection and disease. The oxidative stress may cause sperm cell damage, but that damage can be remedied by natural and supplemental antioxidants.

Subfertility, a condition in which a person is less fertile than average but still capable of contributing to a pregnancy, affects about one in 20 men. Up to 80 percent of subfertility could be due to sperm damage caused by oxidative stress or harmful particles produced by a person's own body.

While infertility has historically been seen as a woman's problem, male infertility is present in up to half of infertile couples.

### **Infertility: Not Just a Woman's Problem**

[Varicocele](#), a condition in which a man has varicose veins in the scrotum, is the most common cause of male subfertility. Other causes include hormonal disorders, problems with quantity and motility of sperm, infections, obesity, drug use and exposure to radiation and chemotherapy. Depending on the condition, male infertility and subfertility can be treated with surgery, hormone therapy and assisted reproductive technologies.

While, as we've seen, some doctors dismissed the link between antioxidants and fertility, others said they were not surprised by the results because healthy nutrition and lifestyle are already recommended for couples planning to conceive.

Dr. Jeanne O'Brien, associate professor of [urology](#) at University of Rochester Medical Center, is one of those doctors. O'Brien said she routinely suggests that her patients take antioxidants if they want a baby. She also recommends decreasing alcohol consumption, smoking cessation, exercising and stress reduction.

"I tell them the antioxidants may help and certainly don't harm them at the recommended dosages," said O'Brien. "I believe it is the lifestyle changes and increased health awareness that accompanies antioxidant consumption that may make a difference in terms of increased fertility."

O'Brien said antioxidants are never her sole recommendations. "There are always additional factors, testing, medication or alternatives offered in conjunction with them," O'Brien said.

"I use antioxidants for select men with impaired semen quality and demonstration of elevated oxidative stress, which is manifest by increased levels of reactive oxygen species," said Kim. "However, I do not assess for oxidative stress if identifiable causes of male infertility are present. In clinical practice, improvements in pregnancy and live birth rates are certainly not as robust as suggested by the Cochrane review."

And Kim warns that, despite the hype around antioxidant supplements, they should not be consumed without a watchful eye. For example, excessive consumption of Vitamin E, or more than 400 units per day, has been shown to have possible negative cardiac and vascular effects.

"Although generally considered safe in moderation, numerous large-scale studies have indicated that many supplemental antioxidants can actually be detrimental to overall health," said Kim. "With an understanding of these caveats, an assessment of the severity of male factor infertility, and very modest expectations of possible benefit, a man could try antioxidants before attempting assisted reproduction."