

Certain dietary or nutritional supplements could improve sperm quality

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Human Nutrition Unit. Credit: URV

Infertility affects 15 percent of the world population and is recognised by the World Health Organisation as a global health problem. In recent years, studies of sperm quality in different populations from developing countries have shown a decrease that could have consequences for the survival of the human species. The decrease in sperm quality has been related to unhealthy lifestyles. Stress, the consumption of drugs, tobacco and alcohol and unhealthy diets seem to be the principal modifiable factors.

Despite the current lack of scientific evidence regarding the effect of dietary and [nutritional supplements](#) on sperm quality, many fertility clinics offer dietary recommendations and supplements before providing their patients with in-vitro fertilisation (IVF) or intracytoplasmic sperm injection (ICSI).

Recently, researchers at the Human Nutrition Unit of the Universitat Rovira i Virgili (URV) and the Pere i Virgili Health Research Institute (IISPV) have carried out the most extensive and systematic review to date of randomised [clinical studies](#) into the effects of different nutrients and dietary supplements on sperm quality and male fertility. After qualitatively analysing the results of 28 nutritional studies involving 2900 participants, the researchers have concluded that supplementing the diet with omega 3 and coenzyme Q10 (in either liquid or tablet form) can have a beneficial effect on the quantity of spermatozoids in semen.

Supplementing the diet with selenium, zinc, fatty acids, omega-3 and coenzyme-Q10 is associated with an increase in spermatozoid concentration; supplementing the diet with selenium, zinc, omega-3, coenzyme-Q10 and carnitines has been associated with an improvement in sperm mobility; and finally, selenium, fatty acids, omega-3, coenzyme-Q10 and carnitines has a positive effect on the morphology of

spermatozoids.

According to the researchers, their study suggests that dietary supplements have a modulating effect on sperm quality and provides an extensive and up-to-date review of the existing scientific evidence. The results suggest that certain [dietary supplements](#) can have a beneficial effect on sperm quality, although it remains to be demonstrated whether this increases the likelihood of conceiving a child naturally or through assisted reproduction techniques. The [researchers](#) believe that further studies need to be carried out with larger samples so that a more accurate conclusion can be drawn.

The results have been published in the November edition of the scientific journal *Advances in Nutrition*.

More information: *Advances in Nutrition: An International Review Journal* (2018). [DOI: 10.1093/advances/nmy057](https://doi.org/10.1093/advances/nmy057)

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