

Vitamin D increases speed of sperm cells

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Vitamin D is important for optimal reproductive function in both animals and humans. It has long been known that serum vitamin D level is important for reproductive function in various animals, but now researchers from the University of Copenhagen and Copenhagen University Hospital have shown that this relationship can also be demonstrated in humans.

A new study conducted in 300 normal men showed a positive correlation between the percentage of motile sperm and [serum vitamin D](#) levels. The study was recently published in the scientific journal [Human Reproduction](#), and showed additionally that stimulation of human spermatozoa in the laboratory with activated vitamin D can increase their forward movement.

"Our study is not sufficient and should not be used to change existing treatment practices. However, it uncovers some of the functions of vitamin D and generates new hypotheses. This is an intriguing finding, because it suggests that vitamin D has an effect on sperm movement and function," explains Martin Blomberg Jensen from Copenhagen University Hospital.

"However, this finding is not sufficient in determining whether vitamin D supplements may improve [sperm](#) quality in normal or infertile males. This study is one in a line of studies indicating that vitamin D is necessary for male reproduction," says Martin Blomberg Jensen.

Today, there is no known medical treatment proved to improve semen

quality in well-designed randomised trials, although several papers have shown numerous positive associations between various drugs such as antioxidants, [zinc](#), various vitamins etc. and semen quality.

"Low semen quality may have numerous causes, but it often has a fetal origin similar to some male genital malformations and [testicular cancer](#). However, this study indicates that factors in adult life may also play a role for semen quality," says Professor Anders Juul from the University of Copenhagen and Copenhagen University Hospital's Department of Growth and Reproduction.

"It is important to find all factors of importance, because semen quality in Danish men is at a low level and contributing to a very high incidence of fertility problems among Danish couples," says Anders Juul.

The authors conclude that there is a need to intensify reproductive research to identify relevant factors and conduct placebo-controlled trials to clarify whether vitamin D supplements are beneficial for infertile men.

More information: The study was published in the June issue of Oxford Journal of Human Reproduction.

Provided by University of Copenhagen

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