

A pack of walnuts a day keeps the fertility specialist away?

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A paper published 15 August 2012 in *Biology of Reproduction's* Papers-in-Press reveals that eating 75 grams of walnuts a day improves the vitality, motility, and morphology of sperm in healthy men aged 21 to 35.

Approximately 70 million couples experience subfertility or infertility worldwide, with 30 to 50 percent of these cases attributable to the [male partner](#). Some studies have suggested that human [semen quality](#) has declined in industrialized nations, possibly due to pollution, poor [lifestyle habits](#), and/or an increasingly Western-style diet.

Dr. Wendie Robbins and her colleagues at the University of California, Los Angeles decided to investigate whether increasing [polyunsaturated fatty acids](#) (PUFAs), which are critical for sperm maturation and membrane function, would increase sperm quality in men consuming a Western-style diet.

The best sources of dietary PUFAs in a Western-style diet include fish and [fish oil supplements](#), flax seed, and [walnuts](#), the latter of which are rich sources of α -linolenic acid (ALA), a natural plant source of omega-3.

With support by the California Walnut Commission, Dr. Robbins' team selected 117 healthy men between the ages of 21 and 35 who ate a Western-style diet and split them into two groups: one (58 men) who would avoid eating tree nuts and another (59 men) who would eat 75

grams of walnuts per day. Previous studies had indicated that 75 grams of walnuts would be a dose at which blood lipid levels would change, but at which healthy young men would not gain weight.

Before the experiment began and then again 12 weeks later, the men's semen quality was analyzed according to conventional parameters of male fertility, including sperm concentration, vitality, motility, morphology, and chromosome abnormalities.

After 12 weeks, the team found no significant changes in body-mass index, body weight, or activity level in either group. The men consuming walnuts, however, had significantly increased levels of omega-6 and omega-3 (ALA) fatty acids and experienced improvement in sperm vitality, motility, and morphology. Those eating walnuts also had fewer chromosomal abnormalities in their sperm following the walnut dietary intervention. The control group, on the other hand, experienced no changes.

Although this research indicates that eating 75 grams of walnuts per day can positively affect a young man's sperm quality, it is still unknown whether the benefits would apply to young men with fertility problems and whether they would actually translate into increased fertility.

More information: Robbins WA, Xun L, FitzGerald LZ, Esguerra S, Henning SM, Carpenter CL. Walnuts improve semen quality in men consuming a Western-style diet: randomized control dietary intervention trial. *Biol Reprod* 2012; (in press). Published online ahead of print 15 August 2012; [DOI 10.1095/biolreprod.112.101634](https://doi.org/10.1095/biolreprod.112.101634)

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