Zinc
Supplementation in men with low zinc status is often successful for male infertility; Deficiency lowers testosterone & reduces sperm count.33,34,35

Selenium
Required for sperm maturation; Protects lipid shell encasing each sperm (prevents lipid peroxidation), which is especially important since sperm have a very delicate fatty acid composition.30,31,32

Carnitine
Cofactor to the enzyme (glutathione peroxidase) that ensures structural integrity of sperm; Deficiency compromises sperm motility.1,23

Vitamin A
Regulates genes that control sperm production (spermatogenesis); Deficiency may lower sperm count.6,7,8

Glutathione
Cofactor to the enzyme (glutathione peroxidase) that ensures structural integrity of sperm; Deficiency compromises sperm motility.1,23

Copper & Manganese
Both are cofactors for superoxide dismutase (a very powerful antioxidant) that protects sperm from oxidative damage.25,26

Vitamin D
Increases sperm motility; Induces acrosome reaction, a process where a sperm releases enzymes to allow fusion with an egg; Men with low vitamin D may have slower sperm.9,10

Coenzyme Q10
Acts as a potent antioxidant protecting sperm from damage; Improves semen bioenergetics via its role in mitochondrial function (helps sperm remain viable); A direct correlation exists between CoQ10 and sperm count & motility.27,28,29

Vitamin C
Low levels increase damage to sperm’s genetic material; Supplementation improved sperm count, motility and structure in human trials.11,12,13

Antioxidant Status
Sperm are highly susceptible to free radical damage to both their genetic material and cell membrane; Poor antioxidant status is a well documented cause of male infertility.22,23,24

Folate
Deficiency may reduce testosterone; Critical to sperm creation due to its role as a methyl donor in DNA synthesis; The MTHFR (methylenetetrahydrofolate reductase) C677T gene, which increases folate requirements, is a risk factor for male infertility.19,20,21

Vitamin E
Protects sensitive sperm cell membranes; Enhances sperm’s ability to penetrate an egg.14,15

Coenzyme Q10
Acts as a potent antioxidant protecting sperm from damage; Improves semen bioenergetics via its role in mitochondrial function (helps sperm remain viable); A direct correlation exists between CoQ10 and sperm count & motility.27,28,29

Vitamin B12
Needed for cellular replication, including spermatogenesis; B12 moves from blood to semen to assist in sperm production; May increase sperm count.16,17,18,19

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Additional nutrients affect male fertility. This list is non-exhaustive.
REFERENCES


Additional references at http://www.spectracell.com/clinicians/clinical-education-center/online-library-mnt-infertility-male-abstracts/