# Male Fertility

### Incidence

25 % of infertility is calculated to be directly due to the male partner and another 15 to 25 % probably also has a male contribution www.fertilityassociates.co.nz

#### Dietary changes that may be helpful

Excessive alcohol consumption is associated with a decrease in the percentage of normal sperm. <sup>i</sup> A Danish study of greenhouse workers found an unexpectedly high sperm count among organic farmers. The sperm count was more than twice as high in these men as in a control group of blue-collar workers.<sup>ii</sup> Suggesting that organically grown foods may enhance fertility.

### Lifestyle changes that may be helpful

The optimal temperature of the testes for sperm production is slightly lower than body temperature, which is why the testes hang away from the body in the scrotum. Men with low sperm counts are frequently advised to minimize lifestyle factors that may overheat the testes, such as wearing tight (e.g., "bikini-style") underwear, frequently using spas and hot baths or using a lap top computer directly on their knees. Environmental exposures, smoking, and use of recreational drugs (e.g., marijuana, cocaine, hashish) may reduce sperm count or cause abnormal sperm morphology (shape).<sup>iii</sup>

#### Nutritional supplements that may be helpful

<u>Vitamin C</u> protects sperm from oxidative damage <sup>iv</sup> Supplementation with 200–1,000 mg per day increased the fertility of men with this condition in a controlled study.<sup>v</sup> Many doctors recommend 1 gram of vitamin C per day for infertile men, particularly those diagnosed with sperm agglutination.

Zinc deficiency. Studies have shown that oral zinc supplementation improves both sperm count <sup>vi</sup> motility,<sup>vii</sup> and the physical characteristics of sperm in some groups of infertile men.<sup>viii</sup> A preliminary trial found that zinc supplements (240 mg per day) increased sperm counts and possibly contributed to successful impregnation by 3 of the 11 men. <sup>ix</sup> In a controlled trial, 100 men with low sperm motility received either 57 mg of zinc twice daily or a placebo.<sup>x</sup> After three months, there was significant improvement in sperm quality, sperm count, sperm motility, and fertilizing capacity of the sperm. The ideal amount of supplemental zinc remains unknown, but some doctors recommend 30 mg two times per day. Long-term zinc supplementation requires 1–2 mg of <u>copper</u> per day to prevent copper deficiency.

<u>Arginine</u>, an <u>amino acid</u> found in many foods, is needed to produce sperm. Research, most of which is preliminary, shows that several months of L-arginine supplementation increases sperm count, quality,<sup>xi</sup> and fertility.<sup>xii</sup> However, when the initial sperm count was extremely low (such as less than 10 million per ml), L-arginine supplementation produced little or no benefit. For infertile men with sperm counts greater than 10 million per milliliter, many doctors recommend up to 4 grams of L-arginine per day for several months.

In a double-blind study of infertile men with reduced sperm motility, supplementation with <u>selenium</u> (100 mcg per day for three months) significantly increased sperm motility, but had no effect on sperm count. Eleven percent of 46 men receiving selenium achieved paternity, compared with none of 18 men receiving a placebo.<sup>xiii</sup>

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L-carnitine is a substance made in the body and also found in supplements and some foods (such as <u>meat</u>). It appears to be necessary for normal functioning of sperm cells. In preliminary studies, supplementing with 3–4 grams per day for four months helped to normalize sperm motility in men with low sperm quality.<sup>xiv</sup>

<u>Coenzyme Q10</u> (CoQ10) is a nutrient used by the body in the production of energy. There is evidence that as little as 10 mg per day (over a two-week period) will increase sperm count and motility.<sup>xv</sup>

<u>Vitamin E</u> deficiency in animals leads to infertility. In a preliminary human trial, 100–200 IU of vitamin E given daily to both partners of infertile couples led to a significant increase in fertility.<sup>xvi</sup>

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