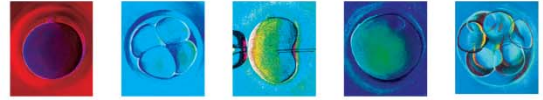


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FERTILITY FACT SHEET

San Ramon / Orinda / San Jose

Diet, Lifestyle and Male Infertility

Infertility affects approximately 15-20% of all couples trying to conceive with about one third to one half of cases due to male factor infertility. There is good evidence that diet and lifestyle can impact a man's fertility. The list below includes both things male patients should avoid and certain things to pursue.

Encourage a Healthy Lifestyle: There are several things a man can do to optimize his sperm production and quality. Sperm production takes 75 to 90 days. Avoiding harmful substances, medications, or lifestyles should occur in advance of attempting pregnancy. You should review your medical history and all current medications and supplements you take with your physician. Stress may contribute to altered sperm production.

Avoid smoking: Several studies have clearly shown that cigarette smoking lowers both sperm counts and sperm motility. If you or your partner smokes, now is the time to quit!

Avoid alcohol and drug use: Excessive alcohol consumption has clearly been shown to impair normal sperm. The evidence regarding moderate alcohol intake is less clear, but most experts agree it's best for patients to avoid more than 1 drink per day. There is some evidence that even moderate drinking (1 drink every other day) may decrease IVF success. Other drugs such as marijuana have been shown to affect sperm parameters and should be avoided.

Avoid excessive heat: It is well known that the testicles should be cooler than the rest of the body for sperm production to be at its best. The harmful effect of a varicocele on sperm production is believed to result from the extra warming of the area caused by the dilated veins. There is no scientific evidence to support the claim that boxer style shorts are better than briefs. It is advisable to avoid regular and prolonged exposure to the groin area with sources of heat exposure such as hot tubs, saunas, and laptop computers.

Identify and avoid environmental hazards: If patient's work or hobby brings him into contact with environmental dangers such as heavy metals like cadmium or lead, pesticides, solvents, organic fumes, or radiation exposure, he may be unknowingly affecting his fertility by impairing sperm production.

Limit caffeine: Limit coffee or other caffeine-containing beverages to 1 or 2 drinks per day.

Proper diet/weight: Eating a balanced diet is important. Extra fruits and vegetables along with plenty of fluids is a good idea. It is probably best to avoid high intake of soy products, since they can contain weak plant estrogens. Men who are overweight should begin a weight loss program.

Exercise: Moderate exercise may be beneficial for patients. However, prolonged, excessive exercise may be just as bad as no exercise at all. So the key is, as with most things, moderation. Adequate daily rest is equally important.

Sexual Activity: The likelihood of a woman becoming pregnant is much higher when couples have intercourse in the three days immediately leading up to and including ovulation. Intercourse every other day or daily during this fertile window leads to the greatest chance of success. Finally, patients should avoid the use of any artificial lubricants such as K-Y® jelly or Replens®. Newer lubricant formulations designed specifically for fertility may be okay.

Avoid harmful nutritional supplements: Some types of nutritional supplements have a clearly damaging affect on male fertility. In particular, supplements which provide "hormone-like" substances such as DHEA or "andro" can actually stop sperm production completely. If the patient is taking any of these types of supplements, or other products intended to build muscle mass, he should be urged stop immediately.

Oxidative Stress and Male Infertility: Recent scientific evidence has revealed that a condition known as "oxidative stress" may be a factor in some of the causes of male infertility. Oxidative stress is caused by the presence of certain molecules known as "reactive oxygen species" in the semen. These molecules, which can damage the sperm cell membrane and DNA, are also known as oxidants. Oxidants are normally kept under control by the presence of antioxidants in the semen. Two of the most important antioxidants are vitamins C and E. When the amount of oxidants in the semen exceeds the amount of antioxidants, we say that "oxidative stress" is present. Oxidative stress has been clearly shown to reduce fertility. Some studies have shown that oxidative stress may be present even when a standard semen analysis appears normal.

Nutrients and Male Infertility: Vitamins C and E are essential antioxidants that protect the body's cells from free radical damage. Vitamin C is the most abundant antioxidant in the semen of fertile men and it contributes to the maintenance of healthy sperm by protecting the sperm's DNA from oxidative damage. Vitamin E is a fat-soluble vitamin that helps protect the sperm's cell membrane. Studies have shown that vitamin E improves sperm motility (movement) and morphology (size and shape). Vitamin C functions to regenerate vitamin E so these vitamins may work together to improve sperm function.

Selenium is a mineral that functions as an antioxidant. Selenium supplements have been shown to increase sperm motility and a combination of selenium and vitamin E has been shown to decrease damage from free radicals and improve sperm motility in infertile men.

Lycopene is a powerful antioxidant and carotenoid (plant pigment) that is abundant in tomatoes. This "phytonutrient" is normally found in high levels in the male testes and research has shown that lycopene supplementation improves sperm parameters in infertile men.

Zinc is an essential trace mineral that plays a role in sperm formation, testosterone metabolism, and cell motility. Zinc supplementation increased testosterone levels and sperm count in a study of 22 men which resulted in nine pregnancies.

Folic Acid is a B-vitamin that is necessary for DNA synthesis. Low levels of folic acid have been associated with a decreased sperm count and decreased sperm motility. In a recent study, the combination of zinc and folic acid resulted in a 74% increase in total normal sperm count in subfertile men.

L-Carnitine is an amino acid produced by the body and functions to transport fat so that it can be broken down for energy. L-Carnitine provides energy for the sperm and is important for optimal sperm motility. L-Carnitine has also been shown to increase sperm quality and increase pregnancy rate

Choosing a Safe Male Fertility Supplement: There are several nutritional supplements available which claim to promote improved male fertility. We recommend the following guidelines:

1. Choose a supplement which is produced under the guidance of a scientific or medical advisory panel.
2. Choose recommend a supplement which contains antioxidants to protect the sperm from oxidative stress.
3. It is probably best to avoid any supplement with herbal content. (i.e. garlic, ginseng, green tea extract, etc.)
4. Since supplement manufacturers are NOT required to test their products for content accuracy or purity, recommend only supplements which have been third-party certified (NSF or USP).