

Male Fertility

Many factors contribute to male fertility, including age, stress levels, lifestyle, number and shape of sperm, and the general health of the genital tract. Overall male fertility begins to decline in the early 30's, but most men have the ability to conceive throughout their lives. It may take older men longer, than men in their 20's, to conceive. Even among the youngest couples, the probability of pregnancy in any one month ranges from 20 percent to 60 percent (1).

If you are trying to conceive, here are a few tips to improve your chances:

- Some chemicals are known to affect reproductive hormones. Avoid exposure to chemicals such as those found in paints, pesticides, industrial chemicals, pollution and plastics. Store and heat your food in glass and buy organic whenever possible.
- Eat a balanced diet rich in whole foods and free of preservatives and artificial ingredients. Cook at home as much as possible and avoid processed, pre-packaged foods.
- Acupuncture may be tried to improved sperm count and quality. Traditional Chinese medicine has an ancient tradition of use in improving fertility. Your acupuncturists may also recommend herbs to be taken. One large meta-analysis showed that acupuncture increased the success rate for in vitro fertilization (2).
- Maintain a healthy body weight. Obesity can lower number and quality of sperm.
- Keep your body clean. Tobacco, alcohol and drug use may lower sperm count. Alcohol use in men may also increase the risk of birth defects in offspring.
- Decrease stress. Consider trying meditation, breath work, yoga, counseling, regular prayer, or guided imagery to keep your stress levels low.
- Pay attention to body temperature. Testicles hang below the body because they need to be a few degrees cooler than the core of the body in order to properly produce sperm. Wear boxers or loose briefs and avoid saunas, hot tubs, and steam rooms.
- Invite your child. Consider journaling nightly during the time when you and your partner are trying to conceive. You may wish to think about your hopes and dreams for your family, or write letters directly to your future child, inviting him or her to be a part of your life.



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Male Infertility

Difficulty conceiving is a problem involving both members of a partnership. After a year of timed, regular intercourse, both members can choose to be evaluated to determine why conception is not occurring. In most cases, male infertility is treatable by either medical or surgical means.

Each couple should consider how many children they would ultimately like to have before choosing how to proceed. Depending on female factors, some couples may be able to achieve a natural pregnancy. In cases where this is not possible, couples can consider assistive reproductive technology such as in vitro fertilization (IVF). Some couples may also wish to consider the option of adoption.

- If you are having trouble conceiving, the first step is to have a sperm count done and a testicular exam with your primary care physician. If an abnormality is found, you can then be referred to a specialist to discuss if further evaluation should be done.
- 10-20% of men who have trouble conceiving have an infection in their genital tract (1). This includes both sexually-transmitted and non-sexually-transmitted infections. Consider having testing to be sure you are not infected. Antibiotics can be prescribed based on test results.
- Less than 1% of male infertility is due to low male hormone levels (1). Usually a total testosterone, LH, and FSH are checked. Treatment for this type of infertility requires replacing these hormones. This therapy is usually continued from 6 months to 2 years. Hormonal problems affecting male fertility would typically be managed by a reproductive endocrinologist, a type of specialist in fertility.
- A number of small studies have suggested that sperm counts may benefit from an increased intake of antioxidants.
 - Vitamin A alone improved sperm function and IVF rates in one study.
 - Vitamin A, Vitamin E, and essential fatty acids (omega-3 fats) were shown to increase sperm count in another study.
 - Folic acid and zinc may increase sperm concentration.
 - The bottom line: having a healthy diet is important for male fertility. If you are having trouble conceiving, re-evaluate your diet. You should have a diet rich in a variety of fruits and vegetables and take a good quality multivitamin daily. You may also consider taking an omega-3 supplement, if your intake of fish is low.
- Some male fertility problems can be addressed with surgery. Your primary care physician will refer you to a specialist if surgery is needed.
 - **Varicoceles:** these are malformations of testicular veins which affect 15% of the general population and are associated with male infertility. These can be surgically corrected by a urologist (1).
 - **Testicular biopsy:** in cases where a couple may be planning in vitro fertilization and it is not possible to acquire sperm from the ejaculate, sperm can be retrieved from the testicle by biopsy with a needle.



Male Fertility

- There are many herbs and supplements on the market for male fertility. Many of these have not been extensively studied for safety or efficacy in humans. The following are a few common examples:
 - **Long Jack (*Eurycoma longifolia*)**, also known as Malaysian ginseng, is a tall, skinny tree. The roots and bark are the parts used. Animal studies have shown an increase in libido and improved sperm parameters for males taking this supplement (3). No adverse effects have been reported.
 - **L-carnitine** is an amino acid which has been shown to be a vital component in sperm motility. This supplement is considered safe with little risk of side effects. The dose is 2 grams of L-carnitine, taken orally, plus 1 gram of L-acetyl-carnitine daily under the supervision of a physician (1).
 - **Co-enzyme Q10** is a vitamin-like compound found in all cells in the body. When taken orally, it was shown in one study to improve sperm motility and sperm count (4). Two human studies have been done which also confirmed this (5). The dose is 200mg, taken orally, once daily. There have been no reports of significant side effects.
 - **Saffron (*Crocus sativus*)** was shown in one study to improve sperm morphology and motility, but not sperm count (6). The dose is 50mg, taken orally, three times a week.
 - **Cowhage (*Mucuna pruriens*)** is a legume which is found in tropical regions. One study of infertile men showed it brought fertility hormone levels closer to normal (7). Dosages range from 22.5 to 67.5 grams divided into 2 to 5 doses per day. Because of the risk of cardiac or neurologic side effects, this supplement should only be used under the supervision of a physician.

References

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4. Mancini A, et al. An update of Coenzyme Q10 implications in male infertility: biochemical and therapeutic aspects. *Biofactors* 2005;25(1-4):165-74.
5. Balercia G, et al. Coenzyme Q10 and male infertility. *J Endocrinol Invest* 2009;32(7):626-32.
6. Heidary M, et al. Effect of saffron on semen parameters of infertile men. *Urol J*. 2008;5(4):255-9.
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The information in this handout is for general education. It is not meant to be used by a patient alone. Please work with your health care practitioner to use this information in the best way possible to promote your health and the health of your future child.

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