

## Surgery Gives Low Testosterone a Boost

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*Low testosterone from varicoceles can be improved through surgery*

Contributing Expert: Fred Hirsch, M.D., Ph.D.

Reporter: Travis Hill

Reviewed by: Joseph V. Madia, M.D.

Male infertility (the inability to reproduce) can be caused by a number of factors, including varicoceles, or swollen veins in the scrotum. Now, it seems varicoceles may lead to problems even more severe than infertility.

Varicoceles may disrupt a man's ability to produce testosterone - a hormone that is extremely important for keeping men in good health. However, surgery can boost testosterone levels in men suffering from the condition.

A team of researchers led by Marc Goldstein, M.D., of Weill Cornell Medical College and New York Presbyterian Hospital, found that varicoceles may pose a bigger problem to men's health than experts previously thought.

"We have known for quite some time that varicoceles can have an adverse effect on sperm parameters, sperm DNA, and on male fertility," says Parviz Kavoussi, M.D., an expert in erectile dysfunction, sexual medicine and male infertility, who was not involved in the study. "Recently, we have learned that varicoceles can not only have an adverse impact on a man's fertility potential, but also on his testosterone production, the other job of the testicle."

According to Dr. Goldstein, men with low testosterone levels may face significant health problems, including osteoporosis and mental health problems like depression. In addition, low testosterone can lead to low, energy, reduced muscle strength, and sexual problems.

"That one little hormone does an awful lot for us guys," says Dr. Kavoussi about testosterone. "Low testosterone can cause a gamut of symptoms and detrimental effects on men's health including: decreased rigidity of erections, decreased sex drive, depressed mood, irritability, decreased energy, increased fatigue, lack of motivation, sleep disturbances, decreased spatial cognition, difficulty concentrating, hot flashes, subfertility, increased fat mass, decreased muscle mass, decreased bone mineral density, decreased exercise tolerance, and deterioration of hair and nails. Yup, that's all."

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While Dr. Goldstein's team found that varicoceles are associated with low levels of testosterone, they also found that a certain surgery - called microsurgical varicocelectomy - can increase testosterone levels in those same men.

Varicoceles usually form during or soon after puberty. If the varicoceles are causing pain or infertility, doctors may decide to take care of the problem. In most cases, varicoceles are left alone. In light of these recent findings, however, it may not be the best idea to let the problem persist.

Dr. Goldstein recommends that men and teens with serious varicoceles visit a male reproductive urologist who can perform microsurgical varicocelectomy. "It is much easier to prevent future fertility problems and low testosterone than wait until the damage has already occurred," he notes.

Dr. Goldstein also recommends that men with varicoceles and low testosterone think about undergoing microsurgery sooner than later. He says the microsurgery methods that are currently available have very low rates of complications and failures, compared to methods previously used.

"Microsurgery is a good choice for men with low testosterone as there are no oral medications to increase testosterone," says Goldstein. He goes on to explain that testosterone shots, pellets, and gels are effective but do not work for all men, such as those trying to conceive. On top of that, he adds, making your own testosterone is certainly easier than using these other methods.

For their study, Dr. Goldstein and colleagues measured the testosterone levels of 325 men before they underwent surgery for varicoceles. They also measured the testosterone levels of 510 men without varicoceles.

The researchers found that men with varicoceles had much lower levels of testosterone compared to those without varicoceles. After going through microsurgical varicocelectomy, 70 percent of patients showed significant increases in testosterone levels.

"I am offering varicocelectomy as a primary treatment options for low testosterone in my practice," says Dr. Kavoussi. "This is a procedure for which men should seek out doctors who do high volumes of [this surgery] with microsurgical training for the best results. That being said, it needs to be considered that we do not have long-term data on this effect yet. We do not know how long after varicocelectomy the testosterone is going to remain normalized. Is this a long-term solution or is this buying time for a man until he has to eventually get on testosterone replacement therapy in the future? Either way, this seems to be a very attractive alternative for many men with clinical varicoceles and low testosterone."

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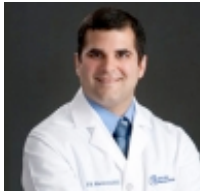
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According to Cigdem Tanrikut, M.D., of Massachusetts General Hospital and one of the study's authors, these results show that undergoing surgery for varicoceles, at the least, keeps testosterone production from getting any worse.

The study's findings are published in *BJU International*.

### **Contributing Expert**



**Parviz Kavoussi, M.D.**

Parviz Kavoussi, M.D. is an expert in erectile dysfunction, sexual medicine and male infertility. He is in practice with his infertility specialist father and brother where they pride themselves in being a family that helps others start their families.

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