

Low testosterone linked to varicoceles

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As many as 15 percent of men have varicoceles, masses of enlarged and dilated veins in the testicles. There is new evidence that varicoceles, long known to be a cause of male infertility, interfere with the production of testosterone -- a crucial hormone to maintaining men's health.

There is good news too: Microsurgery can increase [testosterone levels](#) in these men. Results of new research by physician-scientists at New York-Presbyterian Hospital/Weill Cornell Medical Center are in a recent edition of *BJU International*.

"Varicoceles are a much more serious problem than previously thought. Low [testosterone](#) causes significant health problems in men. Besides causing low energy, decreased muscle strength and sexual problems, it is a major risk factor for osteopenia/osteoporosis and can also cause changes in cognitive and psychological function, in particular, depression," says Dr. Marc Goldstein, who initiated and led the study. He is the Matthew P. Hardy Distinguished Professor of [Reproductive Medicine](#) and a professor of urology at Weill Cornell Medical College and surgeon-in-chief of male reproductive medicine and surgery at New York-Presbyterian Hospital/Weill Cornell Medical Center. He is also senior scientist with the Population Council's Center for Biomedical Research, located on the campus of Rockefeller University.

Varicoceles usually first appear during or shortly after puberty, explains Dr. Goldstein. "The common wisdom has been to leave them alone unless they are causing pain or infertility. But, as a result of our study, I recommend that teenagers and men with serious varicoceles be referred

to a male reproductive urologist experienced in microsurgical varicocelectomy. It is much easier to prevent future [fertility problems](#) and low testosterone than wait until the damage has already occurred."

[Adult men](#) with a varicocele and low testosterone should also consider microsurgery sooner rather than later, says Dr. Goldstein. "The microsurgery techniques available today (and developed, in large part, at NewYork-Presbyterian/Weill Cornell) have a very low complication and failure rate compared with the more invasive techniques used in the past. Microsurgery is a good choice for men with low testosterone as there are no oral medications to increase testosterone. And although testosterone shots, pellets and gels are effective, they are not tolerable or appropriate for many patients, such as men trying to conceive, and are certainly less convenient than making your own testosterone."

In the current study, Dr. Goldstein and his colleagues measured the preoperative testosterone levels of 325 men with varicoceles and in 510 men without varicoceles. They found that [men](#) at every age with varicoceles had significantly lower testosterone levels (416 vs. 469 ng/dL) than the comparison group. After undergoing microsurgical varicocelectomy, testosterone levels significantly increased in 70 percent of the patients, with a mean increase of 178 ng/dL.

"This research indicates that varicocele surgery, at the least, prevents further deterioration of testosterone production," says Dr. Cigdem Tanrikut, one of the authors of the study. Dr. Tanrikut did a fellowship in male reproductive medicine and microsurgery under Dr. Goldstein. She is currently assistant professor of surgery at Harvard Medical School, a urologist at Massachusetts General Hospital and an adjunct assistant professor of urology and reproductive medicine at Weill Cornell Medical College.

Provided by New York- Presbyterian Hospital

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