

# Could bariatric surgery make men more virile?

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Men who have undergone bariatric surgery as a long-term way of losing weight might also benefit from increased testosterone levels post-surgery. However, there is no evidence that the sperm quality of a patient improves. These are the findings of a comprehensive review in the Springer journal *Obesity Surgery*, which is the official publication of the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO). The research was led by Shahzeer Karmali and was a collaborative effort between Yung Lee of McMaster University and Jerry Dang of the University of Alberta in Canada.

Hormonal changes, a drop in sexual functioning, and less satisfaction in bed are among the many downsides of obesity. Obese men in particular are known to experience lower testosterone levels, lower sexual satisfaction, and reduced fertility compared to men of normal weight. On average the odds of male infertility are said to increase by 10 per cent for every nine kilograms a man is overweight.

Up until now most studies on the relationship between fertility and [bariatric](#) surgery have been focused on women. So Lee and his colleagues set out to review the available research on the influence of this procedure on [male sex hormones](#) and sperm quality.

"As the prevalence of both [male infertility](#) and bariatric surgery increases, knowledge of how surgical intervention affects fertility outcomes may better inform patient and surgeon decisions on pursuing this procedure," says Lee.

In all, 28 studies carried out between 1998 and 2018 drawing on data from more than 1000 patients were included in the review. The studies all examined the effect of bariatric surgery on male sex hormones or sperm characteristics in patients with obesity.

Lee and his colleagues found that patients' [testosterone levels](#) significantly increased after they had undergone bariatric surgery. Consistent with an increase in testosterone, levels of the hormones LH, FSH, and SHBG were also boosted. The amount of the female sex hormones estradiol and prolactin also notably dropped. These hormonal changes meant that erectile function also significantly increased after bariatric surgery. However, sperm characteristics such as volume, concentration, ability to move and build did not change much after bariatric surgery. In fact, several cases reported the worsening of such sperm parameters.

"This may be because any positive [hormonal changes](#) after bariatric surgery are counterbalanced by nutritional malabsorption and insufficiencies," explains Lee.

"Bariatric surgery appears to be effective in increasing male sex hormones and decreasing female sex hormones in obese male patients. However, our review also suggests that bariatric [surgery](#) has no benefits on sperm parameters," explains Lee. "Long-term comparative studies or adequately powered randomized controlled trials are warranted to further examine the impact of [bariatric surgery](#) on male sex hormones and sperm quality."

**More information:** Yung Lee et al, Impact of Bariatric Surgery on Male Sex Hormones and Sperm Quality: a Systematic Review and Meta-Analysis, *Obesity Surgery* (2018). [DOI: 10.1007/s11695-018-3557-5](#)

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