

**Background**

- Obesity remains a worldwide issue for both men and women,
- Bariatric surgery has increasingly been used as a treatment to reduce weight for the morbidly obese.
- There have been suggestions in the literature that bariatric surgery may have positive effects on fertility post surgery.

**Purpose**

The purpose of this study was to systematically review research articles and examine the association between weight loss from bariatric surgery and fertility status in both males and females.



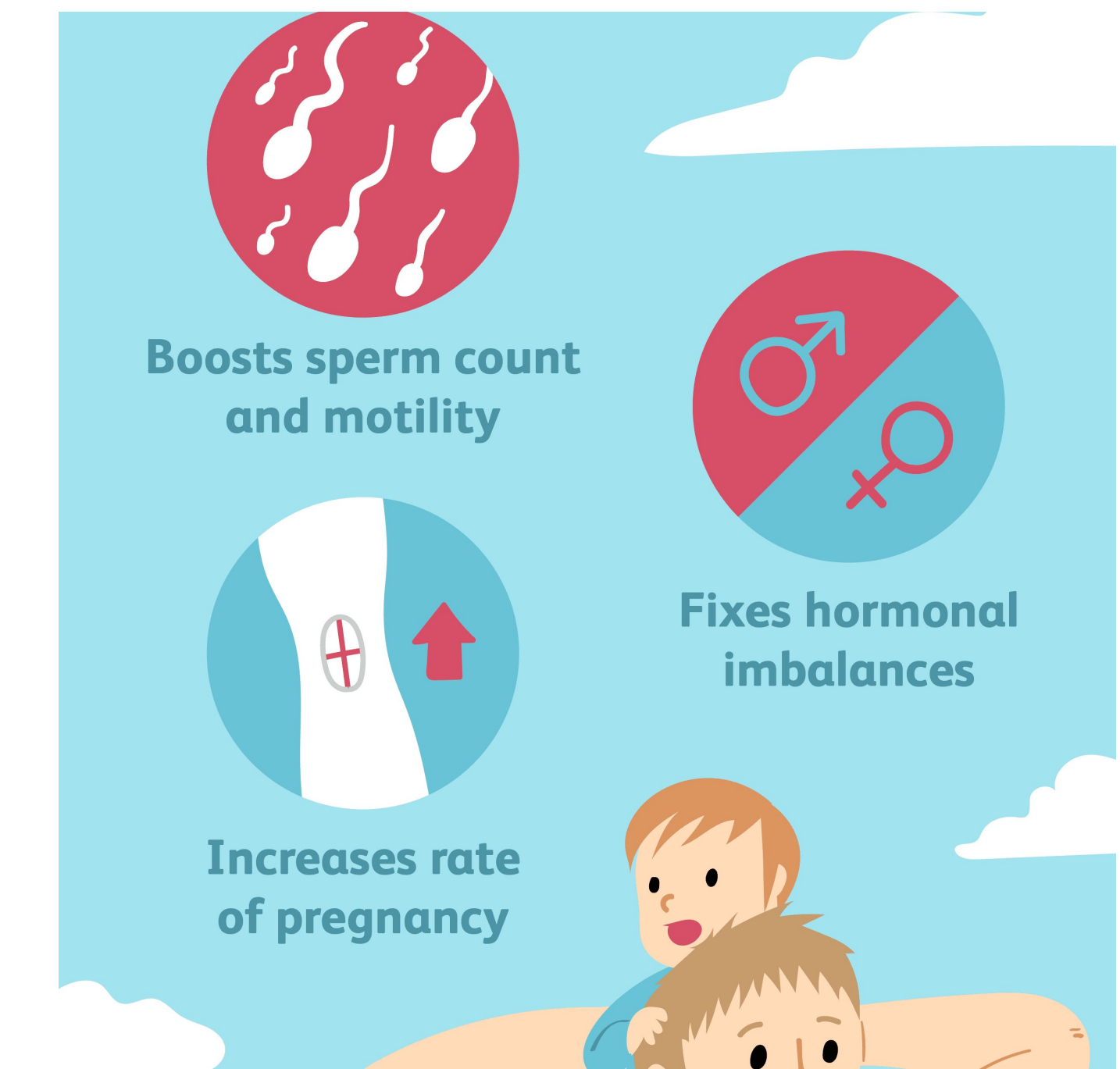
**Methods**

- A systematic review was conducted using PRISMA procedures. Search criteria included bariatric surgery, pregnancy, reproductive health, infertility, and fertility – the databases used were PubMed, Web of Science, and Academic Search Premier.
- After deleting duplicates, case studies, reviews, newsletters, irrelevant topics, and editorials, a total of 1121 articles initially identified were reduced to 20 articles. Of the 20 articles 8 were about males, 11 about females, and 1 about both males and females.
- Data was extracted from each article to identify factors associated with the relationship between bariatric surgery and fertility.

**Results**

- In the studies the main types of bariatric surgery used were Roux-en-Y Gastric Bypass, Laparoscopic Sleeve Gastrectomy, Endoscopic Intra-gastric Balloon, and Gastric Bypass.

Female Fertility Articles	Male Fertility Articles
<ul style="list-style-type: none"> <li>• Five studies found significant improvements in menstrual dysfunction and PCOS</li> <li>• Several found increases in pregnancies, including one that reported a 100% conception rate for previously infertile PCOS subjects who desired pregnancy</li> <li>• One study found that surgeries that result in more weight loss lead to greater improvements in fertility outcomes, but another study found no significant differences between surgeries</li> <li>• One study found improvements in sexual desire and function</li> <li>• One study found increases in successful IVF attempts</li> <li>• One reported finding was: 63 out of 69 women who became pregnant lost more than 5 BMI kg/m2</li> </ul>	<ul style="list-style-type: none"> <li>• Seven studies found significant increases in sexual hormones, including Total Testosterone, Sex Hormone-Binding Globulin, Estradiol, and Follicle Stimulating Hormone</li> <li>• Two studies reported increases in sperm in both Azoospermia and Oligospermia groups</li> <li>• Two found improvements in sexual quality of life</li> <li>• One reported no significant outcomes in infertility, while another reported no significant outcomes in sperm parameters</li> </ul>

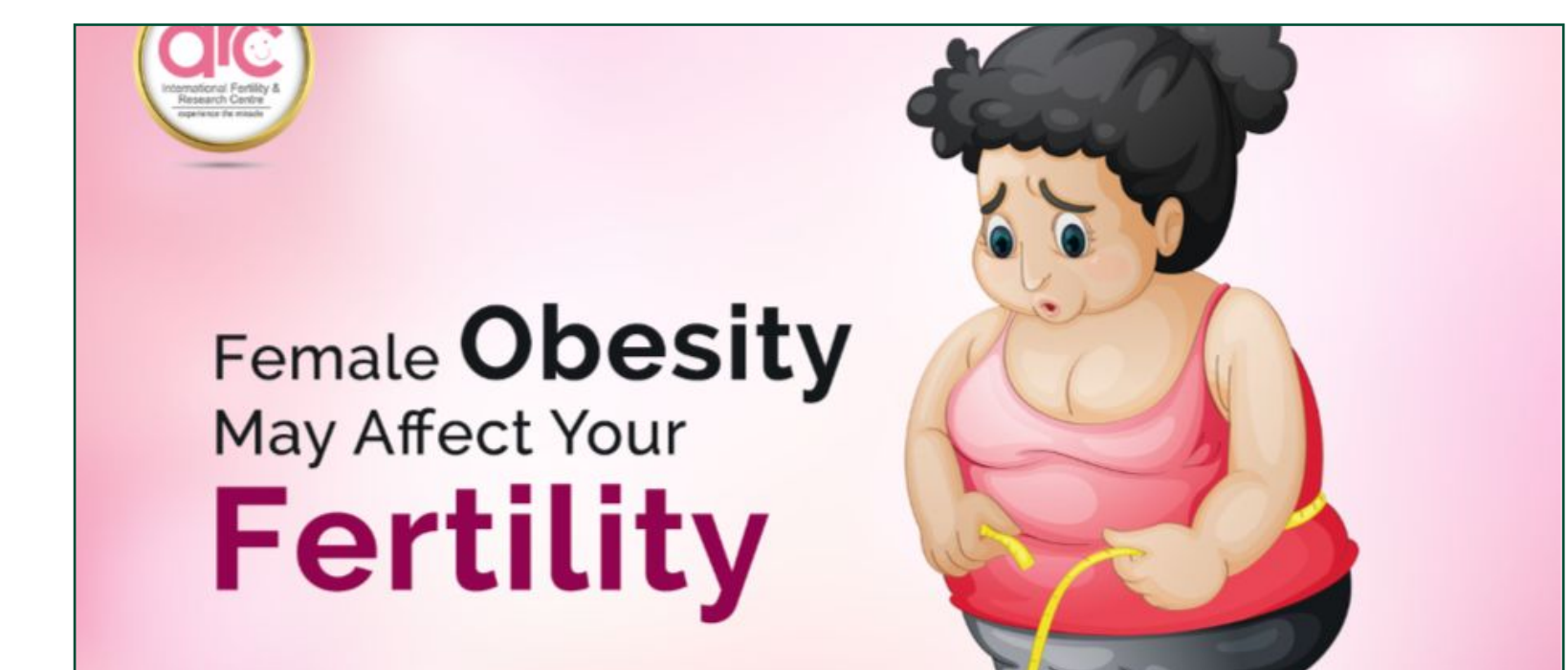


**Conclusions**

- The results indicate that there is a positive correlation between bariatric surgery and improving factors that affect fertility in men and women.
- A majority of the female studies included pregnancy as evidence of fertility improvement after bariatric surgery, however, male studies only mentioned improvements in hormones and sperm count rather than paternity after bariatric surgery.

**Future Directions**

- Further research is needed to clarify the association between weight reduction from bariatric surgery and improved fertility for men and women.
- Increased awareness of the correlation between bariatric surgery and its potential impact on fertility is needed for those undergoing bariatric surgery.
- The next step of this systematic review process includes quality assessment and data synthesis to examine the overall impact of different types of bariatric surgery on fertility for both men and women.



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