



shady grove fertility

proud partner USFertility

9600 Blackwell Road, 5th Floor
Rockville, MD 20850

Refer your patients with confidence

1-888-348-5599



shady grove fertility

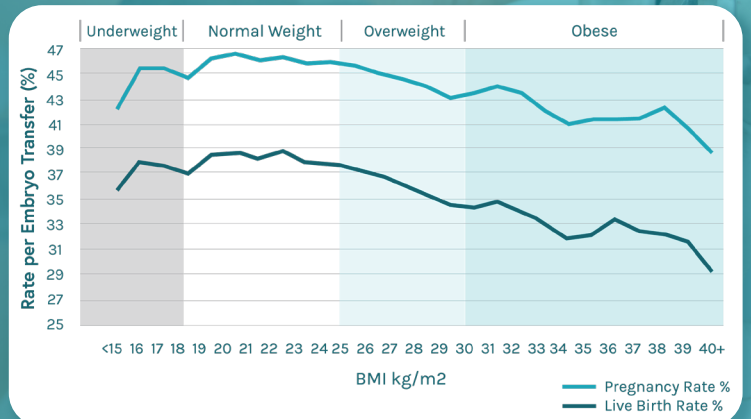
MEDICAL UPDATE | May 2023

Impact of BMI on fertility treatment outcomes

There is a strong correlation between a woman's BMI and her fertility potential and treatment outcomes. While not every woman who is overweight will have difficulty conceiving, there are many who do.

Weight can often be a sensitive topic, but it's important to address it, not only because the rate of obesity is increasing but also because it can have a significant impact on your patients' overall health, ability to conceive, and the health of the child.

[Learn more about weight and fertility](#) →



Counseling your patients on weight and fertility

Understanding how weight impacts female fertility and treatment outcomes

The decision to postpone treatment due to obesity is often a difficult conversation. As part of our preconception evaluation, our goal is to optimize medical conditions that pose a hazard to the health of the woman and baby. Being overweight negatively affects a woman's fertility and treatment outcomes in several ways:

- Increased ovulatory dysfunction, presenting as oligomenorrhea or secondary amenorrhea¹
- Reduced chance of conception within 1 year of stopping contraception¹
- Exacerbation of conditions such as polycystic ovary syndrome (PCOS)¹
- Reduced response to clomiphene citrate and in vitro fertilization (IVF) stimulation medications, requiring more medication for a longer duration¹
- Higher risk of IVF cycle cancellation and fewer eggs retrieved¹
- Decrease in IVF pregnancy rates and live birth rates by as much as 10 percent in some studies¹
- Lower live-birth rate per embryo transfer²
- Increased risk of miscarriage¹
- Increased risk of gestational diabetes³
- Increased risk of hypertensive disorders of pregnancy, including pre-eclampsia³
- Increased risk of Cesarean section and maternal infection³
- Increased risk of preterm birth and neonatal ICU hospitalization³
- Increased risk of overweight and obesity in offspring³



While the exact reason a higher rate of miscarriage is seen in this group of patients is still unknown, an SGF study showed that the higher chance for miscarriage appears to be unrelated to chromosomal aneuploidy in the embryo, a common cause of miscarriage.⁴

Recommendations for overweight and obese patients trying to conceive

For women needing anesthesia for a procedure, such as an egg retrieval, we require a BMI cutoff of 40 to comply with the anesthesia guidelines of our accredited ambulatory surgical center. When surgery is not a part of the protocol, as in the case with intrauterine insemination (IUI), a BMI cutoff of 44 is in place in order to mitigate the increased perinatal risks associated with morbid obesity.

Behavioral weight loss programs have been shown to be effective in women with PCOS and infertility.⁵ Both fertility and pregnancy outcomes are improved with weight loss of approximately 5-6% of initial body weight. For women with non-PCOS infertility, weight loss of a mean of 6.6% achieved with behavioral approaches did not result in improved fertility but did reduce perinatal complications.

For women who have tried and failed behavioral weight loss, or for those for whom greater weight loss than 6% is desirable, FDA approved medications exist that can facilitate weight loss (semaglutide and tirzepatide*).⁶ Patients who are able to take a hiatus from their quest for pregnancy to work on weight loss may benefit from these medications, the latter of which has demonstrated weight loss of the magnitude achieved with bariatric surgery.

Finally, surgery is a consideration for those with a BMI over 35 kg/m² and who have a comorbid condition. It is not recommended to try to conceive for at least one year after surgery, and after weight loss has stabilized. Pregnancy outcomes after bariatric surgery have recently been shown to be beneficial.⁷



“Acknowledging the multitude of risks associated with obesity and pregnancy and the overall decreased rate of success with treatment, we encourage our patients to achieve and maintain a healthy BMI prior to initiating any form of intervention.”

— **Nanette Santoro, M.D.**

Reproductive Endocrinologist, SGF in Denver, CO

Treatment	→ BMI Cutoff
Intrauterine Insemination	44
In Vitro Fertilization	40

1. Obesity and reproduction: a committee opinion. Practice Committee of the American Society for Reproductive Medicine. *Fertil Steril.* 2015 Nov;104(5):1116-26.

2. Kawwass JF, Kulkarni A.D., Hipp H.S., Crawford S., Kissin D.M., Jamieson D.J. Extremities of body mass index and their association with pregnancy outcomes in women undergoing in vitro fertilization in the United States. *Fertil Steril.* 2016 Dec;106(7):1742-1750.

3. Legro R.S., et al. Effects of preconception lifestyle intervention in infertile women with obesity: the FIT-PLEASE randomized controlled trial. *PLoS Med.* 2022;19(1):e1003883.

4. Bishop L.A., Owen C.M., Koniars K., Hill M.J., Richter K.S., Devine K. BMI is not associated with aneuploidy in patients undergoing preimplantation genetic screening (PGS). *Fertility & Sterility* Vol. 106 No. 3 Supplement Sept. 2016.

5. Legro R.S., Dodson W.C., Kunselman A.R., Stetter C.M., Kris-Etherton P.M., Williams N.I., Gnatak C.L., Estes S.J., Allison K.C., Sarwer D.B., et al. Benefit of delayed fertility therapy with preconception weight loss over immediate therapy in obese women with PCOS. *J. Clin. Endocrinol. Metab.* 2016;101:2658-2666. doi: 10.1210/jc.2016-1659.

6. Jastreboff A.M., Aronne L.J., Ahmad N.N., Wharton S., Connery L., Alves B., et al. Tirzepatide once weekly for the treatment of obesity. *N Engl J Med* (2022) 387:205-16. doi: 10.1056/NEJMoa2206038.

7. Johansson K., Cnattingius S., Näsälund I., et al. Outcomes of pregnancy after bariatric surgery. *N Engl J Med.* 2015; 372(9):814-24.

* Tirzepatide is anticipated to receive FDA approval for weight loss in spring 2023



shady grove fertility

proud partner  USFertility