

Endometriosis's Impact on Fertility: How Egg Freezing before Surgical Treatment Offers Patients a Safety Net

To help shine a light on endometriosis, the month of March is dedicated to raising awareness, educating the public, and increasing access to endometriosis resources to help women make better healthcare decisions. Endometriosis isn't a one-size-fits-all condition, and depending on the degree of disease, treatment today can impact a woman's fertility in the future.

As many as
➔ **30-50%**
of women struggle
with getting pregnant
when diagnosed with
endometriosis

"Endometriosis—a painful condition where the tissue lining of the uterus implants on the ovaries, bladder, and other surfaces in a woman's pelvis—is commonly treated by surgically removing adhesions and cysts from the affected organs," explains Brad Swelstad, M.D., who sees patients at SGF's Fair Oaks, VA, location.

Whether or not to have surgery, or more surgery, to treat endometriosis is controversial and should be a case-by-case decision. Given recent studies, SGF is no longer as likely to recommend surgery as the first line of treatment. In fact, repeated surgery may be detrimental to a woman's ovarian reserve, also known as egg supply. In other instances, surgery can be quite appropriate and provide relief of symptoms. Therefore, it is critical to understand each patient's unique situation before outlining a treatment plan.

"While surgery does offer some relief, it can also negatively impact a woman's fertility, particularly with endometriomas present in the ovaries," continues Dr. Swelstad. "Surgical management for endometriosis is oftentimes a temporary solution, with findings showing that over 60% of women will go on to have multiple surgical treatments.¹ This is important for patients to understand because recurring surgeries can take a toll on a woman's ovarian reserve."

Now, women with endometriosis don't necessarily have to choose between treatment to relieve pain and their future fertility. **Egg freezing allows women with endometriosis to preserve the existing quantity and quality of their eggs before undergoing any type of endometriosis management.**

Recognizing that the number of eggs a woman has will decrease over time and that endometriosis does tend to worsen with time, egg freezing allows women with endometriosis to proactively preserve the existing quantity and quality of their eggs and fertility now, for better pregnancy outcomes in the future. Since endometriosis can take many forms, and the success rates of these fertility treatments vary, a fertility specialist can outline a patient's best treatment options for having children.

Why Physicians Recommend Egg Freezing for Patients with Endometriosis Who are Waiting to Conceive

Egg quantity and egg quality diminish over time.

Egg quality is the number one factor in determining a woman's fertility potential.

Endometriosis tends to worsen with time.

While laparoscopic surgery can help to reduce the pain associated with endometriosis, it can also negatively affect a woman's egg supply (ovarian reserve).

Egg freezing protects fertility and gives patients better pregnancy outcomes in the future.

¹Saraswat, L, et al. Over 60% of Women Diagnosed with Endometriosis Go on to Have Multiple Surgical Procedures. Royal College of Obstetricians & Gynaecologists website. September 27 2017. Accessed March 2021. www.rcog.org.uk/en/news/over-60-of-women-diagnosed-with-endometriosis-go-on-to-have-multiple-surgical-procedures/.

Understanding Endometriosis's Impact on Key Reproductive Organs

In general, any patient who has been trying to conceive for over 1 year should seek a fertility evaluation. If the patient is greater than age 35, SGF recommends testing after 6 months of trying. With a diagnosis of advanced endometriosis, SGF would recommend an evaluation regardless of age, particularly if the patient has been actively trying to conceive more than 6 months.

When endometrial tissue forms on other reproductive organs aside from the inside of the uterus, it can interfere with:

OVULATION

When endometriomas are present, the number of eggs in the ovaries may be decreased.

TUBAL TRANSPORT

Scar tissue distorts the Fallopian tubes that transport the eggs from the ovaries.

EMBRYO QUALITY

Inflammation and altered hormone levels make it harder for a sperm to fertilize an egg, and more difficult for a fertilized egg to implant in the uterus.

STAGES OF ENDOMETRIOSIS

STAGE 1

MINIMAL > The laparoscopy will reveal a few lesions and endometrial implants dispersed across the exterior of the uterus. Some inflammation might be present, but it is minimal.

STAGE 2

MILD > Implants are slightly deeper and more implants have spread to an ovary or pelvic lining. The number of lesions is still relatively low.

STAGE 3

MODERATE > Cysts have formed on one or both ovaries and some scar tissue is present. Endometrial implants have increased in number and depth.

STAGE 4

SEVERE > Adhesions are thick and are deeply implanted on pelvic lining and ovaries. Inflammation is severe and lesions are present on Fallopian tubes as well as other reproductive organs.

Why Egg Freezing is a Smart Option for Women Waiting to Conceive

Previously, women with endometriosis had limited options: have surgery and potentially damage their fertility or experience pain. While laparoscopic surgery can help to reduce the pain associated with endometriosis, it can also negatively affect a woman's ovarian reserve.

Shady Grove Fertility recommends that women with moderate to severe endometriosis consider egg freezing and speak with a fertility specialist prior to initiating necessary management surgery. Vitrification, or flash-freezing, is a very efficient and effective method SGF uses to freeze eggs that demonstrates strong survival, fertilization, and embryonic development rates after frozen eggs have been thawed so that family building remains a future option.

Treating Patients with Endometriosis Who Are Waiting to Conceive

Low-dose oral contraceptive pills

- Helps manage pain and diminish growth of endometriomas and prevent new ones from forming.
- Helps with pain management and symptom prevention.
- This treatment does not aid in conception.

GnRH agonists

- Halts estrogen production.
- Bone thinning is a common side effect, so this is not a long-term solution.
- Helps with pain management and symptom prevention.
- This treatment does not aid in conception.

Surgery

- Repeated surgery can be detrimental to egg supply and does not always mean improved fertility.
- 60% recurrence in endometriosis.

Egg Freezing Success Rates

While egg freezing does not guarantee the promise of having a baby one day, freezing at least 15 eggs does significantly increase the odds, with the actual quantity dependent upon a woman's age:

- Based on SGF thaw data reported in Fertility and Sterility²:
 - Women younger than 38, freezing 15 to 20 mature eggs will provide roughly a 70 to 80 percent chance of at least one live birth.
 - Women 38 to 40 years old, freezing 25 to 30 mature eggs is recommended for a 65 to 75 percent chance of at least one live birth.
- Greater than 84 percent of all frozen eggs will survive SGF's thawing process.
- Among the eggs that survive the thawing process, 71 percent will become successfully fertilized.

Women with infertility with advanced endometriosis are likely best served by fertility treatment to increase their odds of conceiving. The highest chance of pregnancy per cycle results from in vitro fertilization (IVF), which can leverage a patient's frozen eggs for treatment.

Patients with Endometriosis Now Have Even Playing Field in Pregnancy Outcomes

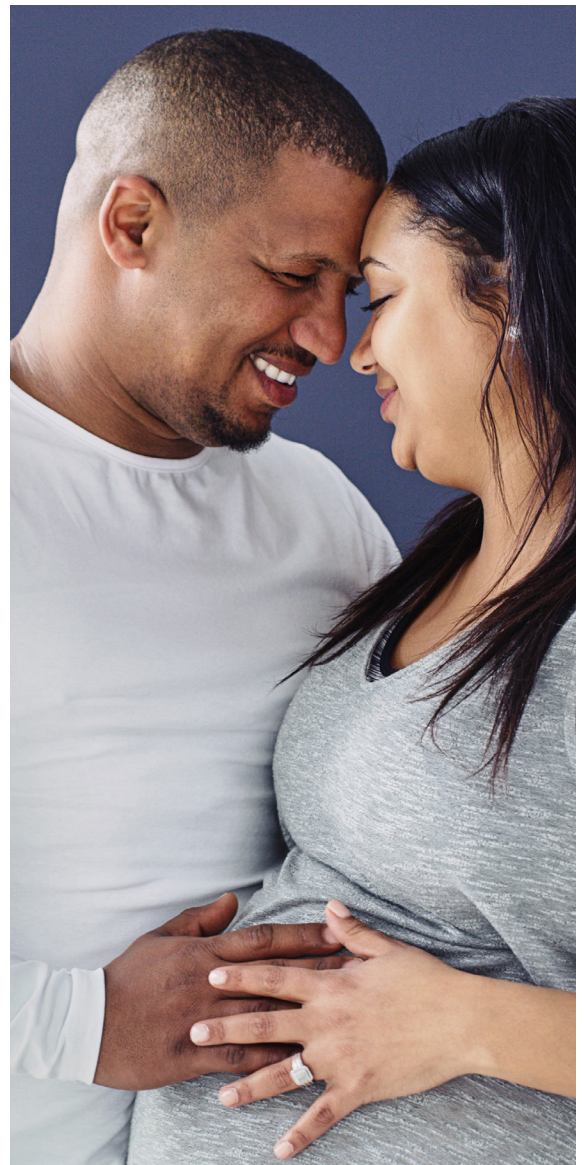
SGF recently participated in a retrospective cohort analysis finding that pregnancy rates are similar for endometriosis vs. non-endometriosis patients undergoing IVF with genetically screened normal embryos.

The study's findings showed primary outcomes of live birth did not differ between endometriosis patients when compared with either control group.

Patients with endometriosis had a live birth rate (61%) not significantly different compared with patients in treatment for male factor infertility (49.6%) and patients undergoing PGT-M (52.1%). These normal rates confirm that assisted reproductive technology (ART) is the treatment of choice for infertility due to endometriosis.³

²Devine, K., et al. Live birth data from 498 elective and non-elective autologous oocyte thaw cycles (2009-2018). *Fertility and Sterility* website. September 1, 2019. Accessed March 2021. [https://www.fertstert.org/article/S0015-0282\(19\)31139-2/fulltext](https://www.fertstert.org/article/S0015-0282(19)31139-2/fulltext)

³Bishop, L., et al. Endometriosis does not impact live-birth rates in frozen embryo transfers of euploid blastocysts. *Fertility and Sterility* website. September 21, 2020. Accessed March 2021. [www.fertstert.org/article/S0015-0282\(20\)30712-3/fulltext](http://www.fertstert.org/article/S0015-0282(20)30712-3/fulltext).



Experience Matters

SGF has more experience than most centers with egg freezing and thawing. **"Not every lab has the expertise and experience to vitrify, or flash freeze, eggs and then have them survive the thaw, fertilize, and develop into an embryo that leads to pregnancy and delivery. The techniques used to freeze and thaw eggs involve specific, highly specialized protocols, extensive embryology experience, and precise techniques,"** shares Eric A. Widra, M.D., Medical Director at Shady Grove Fertility.



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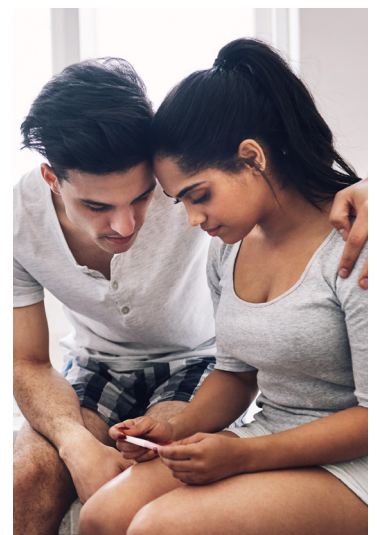
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Conceiving with Endometriosis: How the Condition Affects Fertility

Treating a woman's endometriosis today can impact her fertility in the future. Because endometriosis often worsens with time, it is important for women to proactively consider their family-building plans. Egg freezing can be a game changer for women waiting to conceive by offering them a means to preserve younger, healthier eggs.

Endometriosis is different for each patient. Shady Grove Fertility physicians, like Dr. Brad Swelstad, consider the following points to inform individualized treatment plans:

1. The patient's age.
2. The stage of the patient's endometriosis and whether endometriomas are present.
3. How long the patient has been trying to get pregnant.
4. Anti-Müllerian hormone (AMH) level to indicate ovarian reserve.



[Learn more about preserving fertility with egg freezing for patients with endometriosis >>>](#)