



## 25 Questions and Answers about Reproductive Surgery

### **1. Why would I need surgery?**

The principle goal of reproductive surgery is to restore normal anatomy and function to the reproductive organs. Damage caused by inflammation, infection, or endometriosis leaves these structures more vulnerable to postoperative adhesion formation.

### **2. Why should I have my surgery done by an REI specialist?**

Standard surgical techniques are not appropriate for reproductive surgery, and these delicate procedures are best performed by a subspecialty trained and certified specialist in reproductive endocrinology and infertility.

### **3. Who are the best candidates for laparoscopic surgery?**

Laparoscopic surgery is usually preferable to a standard open surgical approach, because this reduces handling of tissues, prevents drying of surfaces, and allows better access to and visualization of the deep pelvic structures. It also provides magnification and the ability to achieve more complete hemostasis. The net result is a better restoration of anatomy, decreased adhesion formation, lower risk of recurrence of endometriosis or pain, and higher pregnancy rates.

### **4. If my tubes have been cut (tubal ligation) can I have them fixed?**

The answer to this question depends on several factors such as how the tubes were "tied" in the first place, how old you are and whether there are any other fertility factors that would impact success (severe male factor, severe endometriosis).

### **5. Can't I just go to my local Ob/Gyn to have my tubal ligation reversed?**

Often, the first operation is a "make or break" procedure. If improperly performed, the damage caused may not be reversible. It is wise to ascertain your surgeon's experience and credentials well before you schedule surgery.

### **6. I am planning on doing IVF. Why would I need to consider surgery?**

There are several situations in which surgery is recommended prior to IVF. These include removal of fibroids that are close to or inside of the uterine cavity; removal of a blocked, fluid-filled fallopian tube (hydrosalpinx) and removal of ovarian endometriomas (ovarian cysts that can damage the ovary and may impact the success of embryo implantation).

## **7. What is a laparoscopy?**

A laparoscopy is an outpatient surgery usually performed under general anesthesia. Most laparoscopies are completed in a hospital, but some physicians utilize freestanding outpatient surgery centers. During a laparoscopy, the physician inserts a small fiber-optic telescope into the abdominal cavity through an incision made in the patient's umbilical area (belly button).

Using the laparoscope, a gynecologic surgeon can inspect the uterus, fallopian tubes, and ovaries. The appendix and upper abdomen are carefully inspected as well. Additional instruments may be inserted into the abdomen through incisions (ports) made along the hairline above the pubic bone. For example, the physician may use graspers, scissors, or suction irrigators to rinse the tissue and remove blood and fluids as needed.

During a laparoscopy, the physician typically introduces a blue dye into the uterine cavity while directly visualizing the fallopian tubes. If the fallopian tubes are patent (open) but are located in an abnormal location because of scar tissue, then the surgeon may try to free the fallopian tubes to improve the patient's fertility.

## **8. What is a hysteroscopy?**

A hysteroscopy is a simple surgical procedure that is performed either to diagnose or to treat a problem within the uterine cavity. During hysteroscopy, the physician inserts a small fiber-optic telescope through the cervix and into the uterus. Either gas or liquid can be used to distend the uterus and allow the physician to directly visualize the uterine cavity. The physician may also introduce small instruments into the uterus to cut scar tissue or remove polyps or fibroids.

Although diagnostic hysteroscopy can be performed in the physician's office under local anesthesia, operative hysteroscopy usually requires anesthesia because of the cramping that occurs during uterine manipulation. Complications of hysteroscopy are rare.

## **9. What is endometriosis and how is it diagnosed?**

Endometriosis may be suspected when patients complain of increasingly severe menstrual cycles, pelvic pain, or infertility. Endometriosis is a chronic disease characterized by the growth of endometrial-like tissue beyond the normal confines of the uterine cavity. Endometriosis is usually diagnosed at the time of laparoscopic gynecologic surgery, although endometriosis cysts (endometriomas) may be presumptively diagnosed on ultrasound.

Although there are several theories about how endometriosis forms, it seems likely that retrograde menstruation (the passage of menstrual debris out of the ends of the fallopian tubes and into the pelvis) plays a major role. In some women the normal process by which this tissue is eliminated fails to occur and the implants persist. The endometrial tissue that comprises the endometriosis implants will respond to the normal hormone stimulation during the monthly reproductive cycle.

This phenomenon leads to inflammation of the pelvic reproductive organs, causing pelvic pain, painful periods (dysmenorrhea), and infertility. Pelvic adhesions or scar tissue may also develop. However, since endometriosis has been described in areas outside of the pelvis (eye, lung, brain, etc.), the retrograde menstruation theory cannot account for all cases of endometriosis.

## **10. Does surgery for endometriosis improve pregnancy rates?**

Well-designed medical studies clearly show that destroying even small implants of endometriosis can improve fertility by as much as 50%. In a large Canadian study, the monthly pregnancy rate following surgical treatment of minimal endometriosis rose from 3% to 4.5%. Although this finding represented a 50% improvement in the patients' monthly chance of pregnancy, it does not compare very favorably with IVF pregnancy rates, which average above 30% for a single treatment cycle. Nevertheless, because treatment of endometriosis at the time of surgery does improve pregnancy rates, most surgeons will do their best to destroy endometriosis at the time of laparoscopy by using either laser or coagulation techniques. In addition to improving fertility, surgery may often eliminate or improve symptoms of dysmenorrhea and pelvic pain.

Ovarian cysts that contain endometriotic tissue may grow quite large. They are often called "chocolate cysts" because of the dark brown fluid found within them, although endometriosis cysts are more correctly referred to as endometriomas. If left untreated, these growths may destroy part or all of the normal ovarian tissue, including the eggs. Endometriomas must be surgically removed, usually via laparoscopy, as medical therapy is ineffective in the treatment of endometriomas. The ultimate choice of whether to perform a laparoscopy or laparotomy depends on the operative findings and the skill and experience of the surgeon.

## **11. Do I need endometriosis surgery if I am already planning to pursue IVF?**

The question of endometriosis surgery prior to IVF is a somewhat controversial area of reproductive medicine. Most reproductive endocrinologists do not recommend surgery prior to IVF unless the woman has advanced endometriosis, in particular, an ovarian endometrioma.

IVF is associated with excellent pregnancy rates (even without surgery) in women who have only mild to moderate endometriosis. When advanced endometriosis is present, such as an ovarian endometrioma, its surgical removal prior to IVF may enhance the chances for a successful IVF outcome and may decrease infectious complications related to egg collection.

## **12. Do I need to have an endometrioma removed prior to a Frozen Embryo Transfer (FET)?**

The impact of an endometrioma on embryo implantation is uncertain. Some studies have shown a decrease in implantation rates in the presence of an endometrioma whereas other studies do not demonstrate a reduction in success rates. An elevated CA-125 blood test may suggest that surgery or prolonged therapy (3 months) with Lupron is indicated before an FET. In patients with a limited number of embryos to work with, it makes sense to do everything possible to optimize success rates.



### **13. What is Asherman's syndrome?**

Asherman's syndrome describes patients who are found to have severe scarring inside the uterus (intrauterine adhesions) following some type of surgical procedure (such as D&C to remove a retained placenta following delivery). Patients with Asherman's syndrome either have no periods or extremely light periods. In these patients the scar tissue causes the cavity to be smaller than usual and can lead to miscarriage or adverse pregnancy outcomes like preterm birth and intrauterine growth restriction.

Hysteroscopic surgery can be used to remove the scar tissue and restore normal anatomy. Pregnancies after the treatment of severe Asherman's syndrome can be complicated by disorders of placental implantation such as placenta accreta (failure of the placenta to separate normally following delivery) or placenta previa (localization of the placenta on top of the cervix necessitating a Cesarean delivery).

### **14. I have fibroids. Do I need to have them removed?**

Fibroids are very common benign growths of the muscle of the uterus. When fibroids are removed, they usually have a pearly white appearance and can range in size from pea-sized to basketball-sized. The decision whether or not to remove fibroids is dependent on two major factors: size and location. A small grape-sized fibroid located within the uterine cavity may decrease fertility and increase the risk of miscarriage, so it should be removed. However, a larger fibroid located on the outside wall of the uterus may have very little impact on fertility or the risk of pregnancy loss.

### **15. Can my fibroids be removed with a hysteroscope?**

Maybe. It all depends upon where the fibroids are located, what percentage of the fibroid is actually found with the uterine cavity and how large the fibroid is (although even very large fibroids located within the uterine cavity can be removed with operative hysteroscopy).

### **16. I am worried about having worse issues with infertility after my surgery, which I was hoping would improve my fertility. Should I be concerned?**

Although surgery always entails some element of risk, we believe that the odds of a surgery performed by a skilled and knowledgeable surgeon (such as Dr. Keenan) making you somehow less fertile are extremely small. One advantage of seeking out an extremely experienced surgeon who is sub-specialty trained in infertility is that such a level of expertise is often hard to find. Many Ob/Gyn physicians are excellent surgeons, but every patient should carefully consider who they wish to perform their surgery and have a firm understanding of the goal of any surgical procedure.

The Southeastern Center for Fertility and Reproductive Surgery is the oldest and best-established medical practice in East Tennessee dedicated to the treatment of infertility.



### **17. I was told that I have a dermoid cyst. Does it need to be removed?**

Dermoids (also called mature cystic teratomas) are very common benign ovarian tumors. Dermoids can slowly increase over time and eventually become quite large. A very large dermoid may affect fertility, and when there is an ovarian cyst present, the ovary can wrap around itself, resulting in an ovarian torsion. Ovarian torsion is extremely painful and can present with sudden, severe abdominal pain. When a dermoid cyst is found to be over 4-5 cm in diameter, surgical removal may be reasonable to consider. When removing a large dermoid (> 8cm) care should be taken to carefully separate out the dermoid from the normal ovary because viable eggs are usually still present but just pushed out into the periphery of the ovary. The situation is quite different with large endometriosis cysts, which tend to be destructive and lead to a marked reduction in the number of eggs present in the ovary.

### **18. My cervix has a lot of scarring and I was told to get a cervical dilation done. Is this a good idea?**

Cervical stenosis describes a severe narrowing of the cervical canal which can cause problems with fertility treatment and even reduce the chance of spontaneous pregnancy in severe cases. Rarely a patient who undergoes a common gynecologic procedure like a LEEP (to treat an abnormal Pap smear) or a D&C (to treat a miscarriage) will fail to resume normal periods even though month after month she feels like a period should be coming based upon other signs and symptoms. Although these symptoms may be similar to someone with severe intrauterine adhesions (Asherman's syndrome) the actual problem may be a simple case of cervical stenosis. Cervical stenosis can be treated by gently dilating the cervix, usually with ultrasound guidance to avoid perforating the uterus. This surgery can be performed with local anesthesia or intravenous sedation and it usually takes less than 15 minutes to resolve the problem.

### **19. How should I decide between IVF and a tubal reversal surgery?**

In trying to decide between these two options there are several points to consider. First of all, the manner in which the tubal ligation was performed in the first place is very important. If the tubal ligation was performed immediately post-partum, then usually a tubal reversal can be considered. However, if the tubal ligation was performed laparoscopically with electrocautery to disrupt the tubes, then the damage to the tubes may preclude a reversal. On the other hand, laparoscopic tubal ligations performed with rings or clips can be reversed in most cases.

Secondly, a male evaluation should be performed to ensure that there is not a severe male factor infertility issue that would make a tubal reversal less likely to result in pregnancy.

Finally, a woman's age and ovarian reserve status should be considered. Patients with poor ovarian reserve may not be good candidates for Stimulated Cycle IVF but could consider Natural Cycle IVF if available. Patients over age 37 years may be wise to consider IVF as a first step and then consider tubal reversal if unsuccessful with IVF.

Of course, some couples may not be interested in IVF for personal, religious, spiritual, philosophical or financial reasons.

**20. I had chlamydia back in college and I am worried about it affecting my fertility. Should I do a laparoscopy?**

Laparoscopy remains an important part of the evaluation of the infertile couple. Although some patients elect to move rapidly into IVF, others are more interested in a stepwise approach to infertility treatment. In cases of possible tubal disease, a laparoscopy remains the gold standard for evaluating the fallopian tubes. Although a hysterosalpingogram can provide useful information regarding the tubes, a laparoscopy gives a more complete assessment and allows for potential treatment to be performed at the same time. In the setting of a previous chlamydia infection and concerns about fertility, a laparoscopy would provide the most insight into this patient's situation.

**21. What is a uterine polyp, and is it cancer or precancerous?**

Uterine polyps are very common benign growths of the lining of the uterus. Polyps are almost never cancerous or precancerous growths, but removing a uterine polyp is appropriate in a fertility patient or in a patient who is experiencing abnormal uterine bleeding. Older patients and those who are taking tamoxifen for breast cancer chemoprophylaxis are at higher risk for having polyps that are potentially precancerous or cancer. Polyps are very easy to remove using a hysteroscope and the surgery has very few risks.

**22. How much time should I wait between my surgery and trying to conceive?**

The answer to this question depends upon the type of surgery being performed. Following myomectomy and uterine reconstruction, most patients are advised to wait 3-6 months before conceiving. However, following the removal of fibroids using hysteroscopy, many patients are advised that they can begin trying right away. As in most cases, it is best to ask your surgeon when it is safe to resume attempts to conceive.

**23. I have a fibroid but am now pregnant. Do I need to consider surgery while pregnant?**

Operating on a pregnant patient has its own set of challenges and we usually try to avoid surgery if at all possible. Removing fibroids during pregnancy would carry a high risk of miscarriage and of excessive blood loss. Fortunately, most patients with fibroids have a good pregnancy outcome, so the best approach is watchful waiting. However, if a patient with a large fibroid suffers a miscarriage, then it would make sense to discuss removing the fibroid prior to another pregnancy.



Southeastern Fertility  
Center for Fertility and Reproductive Surgery

#### **24. Why would I be placed on Lupron before my surgery?**

Lupron is a medication that shuts down the ability of the pituitary to stimulate the growth of ovarian follicles. Consequently, the patient experiences very low levels of estrogen and develops symptoms of menopause. Lupron is sometimes used to shrink fibroids prior to surgery and to eliminate menses in patients who are severely anemic. In patients with endometriosis Lupron is sometimes used for several months following surgery to help reduce the recurrence of the disease and to improve symptoms such as pelvic pain and severe periods.

#### **25. How long does it take to recover following surgery?**

Every patient may have a different experience in terms of their recovery following surgery. Although some patients return to work within a week following laparoscopy, others may require a full 6-8-week recovery if the surgery was complicated and involved extensive dissection. It is always prudent to schedule surgery when you may be able to take the time to fully recover before returning to normal activities.

