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Tubal ligation: IVF or Surgery?

Microsurgical tubal reanastomosis, also known as tubal reversal surgery, is a highly specialized microsurgical technique used to repair fallopian tubes that have been ligated for contraception or as a result of an ectopic pregnancy surgery.

Patients that are desiring fertility after tubal ligation will often be confronted with the decision to either undergo in vitro fertilization (and bypass the tubes)or will consider microsurgical tubal reanastomosis. Many hospitals and gynecologic surgeons do not have the capabilities to perform the MTR surgery, and so specialized centers, such as Reproductive Science Center, attract patients from great distances.

This article will review the key differences between MTR and IVF. It will also discuss the different surgical techniques for MTR as well as success rates.

There are several key differences between MTR and IVF. Patients who choose to undergo MTR will need to have surgery. At Reproductive Science Center, this is an outpatient surgery. A two inch incision is made into the abdomen in order to access the tubes and repair them. The surgery takes approximately 2 hours and the patient can go home the same day, however they require pain medicine and will have limited activity for the first week after surgery. It may take 4-6 weeks to feel completely back to normal. At the conclusion of the procedure, the tubes will have been repaired and made patent so that fertility can occur in a natural fashion. Nearly 100% of patients will be able to successful undergo microsurgical tubal reversal if their tubes have been tied off in a routine fashion such as the Pomeroy tubal ligation or with tubal clips. Occasionally, the fimbriated end of the tube has been removed by the preceding doctor without informing the patient or as a complication of surgery. This may make a standard repair impossible, however the tube can usually still be opened. After approximately 6 weeks, patients may then begin to attempt pregnancy in a routine fashion. Approximately 80% of patients will be able to conceive (especially if less than 40 years old and their partner has a normal semen analysis.) If a patient is unable to conceive after 6 months, a HSG (hysterosalpingogram) will be ordered to ensure that the tubes have remained open after surgery.

Patients that choose to undergo in vitro fertilization often will move rapidly into an in vitro fertilization cycle where their ovaries will be stimulated in order to produce multiple eggs. These eggs will be removed through a needle through the vagina while the patient is asleep (a minor surgery). Eggs and sperm are combined in the embryology laboratory and then transferred as embryos back into the patient. Every time a patient wishes to attempt fertility, the procedure must be repeated unless there are cryopreserved embryos available for use. Although an attempt at conception can occur sooner with IVF, it may be more difficult to undergo repeat attempts due to the cost and daily injections.



For patients with limited ovarian reserve, advanced maternal age, or poor sperm production, in vitro fertilization will be the recommended procedure. For this reason, we will recommend patients have an evaluation of their ovarian reserve with hormone testing such as FSH and estradiol (or AMH) as well as an evaluation of sperm function through a semen analysis. This will help to make the decision about which type of procedure is best for patients with blocked tubes.

- Ultrasound of the pelvis
- Complete Blood Count

- FSH Estradiol or AMH
- Semen Analysis

Success rates with in vitro fertilization depend greatly upon the age of the woman undergoing the procedure and may vary between 20-60% for any given cycle. Please see our handout on success rates to know your age related chance of success.

Success rates for tubal reversal also vary depending on the age of the woman, however most studies have shown that for women under the age of 40 with partners with normal sperm function, 80% are able to achieve pregnancy within the first 5 years. At Reproductive Science Center the total pregnancy rate has been 93% with a 78% full-term pregnancy rate. There is a 6% spontaneous abortion rate and a 6% ectopic pregnancy rate.

