

Recanalization of Fallopian Tubes

- Occlusion of fallopian tubes causes up to one-third of fertility problems in women.
- The American Society for Reproductive Medicine recommends recanalization of fallopian tubes in patients who have had a hysterosalpinogram showing proximal tube occlusion.
- Recanalization is a lower-cost alternative to other infertility treatments and is associated with minimal stress and few complications.
- Technical success rate of recanalization is high.
- Overall, pregnancy success rates are around 30% with better success rates in younger women with no anatomic abnormalities.

Occlusion of the fallopian tubes is the cause of fertility problems in up to one-third of women who fail to conceive. The American Society for Reproductive Medicine recommends recanalization as a treatment for infertility in women in whom a hysterosalpinogram (HSG) shows *proximal* fallopian tube occlusion. Recanalization is significantly less costly than other infertility treatments and may allow women to attempt to conceive naturally without hormone treatments or other interventions. However, recanalization may be underused as many patients proceed directly to other treatments, such as in vitro fertilization.

Technical success rates for recanalization are high, with reports of 71–92%. Technical failures are related to congenital malformations of the uterus, the presence of large leiomyomas, or polyps, and complete occlusions caused by infection, previous surgery, or endometriosis.

Pregnancy rates following successful recanalization depend on a number of factors, including patient age and uterine and tubal abnormalities. The average rate in most studies is 30%, with the highest success rates in healthy, younger women. Most pregnancies occur within the first year following recanalization. Re-occlusion is estimated to occur in 25% of patients, but recanalization can be repeated.

Candidates for fallopian tube recanalization must have had an HSG examination that demonstrates tubal occlusion prior to the procedure.

Fallopian Tube Recanalization

Fallopian tube recanalization is performed on days 5–12 of the menstrual cycle to be certain that the patient is not pregnant. Patients are asked to refrain from unprotected sexual intercourse from the date of their last period. Patients are given pre-procedure antibiotics and are occasionally asked to continue antibiotics post-procedure.

Recanalization is a simple and straightforward procedure that is performed under sedation and local anesthesia to help patients remain calm and relaxed. It begins by performing a repeat HSG examination to confirm the occlusion. This is necessary because false diagnoses are common due to tubal spasm or mucus. After the placement of a catheter into the cervical canal, iodinated contrast is injected slowly through the canal to minimize the risk of spasm. If the cervix is wide, a balloon catheter may be used to prevent backflow of contrast material. If no contrast passes through a fallopian tube, it is occluded. On occasion, an operator will repeat the HSG after a few minutes if he/she suspects spasm.

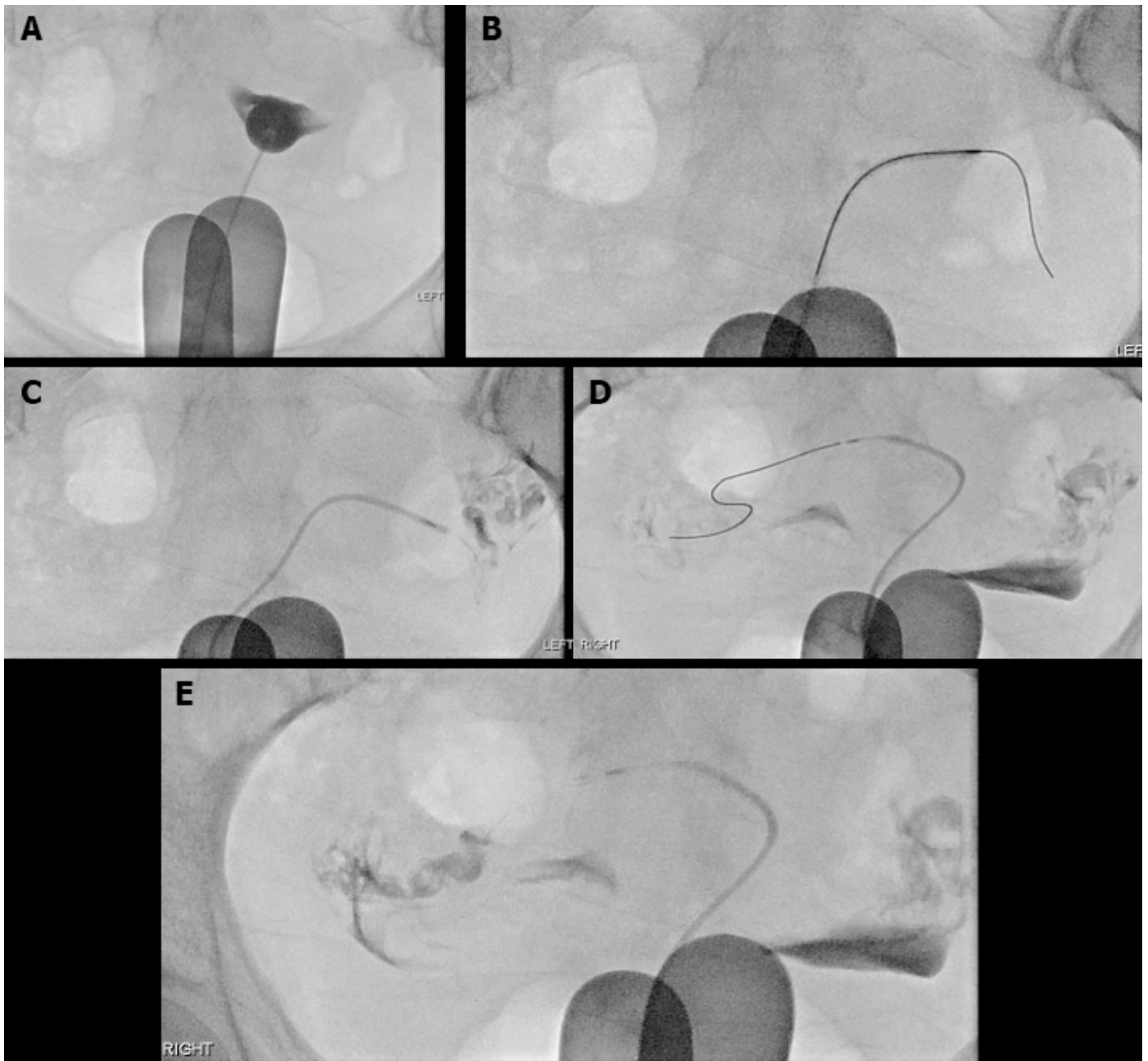


Figure 1. Fallopian tube recanalization (A) Pre-procedural HSG demonstrates bilateral proximally occluded fallopian tubes; **(B)** Recanalization of the left fallopian tube, using a wire passed through a catheter; **(C)** Post-canalization injection of contrast through left fallopian tube demonstrates patent left fallopian tube; **(D)** Recanalization of the right fallopian tube; **(E)** Post-procedure contrast injection demonstrating patent right fallopian tube.

Once tubal occlusion is confirmed, selective salpinography (SSG) is performed to recanalize the fallopian tube for both mid-tubal as well as proximal occlusions. In this procedure, a 5-F curved catheter is advanced over a guide wire and wedged into the cornual region before gently injecting contrast. If SSG reveals a proximal occlusion (Figure 1A), a 3-F tapered catheter over a 0.015-inch guide wire is slowly advanced into the fallopian tube and through the obstruction (Figure 1B). After the guide wire is withdrawn, gentle injection of contrast through the catheter into the peritoneal cavity demonstrates recanalization (Figure 1C). The procedure can be repeated on the other fallopian tube if obstructions are seen on both sides (Figure 1D, E).

Total procedure time is 30–60 minutes, with longer times taken when the anatomy is more complex. Fluoroscopy time is kept to a minimum, and the X-ray beam is coned down as much as possible. Total radiation dose is comparable to that of an HSG with a reported average dose to the ovaries of 2.7 mGy and a patient effective dose of 1.2 mSv.

Complications of Fallopian Tube Recanalization

Patients may experience pelvic discomfort after the procedure, which typically resolves within 24 hours and can be treated with medication for menstrual cramps. Patients may also experience a watery, pinkish discharge that can last 3–14 days. Sexual intercourse may be resumed the day following the procedure.

Other complications, such as perforated fallopian tubes or uteruses, are rare. If pregnancy occurs, patients are at greater risk for ectopic implantation, which has been reported in up to 25% of women.

Scheduling for Fallopian Tube Recanalization

Candidates for fallopian tube recanalization must have had a prior an HSG examination that demonstrates tubal occlusion. Recanalization is performed during the follicular phase (days 5–12) of the menstrual cycle. If menses are irregular, appointments can be made at short notice. The procedure is performed on the main campus of Massachusetts General Hospital. Appointments can be made through Epic (inside the Partners network) or [Physician Gateway](#) (outside the Partners network) or by calling 617- 726-8396.

Further Information

For further information on image-guided fallopian tube recanalization, please contact Peter Mueller, MD, or Kara Pearson Stasko, MS, PA-C, Interventional Radiology, Massachusetts General Hospital, at 617-726-8396.

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