

About Your Procedure

Sperm retrieval

This handout explains different sperm retrieval procedures. It describes TESA, TESE, microTESE, PESA, and MESA. It also includes instructions to follow before and after your procedure.

What is azoospermia?

Azoospermia is the complete absence of sperm in the ejaculate. It may be caused by obstruction of the genital ducts (similar to what happens in a vasectomy) or from little or no sperm being produced in the testicles. Even when no sperm are found in the ejaculate, often sperm can be retrieved from the testicles using minimally invasive methods. These methods are done with no or very small incisions.

What happens after retrieval?

After sperm are retrieved, pregnancy is possible with the use of *intracytoplasmic sperm injection* (ICSI). ICSI is done in the laboratory. In this procedure, a single sperm is injected into each egg. The embryos that result after 3 to 5 days are placed in the woman's uterus. Extra embryos can be frozen for later use.

Most times, retrieved sperm will be *cryopreserved* (frozen) for using later in *assisted reproductive technology* (ART). These are methods that are used to achieve pregnancy.

Retrieval Methods

The procedures described in this handout may be used to retrieve sperm from the male reproductive tract. To choose the best procedure for you, you will meet with a male fertility specialist and have diagnostic tests, if needed. The type of procedure that is used to retrieve sperm will depend upon the reason for your azoospermia.



Talk with your fertility specialist about the best procedure for you and your partner.

Methods for retrieving sperm from the male reproductive tract include:

Testicular Sperm Aspiration (TESA)

This procedure is usually done with a local anesthetic in an outpatient clinic. With local anesthesia, you will stay awake during the procedure. Numbing medicine will be applied to one or both of your testes.

After the numbing medicine is applied, a needle is used to *aspirate* (remove fluids and tissue from the body) tissue from the testicles. No incisions are made.

Sperm collected during TESA are assessed by an *andrologist* (a specialist in conditions that occur in male reproductive organs). Then, they are frozen. TESA works best for men who are producing plenty of sperm throughout their testicles.

Testicular Sperm Extraction (TESE)

TESE is similar to TESA. Most times, it is done with a local anesthetic, but it requires a small incision to expose tissue in the testicles. This procedure may be done to confirm that there are sperm in the testes. It may also be used for men who are producing sperm, but who are not good candidates for a *percutaneous* procedure (a medical procedure where a needle puncture is used to reach inner organs or other tissues). This may be because of already having had surgery or because there is scarring in the testes.

Microscopic Testicular Sperm Extraction (microTESE)

MicroTESE is the most complete way to identify healthy sperm inside the testes. The operation may last 3 to 4 hours, so it is done with a general anesthetic. This will make you sleep during the procedure. MicroTESE requires a larger incision to expose the entire contents of both testicles.

Your surgeon will use a high-powered surgical microscope to see the *seminiferous tubules* (long, narrow tubes where sperm are produced) to help find sperm. Your surgeon and laboratory staff work together during MicroTESE so that tissue samples can be examined while the surgery is being done. MicroTESE is best for men who:

- Have azoospermia that is not caused by any blockages
- Have few sperm on FNA mapping (see handout “About Your Procedure: Testicular fine needle aspiration mapping”)
- Want the most thorough sperm retrieval procedure even though this is major surgery

Percutaneous Epididymal Sperm Aspiration (PESA)

PESA is similar to TESA. It retrieves sperm from the *epididymis* (a narrow tube that connects the *efferent ducts* to the *vas deferens*). These sperm are more mature and may survive being frozen better than younger sperm. PESA is usually done in men who have had a vasectomy who want to have the least invasive procedure.

Microscopic Epididymal Sperm Aspiration (MESA)

In MESA, a high-powered surgical microscope is used. Sperm are retrieved by exposing a single epididymis tube. MESA requires an incision, but it also allows your doctor to retrieve the most sperm.

Outpatient Procedures

Follow these instructions if your procedure will be done in the Men's Health Center with a local anesthetic:

How to Prepare

- Do **not** take any aspirin or aspirin-like drugs such as ibuprofen (Motrin, Advil) or naproxen (Aleve, Naprosyn) for 7 days before your procedure. These drugs may cause extra bleeding during and after your procedure.
- The procedure should not affect your ability to walk or sit. But, because you may have discomfort after the procedure, please plan to have someone else drive you to and from the procedure, even if you do not use a sedative.
- If you plan to take a sedative (calming medicine) such as Valium 1 hour before your procedure, you **must**:
 - **Arrange for a responsible adult to drive you to and from the clinic.** You will not be allowed to drive yourself home. It is not legal or safe to drive when you are taking sedatives.
 - **Sign all consent forms in advance.** Consent forms cannot be signed if you are under the influence of any sedative.

Day of the Procedure

- Completely shave your scrotum. This will make you more comfortable during and after your procedure.
- Wear comfortable, loose clothing.
- You may bring your own jock strap, or we will provide one for you if you do not bring one. You may also wear a pair of tight briefs.
- You may eat a light meal before your procedure.

What to Expect After Your Procedure

Day of the Procedure

Caution

- Do **not** have any sexual activity, including masturbation.

Physical Symptoms

You may have discomfort after the procedure. These common symptoms do **not** require a doctor's attention:

- Bruising and color change of your scrotum and the base of your penis. This will take about a week to go away.
- A small amount of thin, clear, pinkish fluid draining from the incision (if you have an incision). This will happen for a few days. Keep the area clean and dry.
- Slight swelling of your scrotum.
- If you had general anesthesia, you may have a sore throat, nausea, constipation, and general body aches. These symptoms should go away within 48 hours.

Swelling

Put cold packs on your scrotum the night of surgery and the next day to reduce swelling:

- Place a thin, clean towel on your scrotum (or scrotal support) and lay the cold pack (such as a bag of frozen peas) on top of the towel. Do **not** put the cold pack directly on your skin.
- Leave the cold pack on for 20 minutes, then off for 20 minutes. Keep doing this for the first 24 hours after your procedure. Keep the scrotum cool, **not** cold.

Fluids and Food

- Make sure you drink plenty of water so you stay hydrated. Resume a normal, well-balanced diet when you return home.
- If you are not feeling normal, start with food that is easy to digest, such as soup or broth. Avoid greasy or spicy foods.

Pain Medicine

- If your doctor prescribes Vicodin for pain, you may take it as directed. Do **not** drive while you are taking Vicodin or other prescription pain medicines.

- Do **not** take aspirin, ibuprofen, (Advil, Motrin), or naproxen (Aleve, Naprosyn) for at least 2 days after your procedure. These drugs can keep your blood from clotting normally and can cause bleeding.
- After 2 to 3 days, you may not need the stronger pain medicines. At this time:
 - You can take Extra-Strength Tylenol, 1 to 2 pills every 6 hours as needed.
 - **Do not take acetaminophen (Tylenol) while you are taking Vicodin.** If you are given pain medicine other than Vicodin, ask your doctor or nurse if it is safe to take acetaminophen while you are taking your prescription pain medicine.

1 Day After Your Procedure

- Do **not** have any sexual activity, including masturbation.
- Swelling of your scrotum will increase for 24 to 48 hours. This swelling may take several days or weeks to go away.
- Keep using cold packs to reduce swelling (see “Swelling” on page 4). Stop using the ice packs after 24 hours.
- Remove all bandages from inside the athletic support 24 hours after your procedure. Keep using the support for 3 days total. After that, you may wear your usual underwear.
- You may shower after you remove the bandages. Dry the area around your incision gently but completely.

After the 2nd Day

- Do **not** have any sexual activity, including masturbation, for 4 days after your procedure.
- You may resume normal, **light** activity after 48 hours or when you feel better. Do not do activities that cause discomfort.
- You may resume more vigorous activities such as jogging or weight lifting after 7 days. Listen to your body. If what you are doing causes discomfort, slow down or stop and rest.
- You may return to work when you feel comfortable enough to do so.
- If you have an incision, it will be closed with stitches. These stitches will dissolve in your body. They will not need to be removed. It may take up to 2 to 3 weeks for them to dissolve all the way.

Results

Depending on what type of sperm retrieval was done, your doctor will know within a few hours or 1 to 2 days if your sperm retrieval was successful. Your doctor will call you with these results.

When to Call the Clinic

Complications after these procedures are rare. Call the Men's Health Center during business hours, or go to the Emergency Room after hours, if you have:

- Severe bruising (black and blue skin), especially if you also have throbbing pain or there is a bulge around your scrotum. These symptoms could mean you have a *hematoma* (bleeding under the skin).
- Fever higher than 101°F (38.3°C), shaking, or chills, especially if your scrotum is warm, swollen, red, and painful and there is pus draining from your incision. This could be an infection. You may need to take antibiotics.
- Any other symptoms that you are concerned about.

Paying for Your Procedure

Unfortunately, infertility treatment is not always covered by health insurance. While some insurance plans may cover tests and procedures related to the diagnosis of male infertility, many plans do not pay for surgical retrieval of sperm.

If you are thinking about having sperm retrieval, please contact your

Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns.

Men's Health Center:
206-598-6358

Weekdays from 8 a.m.
to 5 p.m.

After hours and on weekends
or holidays, call this same
number or go to the
Emergency Room.