

Reproductive Care Center

Instructions for Evaluating Retrograde Ejaculation

Facts: Normally, when a man ejaculates, semen is propelled forward out of the tip of the penis; this is called “antegrade ejaculation”. Occasionally, however, semen flows backward into the bladder due to failure of the bladder neck muscles to close properly; this is called “retrograde ejaculation”. Uncommonly, retrograde ejaculation can be partial.

With retrograde ejaculation, orgasm is perceived to be normal; however, semen is not deposited in the vagina during sexual intercourse as the seminal fluid remains within the bladder. This defect has many causes that include 1) injury due to bladder neck surgery or trauma, 2) urinary tract and prostate infections, 3) neurological disorders or surgical injury involving the nerves that control the bladder, 4) diabetes that can effect the nerve connections to the penis and bladder neck, and 5) stress. Often, however, no cause can be determined from the medical history.

There are several medications that can improve or reverse retrograde ejaculation when there has been no prior structural damage to the bladder neck. These medications include drugs (Tofranil) that stimulate the Parasympathetic or (Sudafed, Claritin-D, Drixoral) the Sympathetic nerves, both of which control the ejaculatory process.

When retrograde ejaculation persists despite best efforts to medicate and reverse the condition, sperm can be retrieved from urine collected just after ejaculation. The urinary sperm can be analyzed for quality; and subsequent samples collected at a later date can be processed for use with intra-uterine insemination or in vitro fertilization to achieve the desired pregnancy.

Instructions for the test: Urine is normally concentrated and acidic. Both of these markedly decrease sperm quality, especially motility. Accordingly, it is very important to drink extra fluids to dilute the urine and to alkalinize the urine (make it less acidic) to enable harvesting sperm of better quality.

You should abstain from sex for 2-3 days according to your doctor’s recommendation.

For 24 hours prior to the test and the morning of the test, the following instructions must be followed carefully to optimize sperm quality:

1. Avoid alcohol, caffeinated beverages (coffee, tea, soda) and acidic citrus juices
2. Increase fluid intake; we suggest about 8 ounces (one glass) of water or juice every 4-6 hours. On the morning of the test, drink 8 ounces of water or juice one to two hours prior to the appointment.
3. Alkalinization of urine can be accomplished by taking sodium bicarbonate tablets (650 mg bicarbonate per tablet) or Alka Seltzer (1,916 mg bicarbonate per tablet) every 4 hours up until the time of the urine collection for the test. Both tablets should be available over the counter, but ask your pharmacist for the products if needed. Be sure to dissolve tablets in water.

Collection of urinary sperm: When you arrive at the laboratory at the appointed hour for your sperm test, you will be instructed to perform the following steps:

1. Drink an 8 ounce glass of water.
2. Urinate to empty your bladder immediately prior to attempting to collect your ejaculate.
3. Attempt to collect semen in one of the sterile cups that we provide.
4. If you produce a very small ejaculate, you can touch the tip of your penis to the lid of the specimen cup. Screw the cup onto the lid and keep it inverted.
5. If you produce no semen, or only a scant antegrade ejaculate, urinate into the second container that we provide (post ejaculatory urine) to allow us to examine the urine for sperm. Since you had urinated prior to attempting to ejaculate, the post ejaculatory urine will be small in volume and dilute, both of which will facilitate our identifying sperm and enhance the sperm quality.
6. Please inform the laboratory staff if you are taking any medications that we have prescribed to facilitate antegrade ejaculation.

Medications to Facilitate Antegrade Ejaculation: There are two different classes of medication that act to facilitate antegrade ejaculation. These medications close the muscle at the base of the bladder to prevent retrograde ejaculation. This action is a side effect for medications that are usually taken for other purposes. The medication recommended by your physician should be taken exactly as prescribed.

You will need to make a laboratory appointment on the 6th day of medicating to attempt to collect semen or a post ejaculatory urine as discussed above.

Medications:

1. Tofranil (antidepressant, prescription drug): one tablet (25 mg) every 8 hrs for 5½ days
2. Sudafed (sinus decongestant, over-the-counter drug):
 - a. Two tablets (30 mg each) taken about every 6 hrs (7 am, noon, 6 pm, 11 pm) for two days
 - b. Three tablets (30 mg each) taken about every 6 hrs (7 am, noon, 6 pm, 11 pm) for two days
 - c. Four tablets (30 mg each) taken about every 6 hrs (7 am, noon, 6 pm, 11 pm) for 1½ days until completion of the semen and urinalysis