Fact Sheet

From ReproductiveFacts.org

The Patient Education Website of the American Society for Reproductive Medicine

Intrauterine Insemination (IUI)

For a woman to get pregnant, a man's sperm must travel from the vagina through the cervix (narrow, lower part of the womb), into the uterus (womb), and up into one of the fallopian tubes. If sperm arrives in the tubes soon after the release of the egg from the ovary (ovulation), the sperm and egg can meet in the tube, most commonly, on the side that ovulation took place, and then fertilization may occur.

Because the cervix naturally limits the number of sperm that enter the uterus, only a few sperm actually make their way to the fallopian tubes. Intrauterine insemination (IUI) is a procedure that bypasses the cervix and places sperm into a woman's uterus around the time of ovulation. Placing the sperm directly into the uterus makes the trip to the fallopian tubes much shorter. This way, there is a better chance that more sperm will make their way closer to the egg. This procedure is performed to improve a woman's chance of getting pregnant.

When is IUI helpful?

There are many reasons why couples experience difficulty having a baby. IUI may be useful for some of them.

Female infertility. Women who do not release an egg regularly (ovulate) may take medications to help them ovulate regularly. These women may need IUI to time insemination at about the same time as ovulation. Also, IUI is helpful when a woman's cervix has scarring that prevents the sperm from entering the uterus from the vagina. This may be seen in women who have had surgery on their cervix (cryosurgery, cone biopsy, LEEP, etc.).

Infertile women sometimes take medications (by mouth or as an injection) that cause their ovaries to produce several eggs at once. These women appear to have a better chance of getting pregnant if they also have IUI.

Male infertility. IUI is most commonly used when the male partner has a low sperm count or if the movement of the sperm (motility) is less than ideal. But also, IUI is useful for couples that are infertile because the male has problems developing an erection or being able to ejaculate. For example, retrograde ejaculation is when the sperm are released backwards into the bladder, instead of through the penis, at the time of male orgasm. A number of medical conditions can cause retrograde ejaculation. Sperm ejaculated into the bladder can be taken from urine and used for IUI. Also, IUI may help if the man has an abnormal urethral opening (opening of the penis).

Fertility preservation. Men may collect and freeze (cryopreserve) their sperm for future use before having a vasectomy, testicular surgery, or radiation/chemotherapy treatment for cancer. The sperm can then be used later for IUI.

Third party reproduction. IUI is performed when couples use sperm from a man who is not the woman's partner to have a baby. This is called donor insemination (DI). DI is commonly performed when the male partner's sperm quality is so severely damaged that his sperm shouldn't be used for conception and in vitro fertilization is not an option. DI can also be used if the man has certain genetic diseases that he does not want to pass on to his children. Single women or lesbian couples who want to have a baby may also consider DI.

How are sperm collected?

The sperm needed for IUI can be collected in several ways. Most commonly, the man masturbates into a glass or plastic cup that is provided by the doctor's office or andrology laboratory, a laboratory that specializes in dealing with male health issues. Sperm can also be collected during sex in a special condom that the doctor provides. If a man has retrograde ejaculation, the sperm can be retrieved in the laboratory from urine he has collected.

Men who have a difficult time with erection or ejaculation despite using medications, as well as men with a spinal cord injury, may be able to produce a sperm sample with the help of procedures such as vibratory stimulation or electroejaculation. Vibratory stimulation commonly takes place in an office and makes use of a handheld vibratory device. Electroejaculation makes use of electrical stimulation in order to produce a sperm specimen. For men with a complete spinal cord injury, electroejaculation is commonly performed in the office, while patients with an incomplete spinal cord injury may need to have their electroejaculation procedure performed under anesthesia in the operating room.

How is IUI done?

Once collected, the semen sample is then "washed" in the laboratory, to concentrate the sperm and remove the seminal fluid (seminal fluid can cause severe cramping in the woman). This process can take up to two hours to complete.

IUI is performed near the time that the female partner is ovulating. The IUI procedure is relatively simple and only takes a few minutes. The woman lies on an examining table and the clinician inserts a speculum into her vagina to see her cervix. A catheter (narrow tube) is inserted through the cervix into the uterus and the washed semen sample is slowly injected. Usually this procedure is quite painless, but some women have mild cramps.

Does it work?

The success of IUI depends on the cause of the couple's infertility. It works best for men when the majority of their sperm does not move and for women whose cervix prevents sperm from entering their uterus. It does not work as well for men who produce fewer sperm. It also does not help women who have severe fallopian tube disease, moderate to severe endometriosis, or a history of pelvic (lower belly) infections. Other fertility treatments are better for these patients.

Overall, if inseminations are performed monthly with fresh or frozen sperm, success rates can be as high as 20% per cycle depending on whether fertility medications are used, age of the female partner, and infertility diagnosis, as well as other facts that could impact the success of the cycle.

Are there risks?

If a woman is taking fertility medications when she has IUI, her chance of getting pregnant with twins, triplets or more is greater than if she were not taking fertility medications. The chance of birth defects in all children is 2% to 4%. Undergoing an IUI does not increase that risk. The risk of developing an infection after an IUI is small.

Talk with your doctor to find out if IUI is appropriate for you.

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For more information on this and other reproductive health topics, visit www.ReproductiveFacts.org

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