

INTRAUTERINE INSEMINATION

Artificial Insemination using the husband's sperm is a technique that has been utilized for many years. Performed in the traditional manner it is used to place the sperm at the level of the cervix in the vagina when it cannot be delivered there naturally. Such circumstances would include congenital abnormalities of the penis or vagina, male impotence, severely painful intercourse, abnormalities of ejaculation, etc. Otherwise, Mother Nature has provided a very effective method for depositing sperm at the appropriate place and guidance in timing would be the only other consideration.

Intrauterine insemination (I U I) is a procedure which, under appropriate circumstances, can provide an improved pregnancy rate over natural intercourse. There are basically two components to I U I which lead to its effectiveness. One component is the selection of a highly motile fraction of the sperm in a very high concentration. One method of doing this is called the "washed, swim up" technique where a special culture media is added to the semen and it is centrifuged to separate the sperm from the seminal fluids (prostate secretions, etc). This sperm is incubated for one to two hours in a very small amount of culture media which allows the surviving healthy, motile sperm to swim up into the media. This results in a very high concentration of the healthiest sperm to be collected into a very small volume.

The second component is to take this small volume of highly motile sperm and placed directly into the inside of the uterus (Intrauterine), not just at the level of the cervix as with traditional insemination. This means that sperm, which would normally be lost in the vagina or can drain out after intercourse, or be trapped in the cervical mucus, can now be placed in a position... closer to the egg, in very high numbers to further enhance the chance of pregnancy.

Intrauterine insemination has been used successfully for a number of different indications, including:

1. Low sperm count -that washed swim up technique concentrates the sperm and places and closer to the egg so that fewer are lost.
2. For sperm motility-because it is time rarely the healthy us, mobile sperm which are collected, the relative per cent of mobile sperm is increased.
3. Sperm antibodies-male related and pass sperm anybody's are essentially "washed off" in the preparation phase.
4. Most antibodies produced by the woman are located in mucus, which is bypassed.
5. Poor Post-Coital Tests -for the same reasons as mentioned above.

Unexplained infertility

The reasons IUI is beneficial in the treatment of unexplained infertility are not understood but probably are related to subtle immunologic factors which are bypassed by the technique.

In essence than, intrauterine insemination places a very small volume of highly mobile sperm in a concentrated form inside the uterus closer to the egg than what occurs by natural intercourse. It is a relatively inexpensive procedure. Expense however is incurred not only because of the time and materials involved in the sperm preparation and intrauterine transfer, but also the inseminations have to be exquisitely timed to coincide with ovulation. Under normal circumstances sperm deposited in the cervical mucus by a natural intercourse are probably released into the uterus over a period of time (probably 48 hours or more). When sperm are placed directly into the uterus they will swim up into the tubes to mediate within a short period of time (probably 12 hours), therefore they must be placed there very close to the time of ovulation. Ultimately pregnancy rates are dependent not only on the sperm quality but also of the method used to induce and monitor ovulation.

The actual technique of intrauterine insemination, once the sperm have been prepared, is simple. A very small catheter will be placed on the inside of the uterus, a short distance above the cervix and the sperm will be injected into the uterus through the catheter. This should be painless! You'll then be asked to rest in a hips elevated position for about 20 minutes. You can then leave and resume your normal activities including intercourse.

Pregnancy rates with Intrauterine insemination are the lowest when using natural cycles, probably because of our inability to precisely predict when ovulation will occur or. Most Eddie said shown rates of less than 15 percent with time stimulated cycles. Clomid induced cycles usually achieve pregnancy rates in the 30 percent range and Pergonal induced and monitored cycles can achieve pregnancies in greater than 50 percent of couples (depending on the etiology of their infertility). Pregnancies, if they are to be achieved using this technique, usually occur in about four well-timed cycles with sperm of good quality. The cost differences, as well as the success rates, for these various techniques of ovulation monitoring and induction, very significantly and some may not be affordable for all couples. We can discuss which will be most appropriate in your case during your office visits. We will also try to answer any questions that you may have.

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