



Intrauterine Insemination

Intrauterine insemination is a relatively low technology treatment, which involves placing prepared sperm into the cavity of the woman's womb. The treatment is only appropriate if the woman undergoing treatment has at least one normal, patent Fallopian tube.

Intrauterine insemination can be performed in a natural cycle or with the use of medications to help with ovulation.

Who needs intrauterine insemination?

IUI may be appropriate for :

- Couples or women needing donor sperm treatment.
- Couples unable to or who find it difficult to have intercourse for a medical or psychosexual reason

What investigations do I need before treatment?

Ultrasound Scan

Before you begin treatment you will have had an ultrasound scan. The scan is performed through the vagina with an empty bladder. It is not painful. Scanning this way allows us to see the ovaries and the follicles which contain the eggs.

Chlamydia screen

Before you have your tubes checked or your IUI treatment we need to check you do not have a chlamydia infection. This is done by a urine test.

HyCosy/HSG

We will discuss with you whether we need to check your fallopian tubes before treatment. We normally do this by passing a fine tube through the neck of the womb, followed by a gel solution and check the tubes with ultrasound (HyCosy).

Rubella Blood test

Before you become pregnant it is important that we check that you are immune to Rubella (German measles) as this can cause serious problems for the baby if you become infected when pregnant. This is done by a blood test. If you are not immune then we will ask your GP to arrange immunization for you.

What is involved in treatment?

Treatment can be carried out either in a natural cycle or with the use of medication. If you are having medication then you start drug treatment with Letrozole tablets or an injection of FSH (follicle stimulation hormone)

Letrozole tablets:

What is letrozole and why have I been prescribed letrozole?

Letrozole belongs to a class of drugs called aromatase inhibitors. The licensed use of letrozole is as an additional (adjuvant) treatment of breast cancer in post-menopausal women. It is, however, being increasingly used as a treatment by fertility specialists to aid ovulation induction in women with irregular or absent ovulation such as in women with Polycystic Ovary Syndrome (PCO).

Aromatase is an enzyme that is responsible for the production of oestrogen in the body. Letrozole works by inhibiting aromatase thereby suppressing oestrogen production. Another drug frequently used for inducing ovulation is



Clomiphene (Clomid). Clomid, on the other hand, blocks oestrogen receptors. In both cases, the result is that the pituitary gland produces more of the hormones needed to stimulate the ovaries. These hormones, FSH and LH, can cause the development of ovulation in women who do not ovulate.

How do I use Letrozole?

Day 1 - First day of proper bleeding

Day 2 - Start Letrozole 5mg for 5 days

We will also ask you to come for some scans to monitor the effect of your treatment. In the first cycle we ask you to avoid unprotected sexual intercourse until the second scan so we can see your ovarian response. XXX there is an overresponse and we would cancel the cycle to avoid the possibility of a multiple pregnancy. You might be instructed to have regular intercourse from day 8 of your cycle 2 to 3 times a week.

In addition, we may ask you to do some urine LH testing once a follicle is developing. Sometimes we will use a trigger injection, which mimics the normal ovulatory surge, to try and ensure that a follicle ruptures and you ovulate.

Are there any side effects?

The most common side effect of taking letrozole is hot flushes, as well as occasional fatigue and dizziness. Treatment with letrozole is off license as the drug company has not applied for a specific license to allow treatment for fertility and is therefore not approved for ovulation induction although evidence suggests that it is safe to use in fertility treatments.

FSH (Follicle stimulation hormone)

What is FSH and why have I been prescribed FSH?

FSH stands for follicle stimulation hormone which is used to stimulate your follicles inside your ovaries to produce eggs.

How does FSH work?

Gonadotropins –releasing hormone is released from nerve cells in the brain. It controls the production of luteinising hormone (LH) and follicle stimulation hormone (FSH) from the pituitary gland. This is given as an injection to stimulate a woman's ovaries to mature an egg/s to then be trigger for ovulation.

How do I use FSH injections?

On the second day of your period (day two of the cycle) you will be instructed to start your injections. These injections are done subcutaneously in your lower abdomen. Your fertility nurse will give you an injection teach on how to administer the medication and provide you with a link to an instruction video.

Further injections are then given on consecutive days and you will be advised what dose to take and when. You will need to attend the clinic around the day 5-6 of the cycle for an ultrasound scan.

Depending upon your ultrasound picture, further injections may be given on, or after, the tenth day of the cycle and the dose of drug may be increased or decreased. The aim of the medication is to achieve the development of 1-3 follicles (Follicles are the fluid-filled structures that contain the eggs). Eggs are thought to be mature when they develop in follicles that are more than 14-18mm in diameter. The number of follicles and the size of the follicles is therefore assessed at ultrasound. You may need further ultrasound scans in your treatment cycle to check the growth of the follicles.

When you have follicles of the appropriate number and size in your ovary, you may be given an urine dipstick kit to measure your LH levels (ovulation hormone). You may be given a final injection of hCG which releases the the eggs approximately 24 to 40 hours later.

**Insemination:**

On the day of the insemination your partners sperm will be prepared from a fresh sperm sample or if using a donor the sperm will be thawed about an hour before the procedure. Insemination is a straightforward procedure similar to having a cervical smear. The neck of the womb will be examined with the speculum and a very fine, flexible plastic tube passed through the neck of the womb into the cavity of the uterus. The sperm are injected through the plastic tube and will very rapidly reach the Fallopian tubes where it is hoped they will fertilise the egg(s).

After the treatment, some patients may require pessaries, or suppositories, to use to keep the lining of the womb receptive to any embryo(s) that may form. Your consultant will discuss this with you. These pessaries are used for two weeks until a pregnancy test is performed. If you are pregnant, then the use of the pessaries may be continued for several more weeks.

What are the risks of intrauterine insemination treatment?**Multiple pregnancy**

The most important risk of treatment with IUI in a medicated cycle is the risk of multiple pregnancy. Approximately 1 in 4 women who become pregnant following this treatment will have a multiple pregnancy. Multiple pregnancies are at an increased risk of complications for both mother and babies including miscarriage, stillbirth, premature delivery and pregnancy complications such as diabetes, increased blood pressure or preeclampsia. If, during your ultrasound monitoring, it is shown that you have many follicles developing, then it is preferable to cancel treatment in that month rather than risk a multiple pregnancy. Other options could include converting your cycle to an IVF cycle or a small procedure to drain the fluid from some of the follicles.

What are the results of treatment?

Intrauterine insemination is a successful treatment if used appropriately. We will be happy to discuss our most up to date results with you at your consultation. We usually try up to three cycles of intrauterine insemination initially if eggs are being produced and the sperm prepares well. After that time we would review treatment with you and either consider further IUI treatment or other forms of fertility treatment at that stage.