



INTRAUTERINE INSEMINATION (IUI) INFORMATION ABOUT TREATMENT

To All Couples:

It is extremely important that you read the attached information. This explains the nature of IUI treatment, together with the potential risks and benefits of treatment. Understanding this information will help you to be informed when giving written consent for treatment. On the day of your program appointment, this information is reviewed with you. Please be ready to raise any concerns or to ask questions. We suggest that you write down any questions in advance and bring these to your appointment.

After any questions and concerns are addressed, you will be asked to sign a "Consent To Treatment". This form gives consent to a course of IUI treatment consisting of one or more medicated treatment cycles. Afterwards, your physician will co-sign this form.

Please do not sign this consent form until the day of your program appointment. If you continue to have questions or concerns and do not feel ready to sign the consent form, a further appointment can be arranged with your physician to discuss treatment. No IUI treatment cycle can be started until this consent form is signed.

What is intrauterine insemination (IUI)?

IUI is a treatment for certain forms of infertility. Different combinations of medications can be used to increase the chance that the ovaries will produce and release one or more eggs. When blood tests and ultrasounds show that the ovaries are about to release eggs, the male partner produces a semen specimen. The semen is processed in the laboratory to remove abnormal or dead sperm and the seminal fluid. The physician places a speculum in the vagina and passes a fine catheter (tube) through the cervix (the opening to the uterus) and into the uterine cavity. The processed sperm is injected into the uterus. This procedure is called an insemination.

• Sperm function Analysis

Before treatment, the male partner provides a semen specimen for diagnostic analysis. Specialized laboratory tests determine the most appropriate treatment. All of the semen may not be needed for test. Semen not needed for tests might be used for laboratory quality control procedures and then discarded. All semen not used for tests is discarded according to KCUH guidelines.

• IUI with Clomiphene Citrate

Clomiphene is one of the medications used during an IUI treatment cycle. This drug stimulates ovulation in women who do not ovulate on their own, or who do not ovulate regularly. Clomiphene is supplied as a tablet and taken orally. This medication stimulates the pituitary gland to increase the secretion of a hormone called Follicle Stimulated Hormone (FSH). FSH in turn stimulates the ovaries to produce usually one or two follicles. Follicles are fluid-filled sacs in the ovary where the eggs grow. An egg may not be present in every follicle and no follicle contains more than one egg. As follicles grow and mature, they release estrogen into the bloodstream. The growth of follicles is followed, through regular blood testing to measure estrogen levels. In some situations, follicle growth is also watched with vaginal ultrasounds. Blood tests also help to show when a natural ovulation is about to occur. When a blood test shows that ovulation is about to occur, an insemination is performed about 24 hours later.

Alternatively, ovulation is triggered or boosted by a single injection of a medication called hCG which completes the maturation of the eggs. Insemination follows about 20-36 hours after an injection of hCG.

• IUI with Gonadotropin Treatment

Gonadotropins, are a family of drugs which contain naturally occurring pituitary hormones. One of these hormones is Follicle Stimulating Hormone (FSH). FSH is essential to the development of eggs released at ovulation. Treatment involves daily injection of a gonadotropin medication. This creates higher than normal levels of FSH, stimulating the ovaries to produce multiple follicle and multiple eggs. Women have regular blood testing and vaginal ultrasound to check the growing follicles. A single injection of hCG might be given to complete the maturation of the eggs and to trigger ovulation. Clomiphene Citrate may also be used together with a gonadotrophin medication during an IUI treatment cycle. Many women give gonadotrophin medications to themselves by subcutaneous self-injection into the thigh or abdomen.

• IUI with Controlled Ovarian Hyperstimulation (COH)

COH refers to the use of medications to stimulate the production of more than the usual single egg per menstrual cycle. Secondly, these medications prevent natural ovulation. In this treatment, woman are given a medication from a family of drugs called GnRH Agonist. These drugs are synthetic versions of a naturally occurring hormone called "human gonadotropic releasing hormone"(GnRH). Daily use of a GnRH agonist controls, and prevents premature ovulation. Women take this drug by nasal spray or daily subcutaneous self-injection. It suppresses or shuts down the normal menstrual cycle. Once suppression occurs, women begin a second drug called a gonadotropin (see IUI with Gonadotropin treatment"). This drug requires intensive monitoring to minimize the risk of complications.

This may require daily blood testing and an average of 3 vaginal ultrasounds to check the growing follicles. A single injection of hCG completes the maturation of the eggs and triggers ovulation. If a GnRH Agonist has been used, progesterone is given after an insemination, to support a developing pregnancy.

• Semen Collection For Insemination

A semen specimen is needed on the day of insemination. The specimen is usually produced at the hospital. However, depending on traveling distance, some men may prefer to bring the specimen from a location outside the hospital. Any semen specimen produced outside the hospital, must be in our laboratory within one hour (at most) of production. (In some circumstances sperm may be frozen in advance and then thawed for use on the day of insemination).

What are the potential benefits of IUI treatment?

1. In some women, ovulation may fail to occur, or ovulation may not occur regularly. If the ovary releases no egg to meet with sperm fertilization cannot occur naturally. IUI treatment stimulates the ovaries with medication. This increases the chance that one or more eggs will be released at time of ovulation.

With IUI treatment, more eggs are available to meet with sperm, and fertilization and pregnancy are more likely to occur.

2. In some women, the ovary releases an egg to each ovulation, but for unknown reasons, sperm do not reach the egg to achieve fertilization. As a result, fertilization of an egg by a sperm fails to occur. During an insemination, sperm are injected directly into the uterine cavity. This bypasses the vagina and cervix.

Insemination increases the number of sperm reaching the uterus and fallopian tubes. This increases the chance that sperm and egg will meet and that the natural fertilization (and pregnancy) will occur.

3. In some men, a below average sperm count or below average motility (movement) may exist. As a result few, if any sperm reach the egg and fertilization fails to occur.

A laboratory sperm preparation separates out the best sample of motile (moving) sperm. Placing these "best" sperm directly in the uterus, bypasses the vagina and cervix. This increases the number of motile sperm reaching the uterus and fallopian tubes.

4. With some forms of IUI treatment, women take few medication and require less cycle monitoring. Therefore IUI treatment can be less complicated and time consuming.

IUI is a less invasive and less complex procedure than other forms of treatment such as In Vitro Fertilization (IVF).

What are the potential harms of IUI treatment?

1. Medication used in IUI can have short-term side-effects.

Medications used to suppress the menstrual cycle can lead to hot flashes, headache, dizziness, mood changes and forgetfulness. Medications used for ovarian stimulation can lead to bloating, nausea, headache, fatigue and mood changes.

2. Frequent injections can cause mild physical discomfort.

Treatment requires drawing blood on several occasions and may involve the self-injection of medications. With any injectable medications, including those used in IUI, local skin reactions (bruising, swelling and soreness) are possible. Allergic reactions are also possible but very rare.

3. An insemination is not always performed and conversion to IVF treatment or cancellation of the IUI cycle might be recommended.

Response to injectable fertility medication can vary. In some women, the ovaries may be over-stimulated and too many follicles develop. In these situations an insemination is not performed due to a high risk of a multiple pregnancy. Options might include conversion to IVF treatment where eggs can be removed from the ovaries and the risk of a multiple pregnancy reduced. If couples are not comfortable with IVF treatment or conversion to IVF is not possible, the cycle would be cancelled.

4. Ovarian Hyperstimulation Syndrome can occur when women use medications to stimulate the ovaries.

When the ovaries become over-stimulated, this creates an additional risk of ovarian

Hyperstimulation Syndrome (OHSS). With OHSS the ovaries become swollen and painful. Fluid may collect in the abdomen. A woman may feel bloated, nauseated, and experience vomiting or lack of appetite. Smaller women, or women who become pregnant after ovarian stimulation, may be at great risk.

5. Severe ovarian Hyperstimulation can lead to serious medical complications.

Severe Ovarian Hyperstimulation Syndrome can result in dehydration, fluid collecting in the abdomen and lungs and blood clots in the legs and lungs. The condition may resolve with bed rest, but sometimes can require time in hospital. Less than 3% of IUI cycles using Controlled Ovarian Hyperstimulation (COH) require brief hospitalization and time off work.

6. The insemination procedure can cause irritation to the cervix or uterus.

Insemination involves passing a fine catheter through the cervix into the uterus. During or after the procedure, cramping, spotting, or bleeding can occur. There is a very low risk of infection. If infection occurs, treatment with antibiotics or surgery might be necessary.

7. Use of progesterone might have short term side-effects.

During a pregnancy, the body produces progesterone. By taking progesterone, women add to normal progesterone production. This helps to develop and maintain the lining of the uterus. Progesterone has potential side-effects. These include fatigue, dizziness, bloating, and breast tenderness.

8. A multiple pregnancy is more likely with IUI treatment.

The chance of a multiple pregnancy depends partly on the medication used during treatment. At KKHU, using IUI with Clomiphene Citrate, 10%-15% of pregnancies are multiple pregnancies (mostly twins). Stimulating the ovaries to produce more than one egg, increases the risk of a multiple pregnancy. Multiple pregnancies are more likely to result in premature labour, premature delivery, maternal hemorrhage, Caesarean delivery, pregnancy induced high blood pressure and gestational diabetes. Pre-term and low birth weight infants have a higher risk of health problems and developmental problems in childhood. A multiple pregnancy may also create financial and emotional stress for families. If a high order multiple pregnancy occurs, the program refers couples to a high risk perinatologist to discuss management of the pregnancy and the risks and benefits of fetal reduction.

Note: there is no evidence of an increased risk of birth defects in children conceived through IUI treatment.

9. Participation in IUI treatment can be stressful.

Participation in treatment can be physically demanding, time-consuming and disruptive to work and other life activities. Treatment failures are often a source of considerable disappointment; sadness and mild symptoms of depression are not uncommon.

Depending upon the medications used, treatment can be financially costly.

Disagreement over treatment issue can sometimes cause strain in a couple's relationship.

Factors which might prevent a successful pregnancy.

1. An IUI treatment cycle sometimes is cancelled due to excessive ovarian response.

Sometimes hormonal levels may respond too quickly to the medication. This prevents follicles from maturing properly. If this happens, medications are stopped and no insemination occurs.

2. An IUI treatment cycle sometimes is cancelled due to poor ovarian response.

Even with fertility medication, sometimes the ovaries do not respond well. If this happens, medications are stopped and no insemination occurs.

3. At the time of ovulation, it might be difficult, or impossible, to obtain sperm.

The male partner provides a sperm specimen at the time of ovulation. Mild worry about performing is common but occasionally severe anxiety can hinder or prevent production of a specimen.

Arrangements are flexible for when and where men provide the specimen. If needed, the psychologist can offer counseling to help men overcome difficulties.

4. An insemination is performed but no fertilization occurs.

An insemination increases the chance of fertilization of an egg by a sperm. Still fertilization is not guaranteed.

5. An insemination is performed and fertilization occurs, but embryos do not implant.

Fertilization may occur creating one or more embryos. However, none may implant successfully in the uterus and no pregnancy occurs.

What is the success rate for IUI treatment?

Success rates decrease with increasing female age.

The percentage of intrauterine insemination is between 10% - 15%.

IVF +/- ICSI 25% - 45% depending on the diagnosis and wife's age.

If you still have more questions please ask your physician.

