

**Dr H. A. Pattinson,  
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## **Information about IUI (Intra-Uterine Insemination)**

### **What is IUI?**

Intra-uterine insemination (IUI) is a procedure used in fertility treatment. It involves obtaining a sperm sample, usually by masturbation, preparing it (sperm washing) and placing the prepared sperm into the uterus. IUI is used most commonly in situations where the sperm count or motility (movement of the sperm) is low, or in “unexplained infertility” where we cannot explain the fertility problem. It is usually performed along with some type of medication for the female partner to stimulate her ovaries so that more than one egg will be released. The basic idea therefore is to get more sperm closer to more eggs at the right time.

### **How does pregnancy occur naturally?**

A menstrual cycle is counted from the first day of one period to the first day of the following period. At the beginning of the cycle, a number of eggs start to mature within the ovaries. The eggs are contained in fluid-filled cysts called follicles. In a normal cycle, a gland (the pituitary) found in the brain produces 2 hormones, follicle stimulating hormone (FSH) and luteinizing hormone (LH). These are responsible for stimulating the ovaries and causing one of the eggs to mature. FSH causes the follicles within the ovary to grow and mature but normally only one will grow to complete maturity. Other follicles will stop growing and eventually disappear. This is why most normal pregnancies produce only a single child. The growing follicles produce a hormone called estrogen. As the follicle grows the cells around the egg make more estrogen. When the estrogen level is high enough it signals the pituitary to release a large amount of LH. This sudden rise of LH is called the LH surge. Approximately 40 hours after the LH surge starts, the follicle will release the egg.

In the normal cycle, for pregnancy to occur, intercourse has to happen some time around the “ovulation window”, or the time that the egg is released. With intercourse the semen goes into the vagina. Semen consists of sperm cells in a lot of fluid. In addition to the sperm cells, that fluid contains lots of other cells, chemicals, hormones, and other stuff such as fat droplets and debris. Even among the sperm, many are dead or just not moving or are abnormal looking in some way. The good moving sperm now have to swim their way out of that fluid and get into the cervix, or neck of the uterus. There they meet a slimy substance called cervical mucus. This mucus is only designed to allow sperm through at the right time of the cycle - the fertile window. Those sperm that make it through the cervix now have to travel through the rest of the uterus and find a way into the fallopian tube. They then have to swim down the tube to find the egg and fertilize it. It's all quite the adventure!

### **So, what could go wrong?**

Even if the sperm count is normal, sometimes the semen is unusually thick and it can be hard for the sperm to swim out of it. If the sperm count or motility is low, there may just not be enough to make that long journey. Sometimes the cervical mucus does not change in the right way during the fertile window and may not let even the good sperm through. If the timing of ovulation is irregular during the cycle it can be difficult to know when the fertile window is. Sometimes trying to time intercourse to coincide with the fertile window can become an emotional challenge, leading to relationship and sexual difficulties. Very often, we just don't know what is causing the problem - this is called unexplained infertility, and can be very frustrating - it is hard to come to terms with a problem if there is no good explanation for it.

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Why IUI?**

IUI is the least technological of the “Assisted Reproductive Technologies”. Given that we have no way to make someone pregnant, our only option is to try to make pregnancy more likely in any given month. The basic concept of IUI is to get more sperm closer to more eggs at the right time. The first step of “sperm washing” involves a laboratory process designed to select the most active and most normal sperm from the semen. That population of sperm is then mixed in a very small amount of a special fluid. That fluid is then loaded into a thin tube called a catheter. A speculum (the same instrument that doctors use to take a Pap test) is then placed into the vagina and the catheter is carefully threaded through the cervix so that the sperm can be placed directly into the cavity of the uterus. It is not possible to put the catheter into the fallopian tube to get the sperm even closer to the egg, as the opening into the tube is just too small. Putting it into the uterus does give it a pretty good head start, and many more sperm have at least the chance of making it to an egg.

#### **Does it work?**

Yes and no! It definitely improves the odds of pregnancy in that month of treatment. But it is not even close to a guarantee. Nature just does not work that way in human reproduction. For a couple with no fertility issue at all, the chance of pregnancy occurring in any one month of trying is only about 20%, and the average time it takes to get pregnant is about 4-6 months. The chances of IUI working for you is going to depend on many variables, and this is something you should discuss with Dr. Pattinson so that you can have realistic expectations.

#### **What are the risks?**

The actual process of placing the sperm into the uterus - the IUI process - is an extremely low risk process. Other than some discomfort with insertion of the speculum and occasional cramping with the insemination catheter, there is really no significant concern. The risk of IUI comes with the ovarian stimulation - the use of the fertility enhancing medication to stimulate the maturation and release of more eggs. If you are using pills, the risks are relatively low, though the chance of twins is roughly double compared to the normal average. Multiple pregnancies have a higher risk of all pregnancy complication, loss and prematurity. Premature babies can have lifelong problems, both physical and intellectual. The risks increase with the use of FSH to stimulate ovulation, following which triplets, quads etc. are far more common than in the general population and carry far more risks than even twin pregnancies. Be sure to watch the video on “The use of FSH in Fertility Treatments” if you are considering the use of injectable medications. This can be accessed from Dr. Pattinson’s website. Remember that we cannot control the physical or mental characteristics of children produced.

Please feel free to ask us any additional questions that you may have - write them down and bring them along to your clinic appointments. Infertility and its treatment are stressful experiences. Counselling is available to help you with the stress if you feel the need. We wish you every success in your endeavours and look forward to helping you achieve your goal of having a baby.

Dr. Pattinson would like to acknowledge the funding provided by the Government of Ontario through the special Fertility Program to assist patients with fertility problems.

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Consent for IUI Funded Cycle

The government of Ontario is providing special funding to cover the costs of monitoring and labs for individuals who wish to undergo ovarian stimulation and/or monitoring with IUI. The program does not cover the costs of sperm preparation, donor sperm or medications used in the cycle.

In order to access funding for an IUI cycle, patients must sign consent for release of their OHIP number, name and health records, for the purpose of funding and follow-up program monitoring to insure optimal medical standards.

I, \_\_\_\_\_ and \_\_\_\_\_ of the Province of Ontario

Agree to the release of my medical information and OHIP number to the Province of Ontario Fertility Program if so requested.

Signed:

Female partner: \_\_\_\_\_

Male Partner: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_

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## **Patient Information for an Intrauterine Insemination Cycle following the use of Clomiphene or Letrozole**

Call Dr. Pattinson's office on the first full day of your period to determine if he is available to do an IUI for you this cycle. If your period starts on the weekend, call on Monday morning. Arrange a day \_\_\_\_\_ ultrasound in order to check the growth of your follicles (cysts that contain the eggs). **If your period is unusually light or starts earlier or later than expected, have a pregnancy test prior to starting the fertility medicines.**

Take your medications as prescribed and your prenatal vitamins daily.

At the time of your ultrasound, Dr. Pattinson will advise you as to whether you require another ultrasound, and when an injection of HCG (Ovidrel) will be administered. HCG is a hormone that matures and triggers the release of the egg. Your IUI will be scheduled on the day that we expect your egg to be released.

You will be given a time to deliver your partner's semen sample to our office. Please deliver the sample to our office within 45 minutes of its production, and please keep the sample warm by tucking the container under your arm. This sperm will be used only with your consent and only for your own reproductive use. **Write your name on the sample bottle.**

There is a \$200 charge for the laboratory component of IUI and this must be paid by cash or certified cheque prior to the sample being processed.

The sample will be processed within 45 minutes, and then a concentrated bead of sperm of your partner's sperm will be placed in your uterus. We ask you to rest in the office for 10 minutes after this procedure. There are no further restrictions on your activity.

You may experience some abdominal cramping and bloating with ovulation on clomiphene. If your discomfort becomes severe, or you develop a fever, please contact Dr. Pattinson. If you start your period two weeks after this procedure, and have a negative pregnancy test, you may repeat this treatment up to three times. Please make an appointment to discuss further options with Dr. Pattinson after your second unsuccessful IUI cycle, as there may be a significant wait for clinic appointments.

Research indicates that couples that remain optimistic and maintain intimacy during their treatment cycles have a better success rate. Good luck.

**NOTE:** If you are planning to use injectable medications to stimulate the ovaries you will receive a different set of instructions when you meet with Dr. Pattinson.