

# INTRAUTERINE INSEMINATION (IUI)

## INSIDE:

- What to expect from fertility medications
- IUI explained step by step
- Coping with stress



# ABOUT THIS BOOKLET

Merck Healthcare thanks the many individuals, couples and Australian healthcare professionals, including fertility specialists, specialist nurses and psychologists who shared their knowledge and expertise during the production of these booklets.

**Important notice:** The information provided in this booklet does not replace any of the information or advice provided by a medical practitioner and other members of your healthcare team. Your doctor will determine the best medications and course of action for you based on your requirements and circumstances.

Prescription medicines have benefits and risks. Use all prescribed medicines strictly as directed by your doctor and raise any questions or concerns with them before, during or after using them. If you experience side effects consult your doctor.

Medication availability and funding criteria may differ between Australia and New Zealand.



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Building B, Level 1, Suite 1, 11 Talavera Road, Macquarie Park NSW 2113 Australia. Phone: 1800 257 348. Healthcare Logistics.  
58 Richard Pearse Drive, Airport Oaks, Auckland, New Zealand. Phone +64 9 918 5100. Toll free 0800 11 1166. Fax +64 9 918 5101.  
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# INTRODUCTION<sup>1-2</sup>

Having trouble falling pregnant comes as a surprise to most women and men. Many people assume that pregnancy will follow immediately after birth control is discontinued. In reality, up to one in six couples worldwide have difficulty conceiving during the first 12 months of trying.<sup>1</sup>

There are many treatments available that may be able to help you to become pregnant.

**Intrauterine insemination (IUI)** is a common procedure that has been used for many years to help deliver male sperm closer to the female egg.<sup>2</sup>

## WHAT IS INTRAUTERINE INSEMINATION (IUI)<sup>3-5</sup>

You may have heard the term **artificial insemination (AI)**. This is the name given to a procedure where sperm are placed into the female reproductive system by a means other than intercourse. **IUI** is the most common form of AI used and involves placing sperm into the female's uterus through an assisted medical process. As it is a relatively low-technical solution to infertility problems, IUI is usually one of the first techniques used to assist a couple who are having difficulty becoming pregnant.<sup>3-5</sup>

In the procedure, warmed and 'washed' (treated) sperm are introduced into the woman's uterus through a flexible tube. Sperm can be provided by the woman's husband or partner (artificial insemination by husband – AIH) or sperm provided by a known or anonymous sperm donor (artificial insemination by donor – AID or DI). The procedure is done around the time of ovulation to give the best chance of conception. Hormonal (fertility) medications might be used in conjunction with the treatment to enhance conditions for a pregnancy, either by increasing the number of follicles and eggs produced with a cycle, or triggering release of the egg(s) at a precisely known time to coordinate better with insemination.<sup>3-5</sup>

# WHAT ARE THE BENEFITS OF IUI?<sup>5,6</sup>

During normal intercourse, only relatively small numbers of sperm make it to the woman's uterus and into the fallopian tubes where fertilisation takes place. IUI inserts large amounts of the best performing sperm directly into a woman's uterus thus increasing the chance of fertilisation.<sup>6</sup>



# WHEN IS IUI NOT SUITABLE?<sup>6</sup>

IUI is not effective when there is<sup>6</sup>:

- bilateral/blocked or damaged fallopian tubes
- ovarian failure (menopause)
- severe male factor infertility, i.e. no sperm, very low sperm count, poor sperm motility (movement), sperm defects; in this case, donor sperm may be an option
- severe endometriosis.

# REASONS FOR USING IUI<sup>3-6</sup>

IUI is mainly used when timed intercourse or hormonal medications alone have not worked, or if there are 'mild' sperm abnormalities, such as poor motility (i.e. the ability of the sperm to move). It is also used in conjunction with donor sperm by same sex female couples or by women who don't have a partner.<sup>4</sup>



In addition, IUI can be used to overcome fertility due to the following conditions<sup>3-6</sup>:

- **mild endometriosis:** occurs when the tissue that normally lines the inside of the uterus grows in other places where it doesn't belong, such as on the ovaries and fallopian tubes
- **mucus 'hostility':** may arise as a result of a vaginal infection or the presence of antisperm antibodies in the mucus
- **ovulation problems:** including irregular or absent ovulation often caused by a deficiency in one of the controlling hormones
- **ejaculation problems:** due to psychological problems such as impotence (inability to get and maintain an erection), or anatomic problems of the penis, such as paraplegia
- **retrograde ejaculation:** the semen goes backward into the bladder instead of coming out of the penis
- **unexplained infertility:** defined as not being able to conceive after one year of unprotected intercourse, even though the cycle is normal, semen is normal, internal examinations are normal and there is normal sperm-mucus penetration
- **physical problems with sexual intercourse:** vaginismus is an involuntary clamping of the vaginal muscles, which may prevent some women from having frequent intercourse.

# HOW IS IUI PERFORMED?<sup>5</sup>



## Monitoring ovulation<sup>4-7</sup>

There are different ways your doctor may choose to conduct IUI depending on your individual situation.

### IUI without hormonal medication

If a woman has a regular menstrual cycle, IUI will be performed about Day 12 to Day 15 of the cycle when ovulation – release of the egg – is taking place. It is also suitable for those who cannot have natural intercourse (e.g. spinal cord injuries). You will be asked to work out when ovulation will occur by tracking basal body temperature (your temperature increases during ovulation) and changes in vaginal mucus, or by using ovulation kits. Alternatively, you may be monitored through regular ultrasounds or blood tests administered by your medical team or clinic.<sup>4-6</sup>

### IUI in conjunction with hormonal medications

Depending on your particular situation, your doctor may recommend that you take hormonal medication (also known as 'fertility drugs') to help stimulate ovulation. Your doctor may refer to this part of treatment as 'ovulation induction', 'ovarian stimulation' or 'stimulated cycle'.<sup>4-6</sup>

## THE RISK OF MULTIPLE PREGNANCIES<sup>4</sup>

Fertility medications can cause more than one follicle (egg) to develop and this is why your body will be monitored closely through blood tests and ultrasounds while you are taking them.

For those having trouble becoming pregnant, having twins may seem like a blessing, but complications, such as miscarriage and low birth weight, are much more common in twins than single pregnancies.

Throughout this first stage of fertility treatment, your response to follicle stimulating hormone (FSH) will be carefully monitored for ovarian hyperstimulation syndrome (OHSS) – see box below – and to gain a clearer picture of what is happening to the follicles so the right timing and dose of fertility medication can be determined. This monitoring will be performed through regular ultrasounds, blood tests and urine tests.<sup>4,5,7</sup>



## OVARIAN HYPERSTIMULATION SYNDROME<sup>7</sup>

**Ovarian hyperstimulation syndrome** (OHSS) is a potentially life-threatening medical condition which may occur when your ovaries have been over-stimulated by various fertility medications. The ovaries may increase in size and produce large amounts of fluid. It is characterised by pain and bloating in your abdomen and if severe, can cause problems with breathing or urination. Contact a member of your healthcare team immediately if you believe you have any of these symptoms.

# Semen collection<sup>5,8-10</sup>

## Artificial insemination by partner<sup>5,8</sup>

On the day of the insemination, the male partner will be required to produce a sample of semen by ejaculating into a sterile container. Two to three days' abstinence from intercourse/masturbation is preferred prior to the sample collection day. Clinics often provide a room so that this sample may be produced in private, but some men prefer to collect the sample at home and deliver it to the clinic. As it is being used that day it must not be frozen or refrigerated, and it needs to arrive promptly at the clinic – within a couple of hours.

## Donor insemination (DI)<sup>5,9</sup>

IUI can also be done using donor sperm, either from an anonymous or a known sperm donor (known as DI or donor insemination). Insemination with donor sperm is used when there is no male partner or the male partner does not produce sperm, when the sperm are of very poor quality or if there is a high risk of passing on genetic diseases.

Sperm are frozen ahead of time, quarantined for 3–6 months, and screened for sexually transmitted diseases (e.g. HIV/AIDS/Hep B/Hep C) and common genetic disorders.

Many clinics will allow couples to reserve semen for a subsequent pregnancy, so that if they have a child from insemination, they can try for another child with the same genetic characteristics (i.e. from the same donor).

## How might you feel?

### Using donor sperm<sup>10</sup>

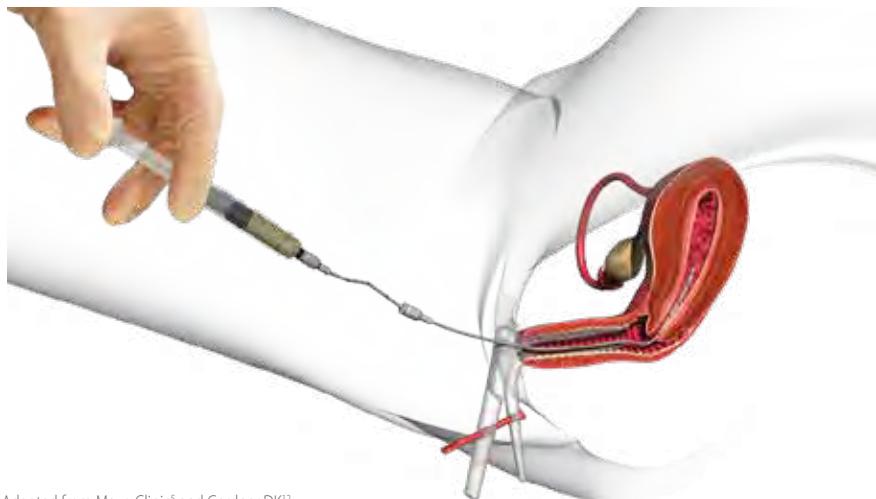
Before embracing the use of donor sperm, it is important for you to explore how you feel about it. Even if you had suspicions about fertility issues, the stark reality of being informed that a donor is essential for fatherhood can trigger feelings of grief, loss, guilt, and even a sense of injustice. It may also unearth insecurities related to masculinity, which may require time to process. Some men might also grapple with a sensation of detachment from the conception and pregnancy process. However, it's important to recognise that, contrary to these concerns, your involvement in the journey extends from insemination all the way to raising your child. Providing sperm does not inherently guarantee that you will be a good father. True parenthood revolves around imparting your values, love, wisdom, and life experiences.

# Sperm preparation<sup>5</sup>

Utilising a fresh sample provided by your partner or a vial of frozen donor sperm that has been thawed for preparation, the semen is carefully prepared in a laboratory for the next stage. The semen sample undergoes a washing process that separates the highly active and healthy sperm from lower-quality ones. Similar to how the cervix acts as a filter for sperm in the woman's body, the IUI procedure involves "washing" and filtering the semen to eliminate mucus and non-motile sperm. This process also removes potential irritants that could cause severe cramps if introduced into the uterus. Using a small, highly concentrated sample of healthy sperm significantly increases the chances of pregnancy, and a concentrated solution containing the most active sperm is inserted.<sup>5</sup>

# Insertion<sup>5,12</sup>

On the day of ovulation, sperm insertion will take place with fresh or thawed sperm. For those using fresh sperm, you will be asked to return to the clinic one to two hours after the delivery of the sperm sample for the insertion process. This simple and low-tech procedure is done without anaesthetic and is rather like having a pap smear, with a similar level of discomfort involved. An instrument called a speculum is inserted into the vagina so that the cervix (neck of the uterus) can be seen. A narrow tube attached to a syringe is gently pushed through the cervix into the uterus. Sometimes when the cervix is hard to reach a longer tube may be



Adapted from Mayo Clinic<sup>5</sup> and Gardner DK<sup>12</sup>

attached to the end of the syringe. The sperm are then injected into the uterus. It is usually not painful but occasionally some mild cramping or discomfort may occur. You will be asked to remain lying down for 10 to 15 minutes and then you will be able to resume your normal routine.<sup>5,6</sup>

## What can help?

### Surviving the two-week wait<sup>13</sup>

After your IUI, it takes around two weeks for pregnancy test results to be accurate. This 'two-week wait' – the time before your expected period – is understandably a time of high anxiety, worry and frustration for women trying to conceive. Here are some 'survival' tips to help you get through this time:

- try not to obsess about symptoms of pregnancy – feeling pregnant does not always mean that you are. Your doctor may prescribe medication after your treatment with side effects that resemble pregnancy symptoms
- keep busy – this may mean working more, or planning meaningful or fun distractions
- allow yourself a limited amount of time each day to think about pregnancy; write down your thoughts, search information online or discuss it with your partner or supportive friends/family members
- try some relaxation techniques such as breathing exercises or meditation.

## SUCCESS RATES<sup>3</sup>

The success rates for IUI will vary depending on a number of factors including the number of cycle attempts and maternal age. You should discuss success rates with your doctor.

# COPING WITH STRESS<sup>14,15</sup>

## Talk to your partner<sup>14</sup>

Infertility is a couple's problem not an individual's. By asking for and relying on the support of your partner and by communicating openly with them throughout the evaluation, diagnosis and treatment phases, you may find that your relationship grows stronger.



## The value of a wide support network<sup>15</sup>

Discussing fertility issues may be uncomfortable, but expressing how you feel may help you release your stress. It's important that you reach out for support.

Infertility is a sensitive subject and many people may not know how to react. Guide the conversation and help them avoid topics that may be hurtful or make you feel uncomfortable. Let your friends know how they can support you.

If you feel in need of more emotional support than your partner can give, but don't want to share everything with a friend or family member, your fertility clinic usually offers the services of a counsellor.

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# Looking for more information?

Other booklets in the *Pathways to Parenthood* series are available at [www.fertilityportal.com.au/merck](http://www.fertilityportal.com.au/merck):

- Your step by step guide to treating infertility
- Overcoming male infertility
- Female infertility & assisted reproductive technology (ART)
- Endometriosis
- Ovulation induction (OI)
- Intrauterine insemination (IUI)
- *In vitro* fertilisation (IVF) & intra-cytoplasmic sperm injection (ICSI)
- Managing the stress of infertility
- Creating families for same-sex couples