Intra-Uterine Insemination (IUI)

## Introduction

Intra-Uterine Insemination (IUI), sometimes referred to as artificial insemination, involves placing prepared sperm into the woman’s womb near the time of ovulation. The sperm is first prepared in the laboratory to separate fast moving sperm from more sluggish or non-moving sperm. It is beneficial in cases where the male partner has a low sperm count or poor sperm motility. However, if the sperm count or motility is very low, intracytoplasmic sperm injection (ICSI) is the preferred treatment. IUI is also suitable in cases where there is no male partner, i.e. for single or lesbian women.

## Who will benefit from IUI?

* Couples with unexplained fertility
* Women with mild endometriosis but open fallopian tubes
* Couples with mild male factor infertility
* Women with cervical hostility
* Couples who struggle with full penetrative intercourse

# Natural or stimulated?

IUI treatment can be performed in two ways at our clinic: in a natural cycle without fertility medicines or in a stimulated cycle with fertility drugs. IUI can be performed with the partner’s sperm or donor sperm (please refer to our separate information sheet on donor sperm for further information).

## Natural cycle IUI

IUI without fertility medicines is performed between day 10 and day 16 of your cycle – day 1 being the first day of your period. You will test for ovulation using home test kits, from around day 8 of your cycle. Your consultant will provide you information about this. At the appropriate time you will need to inform the clinic of the test result and you will be provided with a time for your procedure.

## Stimulated IUI

### Natural IUI Checklist:

* Arrange appointment with a nurse to complete consent forms and check validity of screening test results
* Obtain ovulation prediction kits
* Call clinic on day 1 of period
* Use kits to identify when you will ovulate
* Call clinic with this result and book procedure
* Arrange pregnancy test 2 weeks after IUI
* Arrange donor sperm (if necessary)

IUI can achieve better pregnancy rates when combined with mild ovarian stimulation. The use of fertility medicines, either Clomiphene (Clomid) tablets or hormone (FSH) injections can be advantageous because they can stimulate the ovaries to produce more than one egg each cycle. However, the risk of multiple pregnancy is increased, which is why regular monitoring using ultrasound scans is necessary to determine the number of follicles developing in the ovary. Monitoring of the cycle is typically performed from day nine or ten of the cycle. Once the leading follicle is at least 18 mm in diameter and the lining of the womb (endometrium) is suitably thickened, an injection of human chorionic gonadotrophin (hCG) is administered to trigger ovulation. IUI is usually carried out 24 hours after the injection.

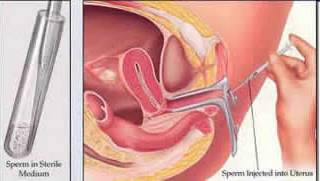
### Stimulated IUI Checklist:

* Arrange appointment with nurse to complete consent forms and check validity of screening test results
* Arrange medications as advised
* Call clinic on day 1 of period
* Take medication as prescribed
* Attend monitoring scan appointments
* Arrange pregnancy test 2 weeks after IUI
* Arrange donor sperm (if necessary)

If you are planning to undergo an IUI cycle (natural or stimulated) you and your partner (this is required for welfare of the child purposes) must have up to date screening test results for HIV, Hepatitis B surface antigen, Hepatitis B core antibody, Hepatitis C, Chlamydia and Gonorrhoea. You may be required to have further tests if you have visited certain countries recently or of a certain ethnic origin.

# The procedure

The sperm is washed in the laboratory before insemination in order to concentrate the best sperm into a small amount of fluid. Using a catheter, your doctor will place the concentrated sperm directly into your uterus through your cervix, under ultrasound guidance as depicted in the figure below.

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**Figure 1** Intra-uterine insemination. Image courtesy of Advanced Fertility Centre of Chicago, Illinois, USA

The insemination procedure is relatively painless and is performed in a few minutes. Some women may experience temporary, menstrual-like, cramping. All normal activities can be resumed after the insemination.

The logic behind IUI treatment is threefold:

1. More than one egg is available thereby increasing the chance of success
2. Sperm are directly placed in the uterine cavity thereby reducing the destruction of sperm by the vaginal acidity and cervical hostility
3. The distance the sperm have to travel to meet the egg in the fallopian tube is reduced because they are being placed closer

# Success rates

The success rate with IUI treatment depends on you and your partner’s fertility status and your age. Most couples who opt to undergo IUI have a 5 to 20 per cent chance of becoming pregnant with each attempt. The chances are higher for stimulated IUI cycles in younger women using good quality sperm. However, it is not uncommon for multiple IUI cycles to be attempted due the poor success rate with a single cycle.

**PLEASE NOTE:** prior to considering IUI treatment we advise women to have the patency of their fallopian tubes checked (i.e. whether or not their fallopian tubes are open). This can be performed via the HyCoSy investigation, which involves checking the patency of the fallopian tubes using a sono-contrast dye under ultrasound visualisation.

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