How does IVF and ICSI work?

The typical IVF and/or ICSI treatment cycle at Merrion Fertility Clinic involves the following processes:

Step 1: Suppressing the natural monthly hormone cycle

As a first step you may be given a drug to suppress your natural cycle. Treatment is given either as a self-administered daily injection or a nasal spray. This continues for about two weeks.

Step 2: Boosting the egg supply (stimulation)

After your natural cycle is suppressed you are given a fertility hormone called FSH (or Follicle Stimulating Hormone). This is usually taken as a daily injection for around 12 days.

This hormone will increase the number of eggs you produce, meaning that more eggs can potentially be fertilised. With more fertilised eggs you should have a greater choice of embryos to use in your treatment.

Step 3: Checking on progress

Throughout the drug treatment we will monitor your progress on 2-4 occasions. This is done by vaginal ultrasound scans and blood tests.

36 hours before your eggs are due to be collected you have a hormone injection to help your eggs be released (i.e. ovulation).

Step 4: Collecting the eggs & sperm

Eggs are collected using ultrasound guidance under sedation. This involves a needle being inserted through the vagina into each ovary.

The eggs are, in turn, collected through the needle and on to a test tube. Cramping and a small amount of vaginal bleeding can occur after the procedure.

The male partner will be asked to product a sperm sample during the egg collection process.

After egg collection, you are given medication to help prepare the lining of the womb for embryo transfer. This is given as pessaries, injection or gel.

Step 5: Fertilisation

IVF

Your eggs are mixed with your partner's sperm and cultured in the laboratory for 16–20 hours. They are then checked to see if any have fertilised.

ICSI

Your eggs are injected with your partner's sperm and cultured in the laboratory for 16–20 hours. They are then checked to see if any have fertilised.

Those that are showing signs of fertilization are grown in the laboratory incubator for another one to two days. The best one or two embryos will then be chosen for transfer.

Step 6: Embryo transfer

You will discuss in consultation the appropriate number of embryos to transfer back into your uterus. The number of embryos is restricted because of the risks associated with multiple births. Remaining embryos may be frozen for future IVF attempts, if they are suitable.