

We're experts at getting people pregnant.





Infertility can affect one in every six couples, so if you are having difficulty conceiving, it is important to know that you are not alone and there are many treatments available that can help you achieve your dream of having a baby.

With many different causes of infertility, these treatments may vary. One type of treatment is IVF (In Vitro Fertilisation) where eggs are collected from the ovary, fertilised in the laboratory and replaced into the uterus, hopefully resulting in a successful pregnancy.

Listed below is a step by step guide as to what happens during an IVF cycle at Repromed.

## EGG COLLECTION

The starting point for IVF treatment is obtaining eggs from the ovaries. This is done by administering injections of FSH (Follicle Stimulating Hormone) which encourages development of several eggs (usually 5-10 however, the number can vary immensely).

This process normally takes about two weeks. Once enough eggs have developed, they are removed from the ovaries by passing a needle into the fluid filled sacs that contain the eggs (follicles) and aspirating them out. This is a simple procedure that is performed under a general anaesthetic in theatre by a Doctor.



### SPERM PREPARATION

While the eggs are being collected in theatre, the sperm sample is also being prepared. Depending on the quality of the sperm sample there are different preparation methods, however the most common method is called a density gradient preparation. The sperm is added to a test tube that contains a special media which filters out sperm that have poor motility. If the sperm count is very poor, or if the man has had a surgical sperm collection, the sperm sample will be spun to concentrate as many sperm together as possible. These samples are then used to inseminate the eggs.

### INSEMINATION

There are two different types of insemination techniques, IVF standard insemination or ICSI (Intracytoplasmic Sperm Injection). IVF standard insemination is used in patients that have normal sperm parameters and this involves the scientist in the laboratory placing the eggs and the sperm into a dish and leaving them overnight so that fertilisation can occur. If there are severe problems with the sperm, or if IVF standard insemination has failed previously, IVF is combined with ICSI, where scientists inject a single sperm into each egg. These are then also left overnight in the hope that fertilisation will occur



#### **FERTILISATION**

The morning after the egg retrieval, the scientists check the eggs for signs of fertilisation. If normal fertilisation has occurred the fertilised eggs are now called 'embryos' and are grown in the laboratory until they are ready to be placed back into the uterus.

## **EMBRYO DEVELOPMENT**

Embryos can be grown in the laboratory for up to five days after egg retrieval. This time allows the embryo to develop and switch-on their own genes.

# EMBRYO TRANSFER

On the day of your embryo transfer, the scientists will assess your embryos and pick the most suitable one for transfer. The embryo will then be loaded into a very soft thin plastic tube and placed back into the uterus. This procedure is very simple, much like a pap smear, and does not require an anaesthetic.

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## **EMBRYO FREEZING**

When patients have more embryos than are being transferred, the option of embryo freezing becomes available. After embryo transfer, any remaining embryos are assessed for freezing. Only high quality embryos are able to be chosen to undergo this process. During this process, embryos are placed into straws containing cryoprotectants and are then placed into a programmable biological freezer which freezes the embryos. They are stored in liquid nitrogen (-196°C) until they are ready to be used.

## PREGNANCY TEST

After your embryo transfer, you will need to wait for nearly two weeks until your pregnancy test. The pregnancy test is scheduled 16 days from the day of your egg collection. We need to wait this long to give your hormones the time needed to rise to a level that we can measure in your blood.

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