

In vitro fertilisation (IVF)

In vitro fertilisation (IVF) is the process of fertilizing eggs with sperm outside of the human body. Once fertilised, the resulting embryos are placed back in the woman's uterus in the hope that a successful pregnancy will follow.

The IVF procedure

IVF is not one simple procedure, but a series of steps over several weeks. The steps involved in this procedure include:

- **Stimulating the ovaries** – hormones are usually given to stimulate the ovaries to produce more than the usual one egg per cycle. This is to enable the collection of several eggs. The development of the eggs is monitored by one or two blood tests and ultrasounds that ensure eggs are collected at precisely the right time while the women undergoes hormonal treatment.
- **Collecting the eggs** – when the appropriate time comes to collect the eggs an ultrasound probe is placed in the vagina while the woman is under light sedation. The ultrasound monitor shows where the follicles are within the ovaries and a fine needle is passed through the vaginal wall and into the ovaries. Each follicle (sac of fluid) in the ovary is pierced in order to collect the egg in each.
- **Fertilisation and embryo transfer** – a couple of hours after egg collection, the man provides a sample of semen. In a standard IVF treatment, the eggs are mixed with the sperm in a culture dish. For intracytoplasmic sperm injection (ICSI) treatment, one sperm is injected directly into the cytoplasm of each egg.

If an egg is fertilised by a sperm, a zygote or pre-embryo will begin to develop. The pre-embryo remains in the incubator for two to five days while it continues to grow and divide.

Once the embryos have grown to an appropriate size, one or two will be transferred back to the woman's uterus at the appropriate time in her menstrual cycle. This procedure (known as embryo transfer) involves passing a very fine plastic tube (catheter) through the cervix and into the uterine cavity under ultrasound guidance. It is very similar to a PAP smear, is generally painless and no anaesthetic is usually needed. Only one or two embryos are transferred back at a time.

For the gamete intrafallopian transfer (GIFT) program, eggs and sperm are placed directly into the fallopian tubes, allowing fertilisation to take place in the natural way. The procedure is performed using a laparoscope, and a general anaesthetic is required. This procedure is rarely used now.

Pregnancy test results

Two weeks after the transfer, a blood test is taken to determine if the woman is pregnant.

Possible risks and side effects

There is no clear evidence that infertility medicines, if properly used, increase the risk of birth defects or cancer. The increase in the hormone oestrogen can cause breast tenderness, slight nausea, dizziness and slight abdominal swelling.

Occasionally, too many follicles develop and the levels of the hormone oestrogen rise too high, causing a condition called ovarian hyperstimulation syndrome (OHSS). This is an unpleasant experience, which may include marked abdominal swelling, nausea, vomiting and diarrhoea, lower abdominal pain and shortness of breath. OHSS is rarely severe enough to require hospitalisation.

There is also a theoretical risk (very rare) of damaging other organs, or causing infection or bleeding, with the collection needle.

Where to get help

Your local doctor

- Obstetrician or gynaecologist
- Your local community health centre
- Family Planning Clinic
- Monash IVF Tel. 1800 628 533

Things to remember

- IVF is a process where fertilisation of an egg occurs outside of the body.
- IVF is not one procedure, but rather a series of steps taken over several weeks.
- While infertility drugs have some side effects, there is no evidence that they cause cancer or birth defects.

This page has been produced in consultation with, and approved by:

Monash IVF

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