

In-Vitro Fertilization (IVF)

Indications for IVF

IVF is usually indicated for couples in whom:

- The woman has blocked Fallopian tubes not suitable for surgery
- The woman has an ovulatory disorder
- The man has sub-optimal sperm counts
- There is unexplained infertility

Preparation for a treatment cycle

At the initial consultation or follow up consultation, a treatment cycle is discussed with the couple concerned. Once the preliminary investigations have been completed, the patient will be ready to begin treatment.

Management of an IVF treatment cycle

To give the best results, we stimulate the development of many eggs using a combination of drugs tailored to each individual's requirements. The growth of the ovarian follicles and the development of the endometrium are monitored with ultrasound. When the follicles are considered mature enough and the endometrium appropriately developed, the woman will receive an injection of human chorionic gonadotrophin (hCG) to mature the eggs. The egg recovery takes place about 36 hours after the hCG injection.

Semen Production

It is a policy of London Fertility Centre that all partners produce their semen sample at the Centre. There is a room specifically dedicated for this purpose. In extreme circumstances, it may be possible for men to produce at home or in a hotel but it is essential that you discuss this with the doctor during consultation.

Once the male partner has produced the semen sample, it is essential that he remains at the Centre until the laboratory has analyzed the quality of the sperm. It is difficult to give an exact time for this, however as general rule, the analysis should be complete by lunch time. If the sperm is not of sufficient quality, the embryologist and doctor will discuss other options with the couple.

The technique of egg collection

Eggs are usually collected using ultrasound to guide a needle through the vagina into the ovarian follicles whilst the woman has intravenous sedation. This takes on average 15-30 minutes. Once the eggs are recovered, the woman goes to the recovery room and is usually ready to leave one or two hours later.

The eggs are taken to the laboratory and, about four hours after collection are inseminated with a prepared sample of semen. Twenty-four hours later, they are examined for division (cleavage). If cleaved embryos have developed, embryo transfer proceeds. Sadly, sometimes no eggs fertilize, either because the eggs are of poor quality, or because of an unsuspected sperm factor, or even more rarely, for reasons that cannot be explained. If fertilization does not occur it is disappointing but does not necessarily preclude the successful use of conventional IVF in the future. However, for subsequent attempts we usually recommend Intracytoplasmic Sperm Injection (ICSI). You will be having injections during the stimulation cycle and although these are not painful they may cause some discomfort. You may also experience some "period pain" type cramps after the egg collection and you will be given tablets to ease any discomfort you may have.

The embryo transfer

This is normally carried out 2, 3 or 5 days after the egg collection depending on the particular circumstances of the case, and only if healthy, growing embryos are available. A fine tube or catheter is passed through the cervix and the embryos are injected in a minute amount of culture medium. Embryo transfer does not usually require sedation and only takes a few minutes. To facilitate this procedure, we advise you to come with a reasonably full bladder.

Embryo freezing

If they are suitable, embryos remaining after the transfer are frozen in liquid nitrogen. Embryos may be stored, if both partners give consent, for 5 years. In special circumstances this may be extended to 10 years. The couple **must** remain in contact with the Clinic as they are completely responsible for confirming that they wish the embryos to remain in storage. The couple are responsible for paying an annual fee to cover administration and storage. The couple must also inform Fertility Design Clinic of any change of address or any personal circumstances.

When frozen embryos are to be used for transfer, they are thawed at the appropriate stage of the menstrual cycle. Not all embryos survive the freeze/thaw procedure and

the chance of pregnancy is generally lower when using frozen embryos as compared to fresh embryos.

Afterwards

Women receive vaginal pessaries of progesterone hormone to support the uterine lining, and 14 days after the egg collection, a blood test for the pregnancy hormone β -hCG is carried out to see if there is a pregnancy.

The success rate of IVF

Success rates vary depending on the type of problem and the factors personal to individual women. These include the age of the woman being treated, the number of eggs she produces, the quality of the sperm, the number and quality of embryos that result, and the number of embryos transferred.