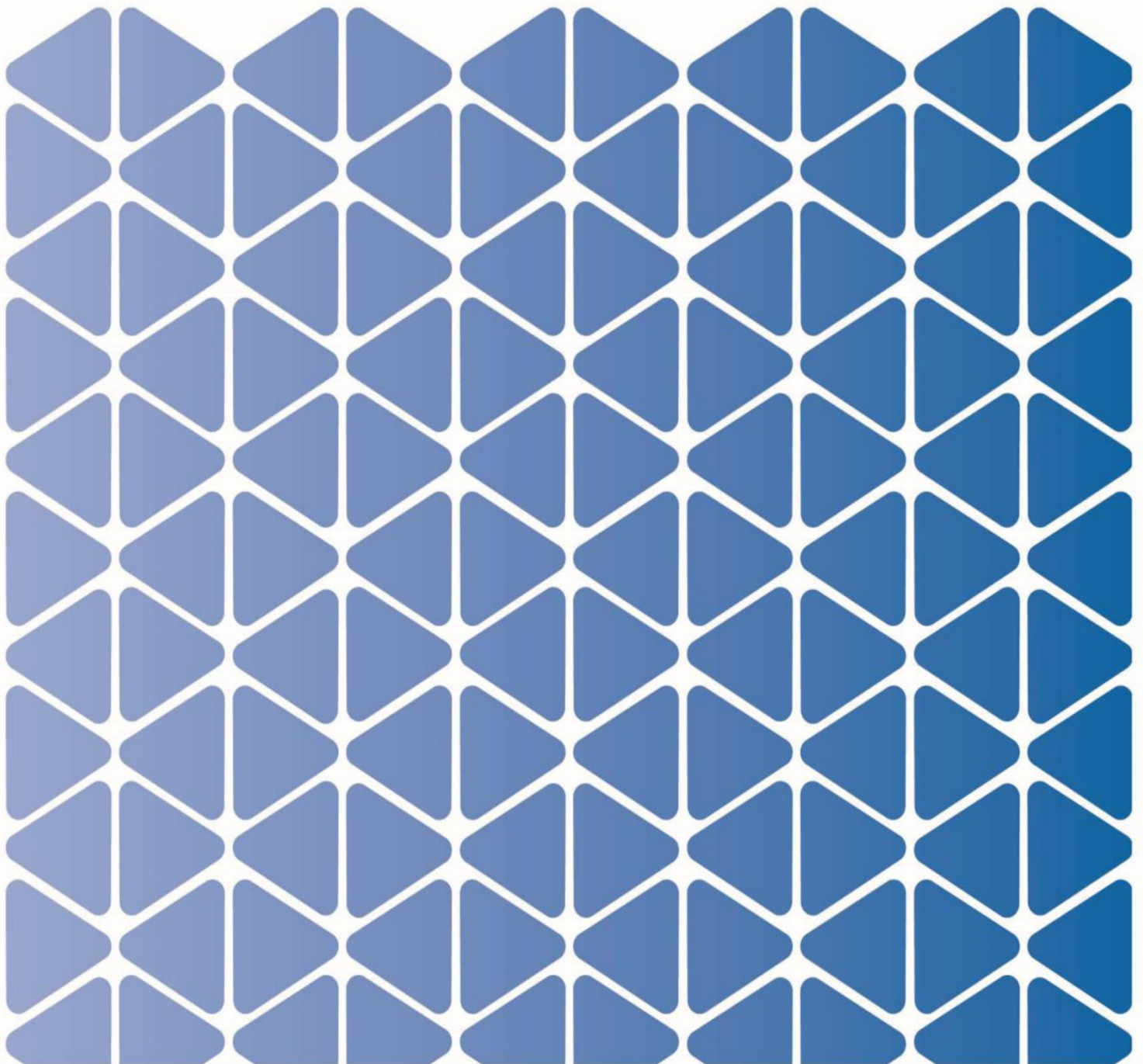


PATIENT INFORMATION

**IN VITRO FERTILISATION (IVF) AND
EMBRYO TRANSFER**

IVF is one of the Assisted Reproduction Techniques (ART) and is commonly known as the “test tube baby” procedure.

Under normal circumstances a pregnancy results when an egg which is released from an ovary unites with a sperm within the fallopian tube. This process is called fertilisation.

There are circumstances however when this process cannot occur naturally. The most common are:

1. Fallopian tubal blockage or damage
2. Lack of, or problems with quality and motility of sperm
3. Endometriosis
4. Cervical problems
5. Failed intrauterine insemination

Occasionally no cause can be found for the infertility (Unexplained infertility) and under these circumstances IVF is also an option for treatment.

During the process of IVF eggs are incubated with sperm (after collection) in the laboratory in order to allow fertilisation to occur. After the fertilised eggs have divided to form embryos (usually 2-3 days) the embryos are ready to be transferred into the uterus.

Process of IVF

1. Down regulation of the pituitary gland.
2. Stimulation of the ovaries with gonadotrophins and monitoring the treatment with ultrasound.
3. Collection of the eggs.
4. Collection and preparation of the sperm sample.
5. Incubation of the eggs and sperm in the laboratory to allow fertilisation to occur.
6. Transfer of the embryo(s) into the uterus.
7. Return 12 days post embryo transfer for a pregnancy test.

1. Down regulation of the pituitary gland

There is a small gland in the brain called the pituitary which releases hormones which act on different organs in the body. FSH (follicle stimulating hormone) and LH (luteinising hormone) are released from this gland and in turn act on the ovaries to produce, mature and release eggs. To ensure that the eggs are not matured and released prematurely (prior to egg collection) the FSH and LH must be temporarily blocked from release (down regulation) and this is achieved by a simple daily injection of a drug called Buserelin. The nurses will tell you when this needs to be commenced and will show you how to administer the injections.

2. Stimulation of the ovaries and monitoring

Gonadotrophins e.g. hMG - Human menopausal gonadotropin (Menopur) are given by injection subcutaneously (underneath the skin) once daily to stimulate the ovaries to produce follicles which contain the eggs. HMG contains equal parts of FSH and LH. As explained above both these hormones are necessary for the production and release of eggs. Treatment with Menopur usually lasts 12 days. Monitoring of treatment is by ultrasound and when the follicles have reached a certain size you will be told when to administer the final injection (Pregnyl) subcutaneously. This is necessary to mature the egg and enhance its release at the time of egg collection.

3. Collection of the eggs

You will be told when to come in to the hospital for this procedure which is performed under a general anaesthetic. Eggs are withdrawn from the ovaries by a needle guided by ultrasound imaging which is inserted through the vaginal wall into the peritoneal cavity and then the ovary. Each follicle is punctured in turn and the fluid containing the eggs is withdrawn. The fluid is looked at immediately by the embryologist to collect and assess the eggs. Following the procedure which normally takes approximately 15–20 minutes you will be taken back to your room. You will normally be allowed home 4–6 hours after the procedure.

Please avoid unprotected sexual intercourse (i.e. abstain or use barrier contraception such as condoms) between the first day of the last NORMAL period to the date of procedure. There is a risk that your procedure will be cancelled if there is a chance of very early pregnancy.

4. Collection and preparation of the sperm sample

The sperm specimen is collected usually at the time of the egg collection and then washed and filtered ready for insemination of the eggs.

5. Incubation of the eggs and sperm

Following egg collection, the embryologist will look at the eggs under a microscope to assess their quality and development and each suitable egg is subsequently placed in a dish and inseminated with the washed sperm. Each dish is then placed in an incubator and will be assessed for fertilisation the following morning. The following day the fertilised eggs are examined to assess whether they have started to divide to form embryos. You will be kept informed at each stage and told when to return for the embryo transfer.

6. Embryo transfer

Embryo transfer (ET) is normally performed 48 – 72 hours following the egg collection providing fertilisation has taken place. Normally 1 – 2 embryos will be transferred into the uterus. This will however be discussed with you at the time.

The embryo transfer is a sterile procedure but does not usually require an anaesthetic. The procedure involves inserting a sterile instrument into the vagina to visualise the cervix and any vaginal/cervical secretions are gently removed with cotton wool moistened with warm saline (salt solution). The embryologist identifies the best quality embryo(s) and loads them into a fine tube (catheter) and this is then passed to the consultant performing the transfer. The catheter is passed through the cervix into the uterus and the embryos released. The procedure only takes 4–5 minutes. Following the embryo transfer you will be kept in the department for 30 minutes before being allowed to return home.

Prior to leaving the department you will be given instructions when to return for a pregnancy test.

Following egg collection, you will also be commenced on hormone treatment with progesterone (in the form of vaginal pessaries) to help thicken the lining of the womb prior to embryo transfer. This is continued until you return for a pregnancy test.

If the pregnancy test is positive the progesterone is continued until you return for a scan to confirm the pregnancy. If the scan shows a viable pregnancy the progesterone is continued until the pregnancy reaches 12 weeks gestation.

Complications of egg recovery

The incidence of complications is small.

- The most common complication is bleeding from the vagina at the time of the operation (20%). This usually ceases by applying pressure only but occasionally requires a suture. It is rare for patients to be readmitted following the procedure with bleeding.
- Pain post egg collection.
- Bruising within the vagina.
- Bladder bleeding

Rare complications:

Infection (0.5–1%)

Bowel perforation leading to infection

Very rare complications:

Internal bleeding requiring an operation (laparotomy)

Vertebral osteomyelitis (infection of the vertebral bones)

Acute obstruction of the ureter (tube linking the kidney to the bladder)

Freezing of spare embryos

Depending on the numbers of viable embryos and their quality it may be possible to freeze some embryos for use at a later date. This will be discussed with you by the embryologist. Your written permission will be required before any embryos can be frozen.

If your symptoms or condition worsens, or if you are concerned about anything, please call your GP, 111, or 999.

Patient Experience

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

Feedback

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

Patient Advice and Liaison Service (PALS)

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

How to contact PALS:

Telephone Patient Services: 0300 123 1732 or via email at: wah-tr.PALS@nhs.net

Opening times:

The PALS telephone lines are open Monday to Friday from 8.30am to 4.00pm. Please be aware that you may need to leave a voicemail message, but we aim to return your call within one working day.

If you are unable to understand this leaflet, please communicate with a member of staff.