Patient information leaflet (IVF)

The Human Fertilisation and Embryology Authority require all consent forms for assisted conception to be complete before treatment is initiated. In addition all screening tests must be complete**. IF YOUR CONSENT FORMS AND SCREENING TESTS ARE NOT COMPLETE WE ARE UNABLE TO START YOUR TREATMENT.** Initial forms for completion can be found under "HFEA – Welfare of the Child" under downloadable forms on our website www.londonwomensclinic.com

IVF is an infertility treatment where there is a problem with the passage of the sperm to the egg (such as blocked fallopian tubes, endometriosis, anti-sperm antibodies), impaired sperm function (low count or motility), some cases of "unexplained" infertility and sometimes there are problems with ovulation.

In a normal cycle, it is usual to produce one egg that is released from the developing follicle two weeks before the next period starts. The follicle is a fluid filled cyst that grows to about 16 - 22mm before releasing its egg. One follicle will usually contain one egg.

The general aim in IVF is to produce a reasonable number of eggs for fertilisation through stimulation of follicles in the ovary. This is known as 'super ovulation'. With infertility treatment it is accepted that not every egg will fertilise and not every embryo will progress to a baby. Super ovulation improves the chance of identifying the eggs and embryos with the best chance to progress.

Once fertilisation has taken place, the best embryos can be selected and replaced into the uterus. The average number of eggs collected is 10 to 12 and 2 embryos are usually replaced. It is possible for remaining embryos of sufficiently good quality to be frozen for future use, and this should be discussed on an individual basis with the embryologist.

When the ovaries are stimulated by fertility drugs it is usual for several follicles to grow. However, the rate of growth of individual follicles varies and it is important that the egg collection is undertaken when, as many eggs as possible are appropriately mature. In order to achieve this, we routinely use a combination of drugs that takes over from the body's natural hormone cycle.

The hormones that stimulate ovulation are stimulating luteinising hormone (LH) and follicle hormone (FSH), both produced by the pituitary gland in the brain. FSH and LH stimulate the growth of follicles that in turn produce Oestradiol before ovulation and oestrogen and progesterone after ovulation. Oestradiol promotes growth of the lining of the womb (endometrium) and progesterone maintains the endometrium in a favourable state for the implantation of the embryo(s).

The drugs:

A combination of drugs is used to manipulate the cycle and stimulate the development of mature eggs. A variety of different regimes are used depending on individual requirements.

However, most would include drugs from the following groups: -

1. **Gonadotrophin releasing hormone (GnRH) analogue, which has the effect of "switching off" the pituitary's natural production of FSH and LH. This is important in order to prevent interference with stimulated follicular development. This is given either as a nasal spray or daily injection. Occasionally longer acting injections lasting for a month are used. The analogue stimulates, and then suppresses, activity of a small gland in the brain known as the pituitary, which normally controls the release of the two important reproductive hormones – follicle stimulating hormone (FSH) and luteinising hormone (LH). Essentially, the analogue suppresses the normal link between the pituitary and ovary. These hormones normally stimulate the ovary to produce a single follicle each month but, by using suppression drugs, additional follicles that would normally go to waste, develop.**

2. Follicle Stimulating Hormone (FSH) and Human Menopausal Gonadotrophin (HMG) are used at doses between 50 and 450 units to simulate follicular development and are given by daily injection.

3. Human Chorionic Gonadotrophin (HCG) (Pregnyl) is given in the late evening 36 to 40 hours before egg collection. It has the effect of causing the eggs within the follicles to mature, ready for fertilisation. The action is the same as the LH which peaks mid-cycle.

4. After the egg collection, Progesterone support is given in the form of Cyclogest suppositories placed in the rectum. These can be used vaginally after embryo transfer. An alternative preparation is Gestone, an injectable progesterone given on a daily basis. These drugs prepare the endometrium for implantation of the embryo.

These preparations may delay the onset of the next period even if you are not pregnant. A pregnancy test should be performed two weeks after the embryo transfer.

Possible side effects of drugs (uncommon):

GnRH	**Cyclogest/HCG/Gestone**
HMG/FSH	
Discomfort at injection site	Breast tenderness
Headaches	Can delay the onset of a period by 2-3 days

Tiredness

Constipation

Allergy

Mood swings

Hot flushes

Pelvic discomfort

Nausea (very occasionally)

Vaginal bleeding

Nasal irritation

Ovarian hyperstimulation (see below)

We hope you do not experience any side effects at all but you should be made aware of the possible side effects prior to commencement of drugs. If you experience any whilst on the fertility drugs and you are concerned, please speak with one of the nurses for advice. It is important to check the drugs for dosage and expiry date - nurses will help you with these checks.

Ovarian hyperstimulation syndrome (OHSS):

This may occur if the ovaries are very sensitive to stimulation and produce many eggs (usually greater than 15) or high levels of Oestradiol. This could be a potentially dangerous situation, but OHSS occurs in its severe form in only 0.5% of patients. If we think you are at risk of developing this, the options are to:

1. Abandon the cycle
2. Delay the egg collection
3. Freeze all the embryos

Ovarian hyperstimulation syndrome is characterised by lower abdominal discomfort, swelling and nausea. Sometimes vomiting and difficulty in breathing may occur. If you are worried that these symptoms are developing, you must contact the clinic. It is important to drink plenty of fluids (at least two litres per day) to avoid becoming dehydrated. Water, milk, fruit juice or isotonic fruit drinks are all suitable. Try to limit tea and coffee, as they are diuretics and make you pass more urine. Continue with these fluids for at least ten days after egg collection.

In the event of problems relative to ovarian hyperstimulation syndrome (OHSS) developing, it is important that you contact The LWC straight away. Any patient is also free to present at accident and emergency of an NHS hospital.

Before treatment can begin:

Although generally at this stage patients will have been fully investigated by their consultant, a review prior to starting IVF treatment is necessary to ensure that all the necessary information has been gathered. A blood test on day 2 or 3 of your period will be performed to measure LH, FSH and Oestradiol. At this stage we should know if you are immune to rubella. If you are not you will need to have a vaccination and your treatment will be delayed by three months. A recent cervical smear test result is required.

Various screening tests are required, which must be repeated annually in the case of repeat treatment. These include HIV and Hepatitis B, Hepatitis B Core & Hepatitis C, and a Chlamydia urine test for both the female and male partner. A semen analysis is also necessary.

We would advise patients to start folic acid prior to treatment. This can be purchased directly from any pharmacy. This will need to be continued until you are a minimum of 3 months pregnant.

Starting the treatment:

The nasal spray or daily subcutaneous injections often start on day 21 of your preceding menstrual cycle although occasionally a day 2 start is recommended.

After you've been taking the nasal spray/injections for approximately 14 – 21 days, an ultrasound scan will be performed. This is usually performed trans-vaginally with a thin ultrasound probe passed into the vagina. This method is quick and painless providing a clear picture and is preferred by most women, as a full bladder is not required. Two to four scans are usually performed prior to the egg collection. The first scan checks that the uterus and ovaries look normal before stimulation starts. A blood test to measure Oestradiol is sometimes taken on the same day. If the scan is normal and the Oestradiol level is low, HMG or FSH can commence.

Occasionally the scan shows a thick womb lining and/or a small cystic area on the ovary. This happens in about 5% of cases and usually means that the Oestradiol level is not low enough to start stimulation. Although a nuisance, the starting day for your injections will be delayed; the Oestradiol level usually falls after a further week's course of nasal spray. The blood test and scan will then be repeated and injections can usually start at this stage.

Starting stimulation:

In most cases HMG or FSH injections can commence after the initial/baseline scan and are given on a daily basis. A nurse will show you or your partner how to give these injections. Alternatively you may be able to make arrangements with your local GP or practice nurse to administer these.

A week later you will need a scan and two days later (after 10 days of injections) you might need another blood sample and scan after which you will be given further instructions regarding scans and injections.

When your follicles are large enough, you will have 10,000 IU HCG (Pregnyl). It is important that this injection is given 35-36 hours before your operation. This will usually mean having it between 9pm and 12 midnight, 2 days before the operation. You will be advised of the exact time by the nurse.

Reasons for the cancellation of a treatment cycle:

1. If, after being on HMG or FSH for several days there is little or no follicular development, you may be advised to abandon the cycle. Future management can be discussed either at that time or at a follow up consultation. The usual recommendation would be to use a higher dose of HMG or FSH on another occasion, or a short protocol without down regulation.

2. If you produce too many follicles, you will see a Consultant to discuss the effects of hyperstimulation and future management would then be decided.

Egg Collection:

You should have nothing to eat or drink for at least six hours before the egg collection. The procedure is performed under intravenous sedation (not general anaesthesia). You will be conscious but sleepy. You are likely to feel a few twinges but should not be in pain. The procedure takes approximately 30 minutes.

A scan probe has a fine needle attached to it which is passed into the ovary and the fluid from each follicle is aspirated. We expect to obtain an egg from about 80% of follicles. Therefore the number of follicles seen on scanning does not always correspond to the number of eggs present. On very rare occasions (usually when the ovarian response has been poor) no eggs are collected.

If your partner's sperm is being used to fertilise the eggs, he will need to produce a sample the morning of the egg collection. We advise three days sexual abstinence prior to the egg collection. The sample should be produced at the Centre during or just after the egg collection.

After the egg collection you may feel drowsy for the rest of the day. You should be ready to go home two hours after sedation. However it is important to have somebody to accompany you. You should not drive a car for 24 hours.

After the egg collection:

It is common to feel some lower abdominal discomfort, for which you may take paracetamol tablets, two four hourly, and maximum 8 in 24 hours. The discomfort and bloating may last for a couple of days. If you feel sick, avoid eating substantial meals and drink fluids only for the rest of the day.

A small amount of vaginal bleeding is normal. It is best to use sanitary towels.

You will be asked to use hormone suppositories (Cyclogest 400 mg twice daily) or injections to support the hormone level in the second half of the cycle. You should start these on the day of the egg collection and continue for 15 days. If you conceive the consultant will advise you to continue these hormone suppositories until 3 months of pregnancy.

The embryo transfer:

The embryo transfer is performed with a full bladder under ultrasound guidance. You should drink one litre of water half an hour before the procedure. The procedure itself is simple and usually pain free. After replacement, it is customary to rest for a short while. The patient is commonly given hormonal support until the result of a pregnancy test is known some two weeks later. The day after the egg collection ring the clinic to find out if your eggs have fertilised. Unfortunately not all eggs will fertilise and once fertilised, not all embryos will be of similar quality. Two embryos will be selected for transfer.

Embryos are usually replaced two to three days after egg collection. Fourteen days after the embryo transfer a pregnancy test should be performed. This can be done on an early morning urine sample at home or brought into the clinic or on a blood sample. Very occasionally however, you may experience period like cramps with no bleeding. A pregnancy test will give you an accurate answer.

It is important to realise that the drugs given after embryo transfer may delay your period, even if you are not pregnant, in which case only a pregnancy test will tell you one way or the other. These are hormones for support and do not make you pregnant on their own.

Number of embryos:

The HFEA code of practice stipulates that not more than two embryos can be transferred. The only exception is the patient over the age of forty undergoing treatment with their own eggs.

There is a risk of multiple pregnancy with IVF treatment.

Multiple pregnancies are associated with an increased risk of miscarriage and complications during pregnancy. These include premature birth of very small babies, which may be handicapped or may not survive. In addition to these risks, a multiple birth can create enormous strains for the parents, including financial difficulties, emotional and physical exhaustion. We will discuss the different possibilities with individual couples.

What you can do after the treatment:

It is wise to take things easy after the egg collection and perhaps have a day off work the following day. The second or third day after egg collection is the day of the embryo transfer, after which you can go back to "normal". The embryos are quite safe within the womb and you can walk about, bathe, shower and undertake normal daily activities. It is best to avoid strenuous activity and heavy lifting until your abdomen is less tender and back to normal. Sexual intercourse can be resumed whenever you feel appropriate.

Abdominal distension and a bloated feeling is common, and this may be associated with feeling sick. Sometimes these symptoms occur after a few days. It is important to drink plenty of fluids and paracetamol may be taken for pain relief if necessary. Please ring the clinic if you have any worries.

Fourteen days after your embryo transfer it is essential to perform a pregnancy test as this is the only way to find out if implantation occurred or not.

If pregnancy occurs:

Again, there is nothing special that you need do. We like to monitor early pregnancy with a scan at seven weeks gestation. At this stage, we can confirm the position and number of fetuses and confirm the fetal heart is beating.

The risk of miscarriage following IVF is comparable to that in the general population. There is a risk of ectopic pregnancy (3 to 5%) with IVF treatment. In the event of this happening as confirmed by an ultrasound scan, an operation may be necessary as ectopic pregnancies do not develop normally and have to be removed. However, if you have any pain or bleeding in early pregnancy, you should report your symptoms to the clinic or your GP.

Freezing excess embryos:

If there are any surplus embryos of sufficiently good quality, you may choose to have these frozen for your future use. You will need to check with the embryologist to see if your surplus embryos can be frozen. However, even good quality embryos may not survive the freezing process and the pregnancy rate from frozen embryo transfer is lower than with fresh embryos.

Counselling:

We appreciate that this is an emotionally stressful time for you and your partner and it sometimes helps to alleviate stress to talk to someone knowledgeable. The counsellor at the clinic is very experienced in the field of infertility. Anything you discuss with her will be in strict confidence.

IVF Three Cycle Package – The Cost - Success

Few women in the UK undertake more than one cycle of In Vitro Fertilisation (IVF). The main reasons are financial, as well as the physical and emotional burden and the commitment of time involved.

Here at The London Women's Clinic we felt that IVF needs to be simplified, to make it less stressful and financially more affordable for most couples. Our philosophy of keeping costs down to a minimum is to encourage the idea of IVF as a multiple cycle treatment.

In order to lessen the financial burden for couples and hopefully to encourage them to take multiple cycles, the clinic now offers a "three cycle package".

Success rates for IVF treatment vary with a large number of factors, including the cause of infertility, the age of the female, and the grade of the embryos that are replaced.

Success is more likely to be achieved if couples regard IVF as a course of treatment rather than a one-off attempt.

- The Cost -

The "three cycle package" represents a substantial saving on three IVF cycles. If you can afford the time and expense, we recommend that couples should plan on the three cycles of treatment in order to maximise their chances of taking home a baby.

Patients booking this form of treatment will be treated for up to three cycles within a period of one year, the end point being an on-going pregnancy which reaches 24 weeks gestation.

COST OF TREATMENT – IVF CYCLE

Valid from July 1st 2009

(This schedule supersedes all previous price schedules)

CANCELLATION FEE: Any booked appointment which is not kept or cancelled giving at least 24 hours notice will be charged at the full amount.

	£
Full consultation fee: (includes pelvic scan, doctor, nurse and counsellor as necessary)	295.00
Follow Up consultation	125.00
Additional Counselling (per session)	65.00
IVF- Single Cycle Package	2950.00
IVF- Three Cycle Package	5900.00
ICSI (In addition to cost of single IVF)	995.00
IVF Ovum Donation (UK) + Drugs	5650.00
Embryo Cryo-Preservation (Includes one year's storage)	500.00
Annual storage fee	275.00
Frozen Embryo Replacement Cycle	950.00
Frozen Embryo Replacement Cycle (no scan)	475.00
HFEA fees	104.50
Hycosy	450.00
Assisted Hatching	500.00
Blastocyst Transfer	500.00

Donor sperm preparation per treatment cycle	850.00
Semen Analysis, prep and culture 24/48	140.00
Surgical Sperm Retrieval (PESA/TESA)	1500.00
1st Pregnancy scan at 7 weeks gestation	FREE
Additional pregnancy scan	125.00
Pelvic ultrasound scan	125.00
Preliminary screening tests and drugs are extra. A list of screening tests can be obtained from the Nursing Co-ordinator.	

PATIENT INFORMATION SHEET

SCORING OF EMBRYOS

The day of you ET will be dependant on the number and quality of your embryos. To help the embryologist choose the correct embryos for the transfer, the embryos are scored according to a number of different factors:

1. Number of cells
2. Size and colour of these cells
3. The amount of fragmentation that has occurred whilst the cells have been dividing

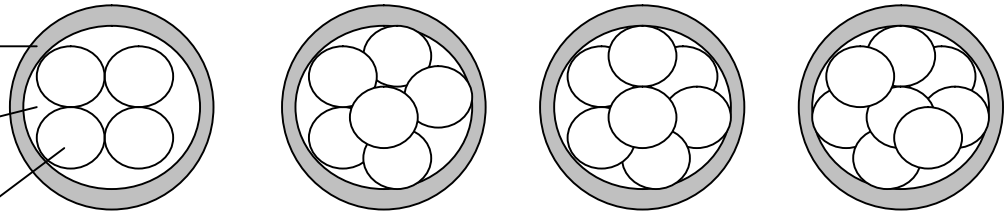
The number of cells that we expect your embryos to be is shown below:

Day 1	1 cell
Day 2	2-5 cells
Day 3	6-9 cells
Day 4	Morula stage 30 cells
Day 5 or 6	Blastocyst 100-150 cells

Before the transfer an embryologist will explain what has happened since your egg collection. This explanation will include the grade of each of your embryos and explain why the embryo received that grade.

GRADE 1 EMBRYOS

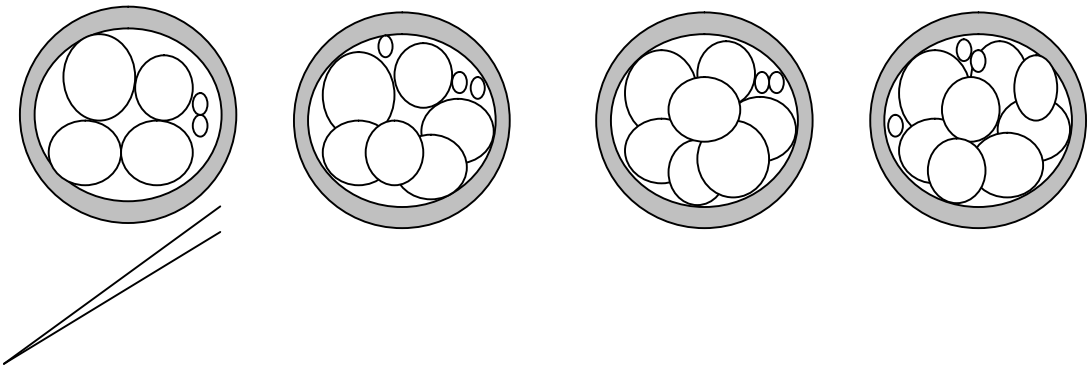
These embryos have cells of an even size, consistent colour and have no fragmentation. Grade 1 embryos have the best implantation rates and will also be considered for cryopreservation (freezing).



Grade 1 embryos (4 cells, 6 cells, 7 cells, and 8cells)

GRADE 2 EMBRYOS

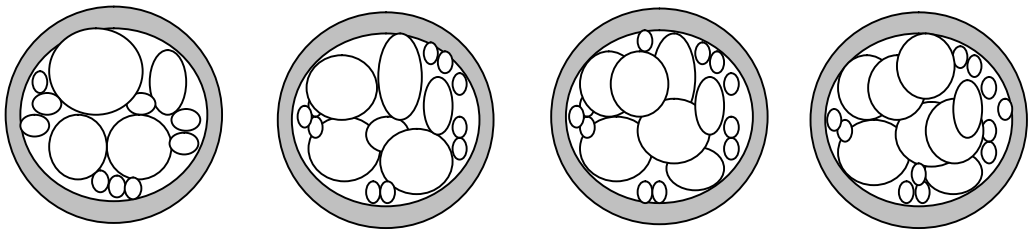
These embryos may have slightly uneven cells, slight fragmentation or both. Like grade 1 embryos, they are good quality embryos with slightly decreased implantation rates.



Grade 2 embryos (4 cells, 6 cells, 7 cells, and 8cells)

GRADE 3 EMBRYOS

These embryos have even more uneven cells, more fragmentation or both. The implantation rate for these embryos is probably not as good as for grade 1 or 2 embryos. These embryos have poor implantation rates and are not usually considered for cryopreservation as their survival rate is poor following freezing/ thawing.



Grade 3 embryos (4 cells, 6 cells, 7 cells, and 8cells)

BLASTOCYST TRANSFER

In select cases we are culturing embryos to the blastocyst stage before transferring them into the uterus. The blastocyst transfer is still a relatively new procedure.

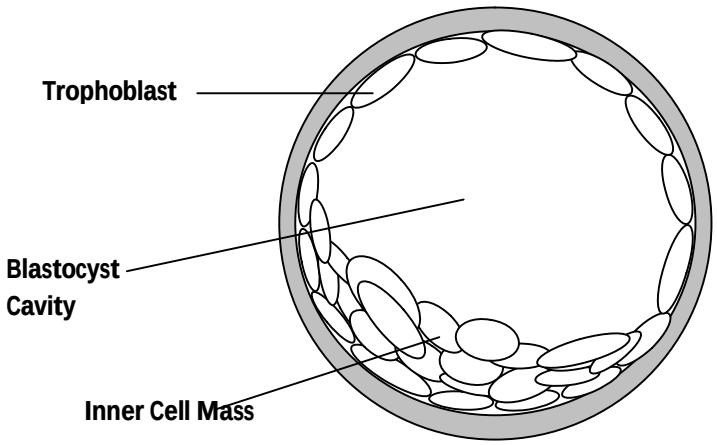
Good quality embryos reach this point usually on day 5 after fertilisation; however, some may take until day 6.

The benefit of a blastocyst transfer is that implantation rates are higher due to two reasons:

1. The transfer timing is more physiological (on day 3 the embryo is in the fallopian tube),
2. The embryo has proved its strength (viability) by surviving in the laboratory for 5 days.

But it should be remembered that sometimes embryos do not survive to day 5 even if they are grade 1. This is important to consider before deciding to have a blastocyst transfer.

The London Women's Clinic routinely performs embryo transfers on day 2 and day 3 and we achieve pregnancy rates equal to those with blastocyst transfer.



A Blastocyst