LISTER FERTILITY CLINIC
part of HCA Healthcare UK

CYCLE INFORMATION BOOKLET – IVF/ICSI

A STEP-BY-STEP GUIDE TO TREATMENT

We recognise that you are likely to have received a considerable amount of information at your consultation and the treatment process may, to begin with, seem a confusing process. Coping with subfertility and IVF treatment itself can also be an emotional process for patients and their partners. This booklet aims to help you through your treatment from start to finish, answer any questions and outline potential complications of treatment.

STEP 1: A treatment plan is made at your consultation with your doctor.

STEP 2: Complete any outstanding investigations including **mandatory HIV, Hepatitis B and C (see pages 4 and 5)**.

STEP 3: Read through Cycle Pack and complete Consent Forms.

STEP 4: Collect Medication & follow instructions and treatment plan given by your consultant.

STEP 5: Book your appointment with the nurse for your treatment consultation.

STEP 6: Book first scan as instructed according to your treatment plan.

STEP 7: First Scan: Consents and Investigations verified, daily diary of treatment given and pay for your treatment cycle.

STEP 8: Regular monitoring with scans and blood tests over 10-14 days of stimulation to monitor follicle growth.

STEP 9: Trigger injection to mature eggs ready for collection once they achieve optimal size.

STEP 10: Vaginal Egg Collection (VEC) 33-39 hours after trigger injection/Semen sample.

STEP 11: Eggs inseminated (IVF) or injected (ICSI) with prepared sperm by our Embryologist.

STEP 12: Progesterone supplement (vaginal capsules or vaginal/rectal pessaries) commenced the day after VEC to prepare womb for implantation (luteal support).

STEP 13: Fertilisation confirmed by phone and embryos are then cultured for 2-6 days.

STEP 14: Embryo transfer 2-6 days after VEC and possibility of embryo freezing discussed.

STEP 15: Pregnancy Test 14 days after VEC.

STEP 16: Contact us with result and to plan further care.

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STEP 1: The Consultation

Patients and their partner will see a named doctor for their consultation(s) and planning of their treatment. Thereafter, patients will be looked after by the whole team (doctors, nurses, ultrasonographers and embryologists), who all work together to deliver your treatment. Please note at the time of egg collection and embryo transfer you may not be seen by the same doctor as seen in consultation. However you can contact your consultant at any point.

At your consultation you will receive a treatment pack containing important documentation:

- This Information Booklet will explain your treatment and may answer any outstanding questions
- Consent forms that need to be completed and given to the nurse at your 1st treatment consultation
- Protocol flow chart for your treatment plan
- A list of required tests (ref to Step 2)
- Prescription
- Price List

A counselling service is available to all patients before, during and after treatment. Our counsellors offer a confidential, non-judgmental and free service available to all patients. Appointments to see a counsellor can be made through the secretaries. In some circumstances such as use of donor sperm counselling sessions are routinely provided before treatment.

NB. Genetic Testing (if recommended by your doctor at consultation).*

If you are doing IVF/ICSI with comparative genomic hybridisation **(CGH)** or pre-implantation genetic diagnosis **(PGD)** you **must ensure** that you contact our **Embryology team prior to starting treatment, on 020 7881 4041, to book an appointment** for this to be discussed. These procedures need to be booked in with the embryology team in advance for any required preparation to be carried out. **Egg Collections can only be carried out on specific days** as follows:

a. **For CGH/PGD on Day 3 embryos:** Monday, Tuesday, Friday and Saturday.
b. **For CGH on Blastocyst embryos:** Wednesday, Thursday, Friday and Saturday.
c. **No CGH/PGD:** 1 week prior to all Bank Holidays including Easter and Christmas (please note treatment cannot be started for up to 3 weeks prior to bank holidays).

NB. Frozen sperm stored outside the Lister Fertility Clinic.

If you are using your partner/husbands frozen sperm that is stored outside the Lister Fertility Clinic you must make arrangements to ensure that the sperm is transferred to our clinic prior to the start of treatment. Please contact our **Embryology team prior to starting treatment, on 020 7881 4041, to arrange** this.

NB. Difficulty in producing sperm or partner unavailable.*

Please contact our **Embryology team prior to starting treatment, on 020 7881 4041, to arrange** for sperm to be frozen prior to or at the start of treatment.

NB. Donor sperm (if required/recommended by your doctor at consultation).*

If you are using **Donor sperm** you **must ensure** that you contact our **Embryology team prior to starting treatment, on 020 7881 4041, to arrange** this. We cannot start your treatment

cycle if your donor sperm is not already here/in our clinic. You must also ensure that you have had your implications counselling session prior to starting treatment.

NB. Sperm retrieval (if recommended by your doctor at consultation).**

If your partner requires surgical sperm retrieval **you must ensure** that he has had a consultation and sperm retrieval plan made with an urologist (as recommended by your doctor**) prior to starting treatment**.

*** Please see current price list for fees.**
**** Fees will be confirmed by the Urologist directly. A Hospital fee will also apply.**

You will be instructed to contact the nurses on 0207 881 4040 to book your treatment consultation.

STEP 2: **Investigations**

TO ENSURE YOU CAN START YOUR TREATMENT AS PLANNED, YOU MUST BRING ALL SCREENING TEST RESULTS AND COMPLETED CONSENT FORMS TO YOUR PRE-ASSESSMENT NURSE CONSULTATION.

WE CANNOT START YOUR TREATMENT UNTIL THESE HAVE BEEN GIVEN TO THE NURSES.

YOUR TREATMENT START DATE WILL BE DELAYED IF YOU DO NOT RETURN THE COMPLETED FORMS OR SCREENING TEST RESULTS.

IF THE RESULTS ARE NOT AVAILABLE AT THE TIME OF YOUR PRE-ASSESSMENT NURSE CONSULTATION. YOU WILL BE REQUIRED TO TO HAVE THESE TEST PERFORMED AT THE LISTER FERTILITY CLINIC AT THIS APPOINTMENT TO ALLOW TREARMENT TO CONTINUE, HOWEVER TEST FEES WILL APPLY (please see enclosed price list).

The **female patient** will need to have the following test results available **at the start of each IVF/ICSI cycle**:

Done within the last 6 months if first cycle of treatment or within 12 months for subsequent cycles:	• **FSH, LH and Estradiol** (Day 2-5 of the menstrual cycle) • **AMH** (performed on any day of the cycle)
Done within 12 months of egg collection:	• **Full blood count** • **Thyroid Function Test: TSH, T3, T4**
Done within 2 years of egg collection:	• **Chlamydia Urine Test**
Other tests:	• Up to date **Cervical smear** (usually done every 3 years unless abnormal) • **Rubella** (confirmation of immunity) • **Sickle screening** (if from African/Afro-Caribbean background) • **Thalassaemia** (if Mediterranean, Asian, South East Asian and Middle Eastern background.

Viral Infection Screening:

It is a HFEA license requirement that **Virology** screening tests, such as HIV, Hep B, Hep C as specified below, are done prior to fertility treatment. These tests need to be done within 3 months of first treatment (i.e. egg collection procedure or IUI procedure) and every 2 years thereafter for subsequent treatment cycles for **both the Female patient AND Male partner.**

• **HIV 1 & 2: Anti-HIV – 1, 2**
• **Hepatitis B surface antigen: HBsAg**
• **Hepatitis B core antibody: Hep BcAb or Anti-HBc**
• **Hepatitis C: Anti-HCV-Ab**

IMPORTANT:

It is a HFEA licensing requirement that individual tests must be accredited by UKAS, the national accreditation body for the UK, or another accreditation body recognised as accrediting to an equivalent standard

Therefore, HIV, Hepatitis B and C tests *must* be performed at the Lister prior to starting treatment to ensure this licensing requirement is complied with as our individual virology tests are UKAS/ISO 15189 accredited.

Only in the circumstance where you have already had treatment elsewhere, and virology screening is still in date with written confirmation that the test was carried out in a UKAS accredited lab will this not apply.

To confirm, we cannot accept any results that do not include the laboratory's details and confirmation that this laboratory is UKAS accredited. Even if already done prior to initial consultation, these tests will need to be repeated at the Lister Fertility Clinic who use a UKAS Accredited laboratory unless we have this confirmation. UKAS provides accreditation to the internationally recognised standard ISO 15189 Medical Laboratories.

STEP 3: **Consent Forms – to be signed in the clinic (by both partners if applicable)**

Prior to starting your cycle you will be required to read and sign forms consenting to your treatment and operation. If you do not understand these forms you should discuss them with a nurse/doctor who will explain them. Similarly, if they bring up any moral or ethical dilemmas please feel free to speak to one of our counsellors or a member of the medical, embryology or nursing team. The original will be held by the centre and we recommend you make a copy for your own records.
Signed consent must be obtained from both partners in the clinic and witnessed by a member of staff before the cycle can commence. It is important that you and your partner's consents are compatible, otherwise they are invalid and the future use of your embryos may be affected.

We cannot start your treatment until all consent forms have been completed, signed, dated at your pre-assessment nurse consultation. Your treatment start date will be postponed if you do not complete the forms on time.

Each consent form must be completed by the person giving consent. The accompanying information leaflet (HFEA Consent Form Guidance) explains what the consents mean and why the HFEA (Human Fertilisation and Embryology Authority) requests they are completed.

In summary they are:

- **Consent to Disclosure (CD)** The patient and the partner need to complete one form each:

  CD – General Purposes: gives us permission (or denies permission) to communicate with non-HFEA licensed persons (such as your GP or other referring doctor) in relation to your treatment and to seek medical information we may require. If you wish us to correspond by letter with your GP or referring doctor please ensure that you tick all relevant boxes.

  – Research Purposes: During the course of your treatment, information about yourself and your cycle is collected, some of which is sent to the HFEA and recorded on the HFEA Register. This information could be of use to researchers investigating, for example, how treatment can be improved. This form also allows you to consent for identifiable information to be disclosed to researchers.

- **MT/WT forms**: These forms (MT for the male partner and WT for the female patient) ask for permission to use your sperm and eggs to create embryos for your treatment. You can also give your consent for us to freeze suitable embryo/s (**for an initial period of 10 years or less** which may be renewed in 10 year increments if the criteria are met) and requests clarification of what you would want to do with such embryos in the event of your death or mental incapacity. You can also consent for your sperm, eggs and embryos (that are not suitable for your treatment) to be used in research projects and/ for training purposes.
- **Lister Consent Forms**: In-house consent forms for LFC Egg Collection/Embryo Transfer and ICSI (if required).
- **Egg Collection Procedure Consent**: This will be explained to you and should have been completed in clinic with the doctor. You will be given a copy of the signed consent form. Confirmation that you understand the procedure and are aware of the risks will be re-iterated on the morning of the procedure.
- **Other Specific Forms**: These will depend on the particulars of your treatment cycle e.g. use of donor sperm/eggs or storing sperm and eggs etc.

In the event of withdrawal or lack of consent to anything previously consented to on an HFEA form from either patient and or partner for any type of treatment she/he must complete:

- **WC Form**: This form should be used to withdraw your consent or to state your lack of consent to your partner's treatment. You and your partner can make changes to or withdraw consent at any time until the point of sperm, egg or embryo transfer.

- **LC Form:** This form should be used if you are the **intended birth mother** and wish to state that your spouse or civil partner does not consent to your treatment. This might apply, for example, if you and your spouse/civil partner are separated and he or she is not aware of your treatment. It may also apply if he or she is aware of your treatment but opposes you having treatment.

You must inform us immediately of any change in your personal circumstances (e.g. name, address, contact numbers or relationship status). This is particularly important if you have embryos/sperm/eggs frozen as we need to contact you to confirm their continued storage. The

storage period is governed by law and we do not require your consent to remove these from storage at the completion of the statutory storage period.

STEP 4: Medication

At your consultation, the doctor will have decided on the appropriate protocol for you and provide you with a protocol flow chart outlining the treatment schedule and a private prescription for the medications you will require.

We require that you collect the package of medication after your nurse pre-assessment appointment and this includes 10 days of stimulation medication. On occasion the number of days may vary and you may require a further prescription or have some left over (which cannot be refunded).

Please be aware that **some medications require refrigeration within 1 hour** therefore you will need to advise the Pharmacist if your journey is longer than 1 hour.

Advantages of collecting all medication at the beginning of treatment:

- New prescribing guidelines mean you cannot use one prescription and pick up parts of it as you go along.
- This facilitates streamlining your journey and removes the need to wait and see a nurse for a prescription after the scan and blood test which can incur a wait of up to an hour in the IVF Unit.
- Saves queuing up at every visit to the pharmacy waiting for the prescription to be processed.
- Saves time with accounts as payment is required for the medication prior to dispensing.
- Minimises dispensing fees which are charged per visit.
- Providing duplicate prescriptions where only part of the initial prescription was collected will incur a fee from the clinic. This is in addition to the cost of the medication and cycle package.

Lister Hospital Pharmacy Opening Hours:

Monday – Friday	8:30 am – 7:00 pm
Saturday	9:00 am –12:30 pm
Bank Holidays	9:00 am – 12:00 midday

London Bridge Hospital Pharmacy Opening Hours:

Monday and Friday	9:00 am – 5:30 pm
Tuesday - Thursday	9:00 am – 6:30 pm
Saturday	9:30 am –12:30 pm
Bank Holidays	N/A

You can buy these medications from an outside pharmacy but you will need to make enquires about this. Occasionally, it may be possible to obtain these medications via the NHS and you will need to make enquiries through your GP.

The brand and dose of the medication prescribed for each patient will vary. The accompanying information leaflet details the individual medication, their use and side effects. In summary, the medication you will be prescribed will fall into one of six groups:

1) **Oral Contraceptive Pill (OCP)**: Many patients are prescribed "the pill" (OCP) the month before they start their fertility medication. This enables the ovaries to rest and can be used to bring on a bleed in women with irregular cycles. By manipulating the number of pills taken, the dates of the treatment can be scheduled which may help many patients and their partners plan treatment.
2) **GnRH agonist/GnRH antagonist medication**: **GnRH agonist** medication works to switch off your natural hormone production so that do you not ovulate and release eggs we are aiming to collect. They work by suppressing the production of the luteinising hormone (LH) and follicle stimulating hormone (FSH) produced by the pituitary gland in the brain and therefore prevents the natural LH surge that causes ovulation. The agonists (injectable in the evening or nasal spray taken two/three times per day as instructed) are commenced before FSH injections are given. **GnRH antagonist** (injectable in the evening) is commenced after FSH injections to control the cycle and prevent premature ovulation.
3) **Stimulation medications**: The "superovulation" techniques used in assisted reproduction are designed to stimulate the ovaries to grow several eggs rather than the usual single egg in a natural cycle. If multiple eggs can be collected in one cycle this increases the potential availability of multiple embryos (fertilized eggs) from which we can select the most appropriate for transfer. These are given as injectable versions of the FSH usually produced by your pituitary gland.
4) **Trigger medications**: Once the follicles have reached the optimal size and you are ready for egg collection, this trigger injection of hCG (Pregnyl, Ovitrelle, Gonasi) or Agonist (Suprecur) is taken approximately 33-39 hours before your vaginal egg collection (VEC). The purpose of this injection is to help mature the eggs within the follicles and it mimics the natural surge of hormone that occurs just before ovulation.
5) **Luteal support medications**: Following ovulation in a natural cycle, the corpus luteum that remains in the ovary at the site of ovulation produces progesterone hormone to prepare the womb lining for implantation of an embryo. Following an IVF cycle, there is not enough progesterone being produced and therefore you will be given progesterone supplements (vaginal capsules, vaginal/rectal pessaries and occasionally a gel/injectable formulation) for luteal support.
6) **Miscellaneous medications**: Other medications may be prescribed depending on past medical and previous cycle history as discussed by your consultant.

STEP 5: **Nurse Pre-assessment Consultation – is booked either through the IVF nurses administrator or Consultant 1-2 weeks in advance of the proposed start of treatment cycle and attended by both partners (if applicable)**

At your Nurse Pre-assessment Consultation you will be provided with information about your upcoming treatment cycle as well as ensuring the following information is complete :

- Complete a checklist/booking form.

- Confirm your contact details.
- Complete and sign the appropriate consent forms in the presence of clinic staff.
- Check that the required blood test results are valid.
- Plan a daily treatment diary and give written instructions.
- Explain the injection technique and give you the appropriate equipment.
- Book your first scan and blood test (depending on protocol).
- Give you an invoice for you to make immediate payment of your treatment cycle.

Most fertility injections are given subcutaneously (fatty layer under the skin) and after instruction can be simply administered by either you or your partner. Used needles and syringes must be disposed of in a sharps box (available from an IVF nurse); the box must be sealed and returned to the nurses once it is full. Please do not throw needles and syringes in the waste bin.

If you are unable to self-inject and would like to have the injections administered by your GP, practice nurse or at your local hospital, you will need to approach them to arrange this.

We recommend you take both the FSH injections and the down-regulation injections in the evening (7pm or later) unless otherwise instructed.

STEP 6: Commence Medication/Book first scan as instructed

The timings for your first treatment scan and for commencing appropriate medications will depend on the treatment protocol. This would have been recommended by your doctor/consultant who would have given you a flow chart outlining the entire process and reiterated at your nurse pre-assessment appointment. It is therefore essential to start your medication "the pill" (if advised) and book your first scan as instructed on the flow chart.

Please telephone the **IVF nurses** to arrange your first scan. Appointments for first treatment scans are Monday - Friday 9.00am – 3:30pm and will be booked according to availability and taking into account the protocol assigned to you.

Day 1 of the cycle is the first day of full menstrual flow. If your period starts after midday, the following day is Day 1. If your period starts over a weekend please telephone us on Monday.

If you still have any queries or are unsure please contact the nurses.

PLEASE REMEMBER TO BRING ALL YOUR REQUESTED BLOOD TESTS & CONSENT FORMS TO THE FIRST SCAN/STARTER APPOINTMENT.

STEP 7: First Scan

The scan performed prior to commencing the fertility injections is a baseline scan. It is carried out in order to check that there are no abnormalities in the ovaries, fallopian tubes or uterus that might affect the outcome of your treatment. All the scans are performed vaginally.

Following this scan you will be seen by one of the IVF nurses who will:

- Confirm that the scan is normal.
- Confirm if you can start your stimulation medication and book further ultrasound scans.
- Confirm all consents are in place to allow treatment to proceed.

Payment of Treatment

Payment for your treatment cycle must be made **when you attend for your first scan**. You will need to pay for bloods tests each time they are done. The nurse will give you an invoice to take to the accounts department for payment. Payment is also to be made on the day of each blood test.

If you have been recommended to have ICSI or ICSI with IMSI, this needs to be paid at the first scan. Additional procedures such as Blastocyst and cryopreservation of excess embryos will incur additional charges which will be invoiced after the egg collection.

Please settle your account by visiting the accounts office in our unit or on the ground floor adjacent to the Lister Hospital main reception. Unfortunately, you will not be able to proceed to egg collection if payment has not been made in advance.

If the egg collection has to be cancelled for any reason, an appropriate refund will be made. If, in the rare event, we are unable to collect eggs during your procedure, or if eggs subsequently fail to fertilise, we regret that there can be no refund or alteration in the stated fees.

STEP 8: Stimulation Scans

Once stimulation of the ovaries begins, you will have regular monitoring of your response with scans to measure the number and size of the developing follicles in the ovaries and blood tests to measure your hormone levels (principally oestrogen) levels in the blood.

The ultrasound does not show the eggs themselves, but the fluid-filled sacs (follicles) containing the eggs. In the majority of treatment cycles women will have approximately 4 scans. The scans are performed at intervals during the treatment cycle.

Once the stimulation with FSH injections are started, you will be required to remain available for regular scans until the follicles reach the optimal size, which for most is after 10 to 16 days. Vaginal scans carry no appreciable risk but may cause slight discomfort, particularly as you near the point of egg collection.

Following each scan you will have a blood test and then you may go home unless advised otherwise. Your blood test and scan results will be reviewed by a doctor later that day and you will be contacted by a nurse later in the day with instructions by phone/email. We are unable to leave detailed messages on voicemail therefore email is preferred unless you can ensure you can receive the call. It is your responsibility to ensure that you have enough medication until your next appointment and for any unexpected dose increase.

STEP 9: Trigger injection to mature eggs ready for collection

When the leading follicle(s) reaches the optimum size of 17-22mm, preparations will be made for your egg collection. It is important to remember that the number of follicles shown on the scan does not indicate the number of eggs collected as some of the follicles may be empty.

You will be given an instruction sheet with the appropriate timings of:

- The last dose of FSH injections
- The last dose of agonist (GnRH analogue) or antagonist

- **The timing of the "trigger" hCG (Ovitrelle, Pregnyl, Gonasi)) or Agonist (Suprecur) injection** maturing the eggs in preparation for collection. This will be from 9pm onwards and your egg collection will be timed accordingly 33-39 hours later.

Please note that you will therefore have no fertility injections on the day before your egg collection. IVF or ICSI/IMSI cases are scheduled depending on your clinical case.

Before your Egg Collection:

- **DO NOT** have food or drink **from midnight** on the night before your egg collection.
- If you are already taking **Metformin, Prednisolone or Thyroxine do not take** your morning dose until after your egg collection once you are eating and drinking.
- If you are already taking **Cabergoline** please continue in the evening.
- Leave all valuables at home.
- Please do not bring children with you on the day of your egg collection.
- Remove make-up, jewellery and nail polish.
- Report to the Lister Hospital Main Reception on the Ground Floor for admission.
- You will be taken to the Day Unit.
- All patients will be accommodated in single rooms.
- The doctor performing your egg collection will confirm your consent.

STEP 10: Vaginal Egg Collection/Semen Sample

Occasionally, you may have a pre-operative scan if you have a low number of follicles (2 or less). This may be done in the clinic or in theatres.

The Egg Collection procedure

The egg collection is usually performed under trans-vaginal ultrasound guidance under general anaesthetic. Rarely, in difficult cases where the ovaries are in an inaccessible position, a trans-abdominal or laparoscopic approach is necessary.

The ultrasound probe is introduced into the vagina, the ovaries are visualised and then an aspiration needle (attached to the probe) is passed through the top of the vagina into the follicles within the ovaries. The follicular fluid is drawn up into a test tube and then the fluid is examined under the microscope to identify the eggs. It is difficult to accurately predict the number of eggs available from the ultrasound scan picture. We may collect either more or fewer eggs than we had anticipated preoperatively. In rare circumstances we fail to collect any eggs despite the appearance of follicles on the scan picture. If this occurs, the treatment cycle cannot proceed to embryo transfer and you will be given a free follow-up appointment to see the doctor to discuss your further options.

Although most patients have a general anaesthetic (GA) for this procedure, some may prefer to have it performed under intravenous (IV) sedation, if you would prefer IV sedation please advise the IVF nurse and discuss it with the anaesthetist on the morning of your egg collection.

After the Egg Collection

Generally, the egg collection takes 15-20 minutes and following the procedure patients are given antibiotic and painkilling suppositories in theatre. After the operation, patients are transferred from theatre to the recovery area for approximately 15-30 minutes, not all patients are fully awake at this time. Patients are then transferred from the recovery area to the Day Unit. Patients may feel drowsy and nauseous with symptoms of abdominal pain and backache but these quickly settle.

A nurse will inform you about the procedure, provide a post egg collection instruction sheet and discharge you if all is well approximately 2-4 hours after the procedure unless the doctor advises otherwise. The Egg Collection procedure is performed as a day case. However, in the unlikely event that you need to stay in the hospital overnight, there will be an additional cost.

Some patients may be called or visited by an embryologist if there are any issues regarding sperm quality or if additional procedures are necessary. Patients wanting to talk to a doctor may need to wait until the operating list is finished.

You must not drive for 24 hours following the operation due to the possible effects of the anaesthetic and you should have somebody to accompany you home.

Collecting the semen sample

A semen sample will be required from the male partner on the day of the egg collection. The embryologist usually requires partners between 8.30am – 1.00pm and they are advised to wait in their partner's room until called by a member of the embryology team. Partners should ejaculate once 2-3 days prior to providing the sample.

On occasion men may find it difficult to produce a sample and many options are available under these circumstances:

- To allow you to help your partner to produce a sample, the sample could be produced before arrival at the hospital, or in the hospital before your operation. Please inform the nurses should you require either of these alternatives as appropriate arrangements must be made in advance.
- You can arrange for sperm to be frozen prior to egg collection. You will need to contact our embryologists in advance to arrange this. Additional charges will apply.
- If your partner is worried that he may not be able to produce a sample by masturbation, special condoms are available so that the sample can be produced during intercourse.
- We may sometimes prescribe medication to improve the chances of producing a sample.
- If a fresh ejaculate cannot be produced on the day and frozen sperm is not available, the eggs may need to be frozen or a surgical sperm retrieval may be performed (if an urologist is available) with additional cost implications.

STEP 11: Fertilisation of Eggs

Following collection of the eggs and sperm sample, the sperm sample is prepared to concentrate the highest quality sperm together and remove impurities that are present in the fluid around the sperm. The eggs are then fertilised by either conventional **in-vitro fertilisation (IVF) or intra-cytoplasmic sperm injection (ICSI**).

In conventional IVF the gametes (eggs and sperm) are mixed together in a dish and sperm penetrate the eggs to fertilise them naturally. Using ICSI, introduced in 1992, a single sperm is taken up in a fine glass needle and is injected directly into an egg. It offers the opportunity to men who would previously have had little or no chance of fathering their own genetic offspring real hope

of having their own genetic child. Not all eggs collected will be mature enough to be suitable for injection and not all eggs survive the injection process.

ICSI bypasses the natural processes involved in a sperm penetrating an egg, and is therefore used when there are factors that may prevent fertilization naturally or by conventional IVF.

Circumstances in which ICSI may be appropriate include:

- When the sperm count is very low
- When the sperm cannot move properly or are in other ways abnormal
- When sperm has been retrieved surgically
- When there are high levels of antibodies present in the semen
- When there have been previous fertilization failures, although ICSI is generally unsuccessful when used to treat fertilisation failures that are primarily due to poor egg quality
- When frozen sperm is thawed for use the embryologist assesses the sperm quality to determine it if it is suitable for conventional IVF or ICSI

Please be aware that there is an additional charge for ICSI.

STEP 12: **Luteal Support**

The day after egg collection, you will be asked to commence progesterone supplementation. This medication will usually be in the form of vaginal capsules or vaginal/rectal pessaries; however injections or gels may sometimes be advised and will continue until your pregnancy test. This will need to be taken until 12 weeks of pregnancy by which point the placenta will provide enough hormonal support.

STEP 13: **Embryo Culture**

After either IVF or ICSI the eggs are incubated overnight and the embryologists will assess for successful fertilisation the next morning. You will receive a call from the embryologists (usually by midday) to discuss the fertilisation results and to plan your potential embryo transfer. Please ensure you have given us all your contact numbers and that you are available to talk.

In spite of having normal eggs and sperm, in 5% of cases eggs fail to fertilise. Patients who have poor quality eggs and/or sperm may have a higher risk of failed fertilisation. In some circumstances, eggs do fertilise but the embryos may not develop normally or may not develop at all. Embryos that display any abnormal development may not be transferred. You will be offered a follow up consultation to discuss this with the doctor; this will be free of charge.

The eggs that have fertilized normally (embryos) will be allowed to develop until the appropriate day for transfer:

- By Day 2, embryos are expected to be between 2-4 cells.
- By Day 3, embryos are expected to be between 5-8 cells.
- By Day 5-6, blastocyst stage

Our default is now to recommend embryos be cultured to Day 5 regardless of number of embryos available on Day 2-3. This is because the genetic competence of embryos becomes more apparent between Day 3 and 5 and if an embryo does not develop to the blastocyst stage it will not have the capacity to create a pregnancy. Natural selection will see the most viable embryos continue to grow

to Day 5 whilst those of poor quality and less likely to be genetically normal will case growing between Day 3-5.

We are confident that the conditions in the lab mirror that in utero. Although you can request to have embryos transferred in Day 2-3 if you only have one/two available, we will routinely recommend waiting to Day 5 (or occasionally to Day 6) until they reach blastocyst stage before transfer.

There is a chance that no embryos will develop to Day 5 especially with poor quality embryos on Day 2-3 so no transfer may occur. However, as mentioned above if these embryos do not proceed to blastocyst stage in the lab, we are confident that they would not have survived in utero. Therefore pushing to Day 5, even in these circumstances, may glean useful information that would otherwise not be available on embryo quality, avoid unnecessary medication use and the anxiety of the two week wait.

We will recommend against transfer of blastocysts of very poor quality (of any D grading) or that have not moved on between Day 5-6.

(There is an additional charge for blastocyst culture, but this is waived if no embryos are available for transfer on Day 5-6 please refer to the current price list).

STEP 14: Embryo transfer/freeze

Embryo transfer

You will be given an appointment for your embryo transfer procedure (the embryologist will only contact you to change this appointment if your embryos are suitable to be cultured to blastocyst stage). The embryo transfer procedure is usually very straightforward and will take no more than 15-20 minutes. It feels similar to a cervical smear test and may cause some discomfort. If you have had any problems with having a smear test performed or an embryo transfer procedure, please inform the nurses or your doctor at the start of treatment as we may need to assess this further by doing a dummy embryo transfer.

You should be aware that:

- On arrival for your embryo transfer you should start drinking water as the transfer is performed with the aid of an abdominal ultrasound scan for which a semi-full bladder is needed.
- The actual time of your procedure will depend on the complexity of the cases taking place that day. Sometimes this simple procedure can be difficult to perform in some women and may therefore take longer than expected, resulting in some delay. Please be patient with us as we work through the list of embryo transfers.
- In exceptional circumstances the procedure may be extremely difficult and this might lead to the transfer being performed under general anaesthetic or rarely into the fallopian tubes laparoscopically.

The number of embryos to be transferred would have been discussed with you at the initial consultation but the final number will be decided on the day of the transfer. Our aim is to maximise the birth of healthy babies which is best achieved by avoiding multiple pregnancies if possible in view of the increased pregnancy risk.

Patients under the age of 40 can legally have no more than 2 embryos transferred and patients 40 or over no more than 3. Women with high quality blastocyst embryos available for transfer are advised to transfer only 1 embryo as this does not compromise pregnancy outcome, minimises multiple pregnancy rate and any extra embryos can be frozen.

The unit's multiple pregnancy minimisation strategy along with the algorithm recommending how many embryos to transfer is included in the initial cycle pack and can also be requested at any time.

Cryopreservation (Freezing) of Excess Embryos

We recommend freezing surplus good quality blastocysts as the implantation potential of frozen-thawed blastocysts remains reasonably good. However, the quality of the embryos resulting from the treatment may be insufficient to allow their cryopreservation. Also, embryos considered to be satisfactory for cryopreservation do not always survive the freezing and thawing process.

After fresh blastocyst transfer, the remaining embryos may be cultured until Day 6 to decide if they are suitable for freezing.

If you have cleavage embryos (Day 2-3) transferred, the remaining embryos may be cultured until Day 5 to decide if they become blastocysts and are suitable for freezing.

This provides you with the potential opportunity of subsequent frozen embryo transfer (FET) cycles without having to undergo stimulation and egg retrieval. The FET is relatively simple and can be done in a medicated or a natural cycle. There is no guarantee that the transfer of thawed embryos will result in a pregnancy and the results of FET are lower than with fresh treatment.

Extensive research with human and animal frozen embryos has shown no greater incidence of abnormalities compared to naturally conceived pregnancies.

Any suitable excess embryos can be stored for **an initial period of ten years from the date of cryopreservation**. After this period of ten years there is a possibility of extending the storage period, in further increments (maximum ten year increments), if it is shown that the criteria for extended storage continue to be met. You and your partner will need to complete an **HFEA ES form** each to apply for storage extension. There is a maximum storage period of 55 years.

Please be aware that there are charges for freezing and annual storage as listed on the current price list.

You must inform us immediately of any change in your personal details or personal circumstances (e.g. name, address, contact numbers or relationship status). This is particularly important if you have embryos/sperm/eggs frozen as we need to contact you to confirm their continued storage. The storage period is governed by law and we do not require your consent to remove these embryos/gametes from storage at the completion of the statutory storage period.

The Days after Embryo Transfer

Following embryo transfer you will be advised to:

- Drink at least 2 litres of water per day to maintain good hydration
- Continue Folic Acid supplements
- Continue Luteal Support medication
- Continue other medication as recommended by medical staff (e.g. estrogen, aspirin, metformin, clexane, prednisolone, thyroxine) if appropriate
- Return to normal activities. There is no evidence that rest improves the chances of success.

Freeze-all cycles (see P316 Freeze-All Patient Information Sheet)

During IVF/ICSI, there may be occasions where factors will be identified following the commencement of treatment that may impact on the chances of any embryo that we transfer successfully leading to a pregnancy or where a transfer may be perceived to put a patient at increased risk.

Such factors will include:

- high progesterone level prior to egg collection (>6nmol on day of trigger),
- presence of fibroid or polyp within uterine cavity,
- presence of a hydrosalpinx (dilated fluid-filled tube),
- thin endometrium (<7mm).
- Risk of significant Ovarian hyperstimulation

In these circumstances you will be provided with potential options:

1. **Proceed with egg collection and transfer:** Unlikely to be recommended option in view of potential decrease in success rate.
2. **Abandon cycle, address problem and start again in the future:** This is likely to be recommended if there are also other areas of concern such as a lower response to medication than expected
3. "**Freeze-All":** We are likely to recommend that we continue with stimulation, collect and fertilise the eggs before freezing embryos. These embryos can then be thawed, cultured and selected for transfer in a future cycle.

STEP 15: **Pregnancy Testing**

We advise you to undertake an initial pregnancy test 14 days following egg collection. This can be either a:

- Home pregnancy test (that can be bought over-the-counter) using an early morning urine sample.
- Blood test at the Lister Fertility Clinic (please refer to current price list). These are carried out between 9.30am and 4.00pm Monday to Friday and the blood sample is sent to our main laboratory for more accurate (quantitative) pregnancy hormone (beta hCG) testing. You will be called with your results. If this test is done after midday, you will be called the following day.

If your first home pregnancy test is negative you may be advised to continue your medication, re-test in 48 hours and contact us for further advice.

If your home pregnancy test is negative and you are:

- Having irregular bleeding/pain,
- Experiencing pregnancy symptoms,
- In doubt of the result,

please contact the IVF nurses. We advise that you have a blood test for quantitative reading of the pregnancy hormone at either the Lister (a charge will apply) or at your local GP's practice or hospital.

STEP 16: After Pregnancy-Test Care

It is a statutory requirement of licensed clinics to report all treatment outcomes (both negative and positive pregnancy results) to the HFEA. Please contact the IVF nurses on 020 7881 4040 as soon as possible with your result.

Positive Test

We suggest that you arrange a scan appointment for approximately two and a half weeks after a positive pregnancy test and continue with all medications until further instructed. Pregnancy scans are usually carried out on Tuesdays, Wednesdays and Thursdays (10.00am – 3.00pm).

The early pregnancy scan at this point should be able to detect:

- Whether you have a single or multiple pregnancy.
- That there is a fetal heartbeat (unlikely if scanned earlier than this).
- Whether the pregnancy has implanted in the right place.
- The possibility of a miscarriage or a pregnancy outside the uterus (ectopic).

Once all is confirmed to be well, we recommend an appointment with your GP to discuss your antenatal care.

Negative Test

Please call our secretaries to book a follow up appointment to see one of our doctors to discuss further treatment options. Appointments within 6 weeks of a **failed fresh** IVF/ICSI/IMSI cycle are free of charge.

Treatment Cycle Complications

Although significant complications are uncommon following IVF treatment, the potential risks of treatment as discussed with you at your consultation are listed below. If you have any queries you should discuss them with one of the nurses or your doctor.

Pre-Egg Collection

- Medication side-effects
    - Hormonal
    - Allergic reactions
    - Bruising at site of injections
- **Freeze-all cycles**
- Cycle Cancellation
    - Poor Response
    - Ovarian Hyperstimulation Syndrome (OHSS)

Freeze-all cycles

During IVF/ICSI there may be occasions where factors will be identified following commencement of treatment that may impact on outcome of any embryo transfer such as a high progesterone level pre trigger, presence of fibroid or polyp within the cavity, presence of a hydrosalpinx or a thin endometrium (<7mm). In this circumstance or where a transfer may be perceived to put a patient

at significant risk of OHSS, we may recommend collection, fertilisation and culturing all embryos to day 5/6 before freezing all so we have the maximum information on their quality and therefore chances of success to help guide future plans. If an embryo is of top quality on day 5 it has greater than 95% of thaw survival. If an embryo is of poor quality then it will not be frozen as it would have limited chance of success. Average quality embryos may be slightly less likely to survive freezing. On occasion your doctor may recommend freezing at an earlier stage (Day 1) for later culture of the thawed embryos to blastocyst and refreezing at that point if possible. (See P316 Freeze-All Patient Information Sheet)

Ovarian Hyperstimulation Syndrome (OHSS)

OHSS is the over-response to the stimulating fertility drugs with the production of numerous follicles leading to high levels of oestrogen. You are regularly monitored by scan and oestrogen levels to allow dose changes to minimise this risk or even cycle cancellation. You may be asked to stop the FSH injections and continue Synarel/Suprecur/Cetrotide/Orgalutran **(coasted)** until the oestrogen levels fall to safer levels before the hCG or an agonist 'trigger' is given. The cycle is sometimes cancelled as it is the trigger **hCG injection** given prior to egg collection that can cause the potentially serious symptoms to occur. This minimises but does not eliminate the risk.

Some patients may be given a course of Cabergoline tablets for 8 days from hCG trigger or egg collection to minimise the risk of OHSS.

A few patients however may still have a risk to develop OHSS anytime in the two weeks following egg collection. The majority will develop a mild or moderate form of the condition. In exceptional cases, severe OHSS may occur. The doctor may advise some patients to have all their embryos frozen and postpone embryo transfer until a later date in an unstimulated cycle.

- **Mild OHSS** is essentially an effect of the stimulation regime because the ovaries become enlarged following stimulation and may cause abdominal discomfort and in essence is the presence of larger ovaries than normal.

- **Moderate/Severe OHSS** may result from dehydration due to the passage of fluid into other compartments of your body (chest and abdomen). The symptoms are:
  - Nausea/Vomiting
  - Weakness
  - Shortness of Breath
  - Abdominal Pain/Swelling
  - Weight Gain (5kg or more)
  - Thirst
  - Decrease Urine Output

If you have a combination of the above symptoms and are at risk of OHSS after egg collection please contact the nurses who will discuss your problems with a doctor and advise you accordingly. If you need to contact somebody out of hours, the emergency phone number is 07860 464 100. Sometime patients with severe OHSS are advised to be hospitalised for further management.

The management of **severe OHSS** may include maintaining the circulating blood volume by administering intravenous fluids, close monitoring and may also include aspiration of the ascitic fluid from the abdomen. These symptoms do not persist after the first three months of pregnancy. Patients who are not pregnant should recover by the time their next period is due.

Risks of egg collection include but are not limited to:

- Potential reactions from the drugs and procedures used in the administration of anaesthesia
- Failure to collect eggs because:

  - The follicles are empty
  - The eggs inside the follicles are all immature
  - The eggs inside the follicles are all abnormal
  - Pre-existing pelvic scarring and/or technical difficulties prevent safe egg recovery
  - Ovulation has occurred before the time of egg recovery

- Risks associated with the passage of the needle through the vagina into the ovaries
  - Infection
  - Bleeding
  - Inadvertent damage to adjacent structures such as:
    - Bowel
    - Uterus
    - Bladder/Ureter
    - Blood vessels
  - Adhesion formation

Although complications are uncommon, if significant bleeding or damage to the bladder or bowel is suspected, further surgery may be required to repair such damage.

Post egg collection

- Failed fertilisation of eggs/Failure of embryos to cleave

- **OHSS** – as above.

- **Miscarriage** – risk is dependant on your age and is not significantly affected by the use of IVF/ICSI. Approximately 25% of all pregnancies miscarry and this risk rises with age. If you require further information we have a dedicated "miscarriage" information pack.

- **Ectopic/Heterotopic** - An ectopic pregnancy is a pregnancy occurring somewhere other than in the uterus, most commonly in the fallopian tubes. The incidence of ectopic pregnancy with fertility treatment is approximately 2.5%. It is a potentially serious condition but can be detected very early in the pregnancy by ultrasound scan. If two embryos have been transferred there is the small chance of a "heterotopic pregnancy" where one implants in the correct place and one implants in the tube.

- **Congenital Anomalies** – Some studies have suggested a small increase although this may well be as a consequence of the cause of infertility rather than the treatment

- **Pregnancy complications:** – Some studies have also suggested an increase in certain pregnancy-related risks such as preterm labour, growth restriction and placentation problems (placenta praevia and vasa praevia) in babies born through fertility treatment. Again, studies have suggested this may well be as a consequence of infertility itself (and the risks higher even if you conceive naturally) rather than the treatment. However, we would recommend consideration of a Doppler Scan at 20 weeks to assess location of placenta in more detail and growth scans later in pregnancy with your obstetric team although they will make the final decisions on management at this point in your pregnancy.

- **Genetic Risks** – if there is a potential underlying genetic cause of male infertility, this may be passed on to male offspring produced by an ICSI cycle. As a consequence you are likely to be advised to undergo certain genetic tests if you have a low sperm count or no sperm.

Multiple Pregnancy – The accompanying leaflet outlines the increase in obstetric risk to both mother and baby that makes multiple pregnancy an undesirable outcome of IVF/ICSI. It is important to be aware that although the majority of IVF twins are ***dizygotic*** (non identical) from replacing more than one embryo, ***monozygotic*** (identical) twins can occur when one embryo splits

into two. So in theory, there is small risk, which seems to be more likely when embryos are created in the lab for a cycle of treatment that monozygotic twins may occur from 1 embryo and triplets or other higher order multiples may arise from one embryo or two embryos. These ***"monozygotic"*** multiple pregnancies carry a higher pregnancy complication rate as they often share a similar placental circulation.

Risk of multiple pregnancy depending upon the Day of Embryo Transfer and the Number of Embryos Transferred.

	Day 2/3 transfer			Day 5 transfer		
	1 embryo	2 embryos	3 embryos	1 embryo	2 embryos	3 embryos
<35	0%	25.1%	N/A	2.3%	41.3%	N/A
35-37	1.9%	21.9%	N/A	1.0%	31.1%	N/A
38-39	0%	17.2%	N/A	2.0%	27.4%	N/A
40-42	0%	8.7%	14.2%	2.7%	18.2%	0%
≥ 43	0%	5.3%	3.2%	0%	11.1%	40.0%

Lister Data 2006 – 2016

Further information:

One at a time is a professionally-led site aimed at reducing the risks of multiple pregnancies from fertility treatment. For more information visit: **www.hfea.gov.uk**

GENERAL INFORMATION

Who do I contact to make appointments?

USEFUL TELEPHONE NUMBERS

IVF Nurses	020 7881 4040	Mon – Fri	9.00am – 4.30pm
Laboratory/Embryologists	020 7881 4041	Mon – Fri	8.30am – 5.30pm
Medical Secretaries	020 7730 5932	Mon – Fri	9.00am – 5.00pm
Accounts	020 7881 4068	Mon – Fri	8.30am – 4.00pm

Phlebotomy Service
We offer a service for patients who require blood tests. This service operates Monday to Friday from 9:30am to 4:00pm only.

This service is not available on weekends and Bank Holidays

Nurse Drop in Service

We offer a drop in service for patients who have minor queries for the nurses. This service operates Monday to Friday from 1:00pm to 3:00pm only.

This service is not available on weekends and Bank Holidays

Patients wishing to start treatment must make an appointment as it may not be possible for us to accommodate you at short notice.

Are there counselling services available?

Our counsellors offer a confidential, non-judgmental and free service available to all patients before, during and after treatment. Patients are encouraged to explore their own feelings in order for them to make appropriate decisions for themselves. Appointments to see a counsellor can be made through the secretaries. In some circumstances such as use or donor sperm/eggs counselling sessions are routinely provided before treatment.

Who do I contact during my treatment if I have any queries?

The nurses are usually the first line of communication in your treatment and are able to answer the vast majority of queries. If you do not understand your treatment plan or anything else pertaining to your care, do not hesitate to contact them on the number above.

We aim to answer telephone calls where possible. If staff are already on a call you will be diverted to the answer machine. If you do need to leave a message please clearly state your full name, hospital X number and contact number. Please do not leave multiple telephone messages as this creates unnecessary additional work and delays our response. If the clinic has been particularly busy there may be delays in getting back to you. Any messages left before 4:30pm will be returned the same working day. Messages left on a Saturday or Bank Holiday before 12:00pm mid-day will be returned the same day. Messages left out of these hours will be returned the next working day.

If you are sending an email please ensure you leave your full name (as registered with the clinic) and hospital X number.

If there is an occasion when you need to contact your doctor, please e-mail them or leave a message with the secretaries and they will contact you. Alternatively, call the secretaries to book a follow-up with a doctor to discuss your treatment in more detail. Please do not leave messages on multiple extensions.

Who do I contact in the event of a medical emergency?

In the event of a **medical emergency**, please call **020 7730 5932** during the hours of **9am to 4.30pm MON - FRI** and your call will be appropriately directed.

For an **out-of-hours medical emergency**, please call **07860 464 100**. This phone is turned on between the hours of

- **4.30pm – 12 midnight MON – FRI**
- **12 midday – 12 midnight SAT**
- **9am – 12 midnight SUN**

This phone is carried by a nurse who will answer your query and give you the appropriate advice. Please also be aware that the nurse will not have access to your file when she speaks to you.

Please note: there is no messaging service for this number. Should this number be temporarily unavailable, please wait and try again and please ensure that your number is not withheld. Patients may sometimes be unable to speak to the nurse on the emergency mobile if she is in an out-of-signal area (e.g. on the tube returning home from work). Usually all "missed calls" are returned as soon as possible unless the caller's number is "withheld".

If this number is unavailable for more than 30 minutes, please call the Lister Hospital Duty Sister on 020 7730 7733 who will contact a doctor on your behalf.

What do I do if I want to withdraw consent to treatment?

You and your partner can make changes to or withdraw consent at any point until the time of sperm, egg or embryo transfer. If you would like to change or withdraw your consent, you should ask the clinic for a HFEA WC form or LC form.

When will I have to make payment for a treatment cycle?

Payment for a treatment cycle **must** be made when you attend the first scan of the treatment cycle. Please settle your account by visiting the Accounts Office in our unit or on the ground floor adjacent to the Lister Hospital main reception.

Clinic closures

The clinic remains open throughout the year **except over the Christmas New Year holiday period**. Patients wishing to have treatment at the end of the year must make sure that they contact us at the beginning of November to book in for a nurse consultation. This is so that stimulation injections can be started by the end of November in order to complete treatment before the clinic closes.

The clinic is open at weekends and all other Bank Holidays for specific booked procedures. However, this is a limited service and we do not provide consultations or have a drop-in service.

What time does the hospital pharmacy open?

Our pharmacy located on the ground floor is open:

- **Monday - Friday (8.30am - 7.00pm)**
- **Saturday (9.00am - 12.30pm)**
- **Sunday - Closed**

Bank Holiday (enquire directly with the Lister Pharmacy)

Who do I contact to make a complaint?

We constantly strive to achieve excellence however we appreciate that you may feel there are some areas of our service which did not meet your expectations. Please speak to a member of staff if you would like to raise any issues and we will aim to resolve them for you. If you would like to make a formal complaint, please call or write to IVFComplaints@hcahealthcare.co.uk.

Unit Manager
Lister Fertility Clinic
The Lister Hospital
Chelsea Bridge Road
London
SW1W 8RH

Telephone: 020 7730 5932

How do I obtain a copy of my medical notes?

You have the right to access a copy of your medical records. If you wish to do so please contact the secretaries for a Copy Request Form. Please allow 21 working days to prepare your records.

Who do I inform of any change in personal circumstances?

You must inform us immediately of any change in your personal circumstances (e.g. name, address, contact numbers or relationship status) by contacting the secretaries. This is particularly important if you have embryos/sperm/eggs frozen as we need to contact you to confirm their continued storage. The storage period is governed by law and we do not require your consent to remove these embryos from storage at the completion of the statutory storage period.

Are there specific issues I should be aware of when using donor sperm?

It is important to be aware of legal, social and ethical implications of donor assisted conception. These issues are discussed fully at the implications counselling appointment. Under the terms of the Human and Fertilisation and Embryology Act 1990, the HFEA licenses and regulates clinics which practise donor insemination. Your partner can be the legal parent of any child born from your treatment – as long as both you and your partner give consent (**WP and PP**) to this in writing. The donor is not the child's legal father and has no legal responsibilities for the child.