The Leeds Centre for Reproductive Medicine

Egg Donation for Recipients

Welcome

This booklet has been written to help fully inform you of the purpose and techniques of treatment.
Please ask for clarification and let us have your comments and suggestions for future editions.
It is important that you read and understand all the material as our intention is to keep the risk of an error in treatment at its minimum.

HOW TO CONTACT US!!

Address:

The Leeds Centre for Reproductive Medicine
Leeds Teaching Hospitals NHS Trust
Seacroft Hospital, York Road
Leeds, West Yorkshire LS14 6UH

Telephone:

- Monday to Friday (8.00am to 5.00pm):
  - Administrative queries: **0113 206 3100**
  - Clinical queries: **0113 206 3100**
- Saturday, Sunday & Bank Holidays (8.00am to 12.00pm):
  - Clinical queries only: **0113 206 3102**
- When in emergency:
  - During working hours ring The Centre on he direct line or go to a local Accident and Emergency department
  - Outside the above hours please ring the St James's Hospital switchboard: **0113 2433144**
    You will be put through to the duty person for The Leeds centre for Reproductive Medicine or go to a local Accident and Emergency department

Fax: 0113 206 3120

Email: leedsrmuenquiries@leeds.nhs.uk

Website address: www.leedsreproductivemedicine.co.uk

Ethnic Minority Languages: We will be pleased to organise a session (with prior notice) for an official translator / interpreter (if available) to translate the contents of this booklet.

This information booklet describes why egg donation is needed. It is expected to supplement but not replace further opportunities for you to discuss the implications and any other specific questions that you may have with a counsellor, nurse or a doctor. You should not feel under pressure when making up your mind and we hope that this information may help you to decide if donating eggs or accepting donated eggs is right for you.

Please bring this leaflet with you when you attend for your appointment in the centre. You may also find it helpful to underline/mark the areas which you would like to discuss further.

1. Background:

The first pregnancy following the use of donated sperm was reported in 1884 but it was not until 1983 that the first pregnancy following the use of a donated egg was reported. Sperm can easily be collected and frozen (cryo-preserved) for storage. Eggs, in contrast, are difficult to collect and, at present, cannot easily be frozen for storage and future use. With the advent of the technique of IVF, however, it is now possible for a woman to donate eggs ***(the egg donor)*** to another woman ***(the egg recipient)***. Only clinics that have been inspected and are licensed by the Human Fertilisation and Embryology Authority (HFEA) can set up an egg donation programme. Such a programme has existed in Leeds since in 1993. This leaflet contains some general information about egg donation and some specific information for egg recipients.

2. Patient Support Group

On line internet support and information is available. The website is run by current and ex-patients who have had similar experiences and who are prepared to share their experiences. They will also be able to get information regarding groups in your locality. We recommend that you become a member of the support group for your own benefit and that of others. Contact the Assisted Conception Unit for the address.

3. Emergency out of hours contact

The LCRM working hours are Monday to Friday 8.30am- 5.00pm

In an emergency or on weekends you can obtain advice from the on call member of the team OR from the gynaecology registrar or SHO on duty via the hospital switchboard on 0113-2433144.

4. Why do some infertile couples need egg donation?

Some couples can only achieve pregnancy by using eggs donated by another (fertile) woman. They can be divided in 2 categories:

1) <u>women whose ovaries cannot produce eggs at all, or produce poor quality eggs</u>

a) For a variety of reasons some women's ovaries are not able to produce eggs. The most common causes are:

b) Women born without ovaries or with under-developed ovaries (eg Turner's syndrome).
c) Women whose ovaries stopped working prematurely. Most women go through the menopause in their mid to late 40's or early 50's. After the menopause a woman is no longer capable of conceiving because her ovaries stop producing eggs and sex hormones. However, to some women these changes can occur much earlier, even in their teens or twenties before they would even have contemplated to try to get pregnant. This is known as premature ovarian failure or premature menopause.
d) Women who have become sterile after surgery, radiotherapy or chemotherapy.
e) Women undergoing infertility treatment but whose ovaries do not respond to traditional fertility drugs (such as Clomiphene tablets or FSH injections).
f) Women undergoing infertility treatment but whose ovaries consistently produce poor quality eggs when stimulated (particularly more common in the older age group).

For these women, egg donation is their only realistic chance of achieving a pregnancy.

2) <u>women who are suffering from, or are carriers of certain genetic diseases</u>

a) Some women may be carriers of diseases such as Duchenne muscular dystrophy or haemophilia. These diseases can be passed on to their offspring. Rather than risk giving birth to a child who might suffer greatly and die at an early age, they may choose to avoid the possibility of having an affected child by using donor eggs from another woman who is not a carrier.

5. Who donates eggs?

Donors undergo the procedure voluntarily and for altruistic reasons. The HFEA provides guidance on financial reimbursements to the donor, which covers expenses for travel and loss of earnings (SEED REVIEW: details can be accessed from the ACU staff and the HFEA website).

<u>Our donors are recruited from several sources.</u>

Anonymous volunteer donors:

Women who are in a stable relationship, have already had children, preferably have completed their own family, and feel that they want to help infertile couples. Such women have come forward on their own initiative and have only altruistic motives. No financial incentives are involved.

Close relative of the patient:

1) Some patients for ethnic, cultural or religious reasons and others as a personal preference choose to have a 'known donor' such as a sister or close friend of the female partner. Donation between known donors and recipients <u>is acceptable</u> after careful implication counselling. We adhere and remain within the law and its provisions at all times.

2) Nationally there is a shortage of anonymous donors and some donors as well as recipients prefer anonymous donation because it makes the likelihood of emotional conflict in the family or between friends less likely. We can match another donor recruited by a different couple for your friend /relative whilst you donate anonymously to a different recipient. In this way treatment can be expedited for both your relative/friend and for others.

Infertility Patients:
Some programmes have an egg-sharing scheme where screened and counselled infertility couples donate some of their eggs in return for subsidised treatment for themselves. We have not initiated this scheme because we have been concerned with the effect that loss of permanent anonymity between donors and children might have in time on the children, donor and recipient couples. However, such a scheme is operational in several other centres with HFEA's permission.

6. Regulation of egg donation:

We suggest you read the leaflet "What you need to know about donating sperm, eggs or embryos" produced by the Human Fertilisation and Embryology Authority, the official government body regulating and licensing IVF units in this country.

1) Human Fertilisation and Embryology Act
Human Fertilisation and Embryology Act was passed by parliament in 1990 and became law on 1st August 1991. Simultaneously a statutory Human Fertilisation and Embryology Authority (HFEA) were established for the regulation of all treatments and research pertianing to human eggs, sperm and embryos. This authority licenses centres, its staff and regularly inspects the centres for compliance with the law and the HFEA Code of Practice. By law every HFEA Licensed Centre is required to report every treatment cycle and its outcome to the HFEA. This information is then analysed and published periodically on the HFEA website (www.hfea.gov.uk).

2) HFEA register
The Authority keeps a confidential register of identifying information on all patients and their treatments, donors and recipients and children born after all licensed treatments. This register was set up on 1st August 1991 and contains above information from that date onwards. From 1st of October 2009 the HFEA requires your permission to disclose either your identifying or non-identifying information to named researchers who approach the HFEA and have their research approved by the authority. Your consent will be requested when you are registered with the HFEA.

3) Using Donor Eggs, Sperm or Embryos
Identifying information about donors is held on the HFEA register and may be given to any child born from a donation once they are eighteen years old (*if the donor is registered as identifiable)*.

A donor conceived person aged 16 and over is entitled to apply to the HFEA and access non identifying information that the HFEA holds about the donor. Sixteen year olds who intend to enter an intimate physical relationship can submit a joint application to establish whether they are genetically related.

From the 1st of October 2009 the HFEA permits centres to release non identifying information to recipient couples about their donors. This includes information about the screening tests performed before donation as well as personal non identifying information such as hobbies, likes and dislikes, professional qualifications and a personal message written by the donor.

We encourage couples to tell the child or children if donated gametes had been used. This we advise should be done at an appropriate time in their lives. Information, support and implication counselling is available within the clinic to help guide them through this process. External support is also available for them-see useful addresses.

If you would wish to seek information about your child's donor or genetically related donor-conceived siblings you may find counselling, or similar support services, on the implications of receiving such information beneficial and highly advisable.

4) **Legal Parenthood**
The law defines the legal mother as the woman who gives birth and her partner as the father irrespective of the source of eggs or embryos created with donated eggs unless the husband/partner can prove that he did not consent to treatment. The donor has no parental rights or responsibilities.

Both partners of a recipient couple must provide written consent to the use of donated eggs/embryos in the treatment of their partner.

Under the current law, there is no need for the recipient couple to disclose the use of donor eggs/embryos to the Registrar of Births. Therefore you will not expect to be named at any stage.

Unmarried couples concerned about parental responsibility are advised to seek independent legal advice.

5) Welfare of Future Children
The law states that 'a woman shall not be provided with treatment services unless account has been taken of the welfare of any child who may be born as a result of the treatment (including the need of that child for a father), and of any other child (other children in the household or the family) who may be affected by the birth'.

This applies to every woman whether or not she is resident in or a citizen of the United Kingdom. It is the statutory duty of every centre to have a written procedure for assessing the welfare of the potential child and that of any other child who may be affected.

6) Factors considered in assessment include:
i. the couple's commitment to having and bringing up a child

ii. ability to provide a stable and supportive environment for the child/children
iii. couple's medical history and that of their families
iv. both partner's health (including their ages) and consequent future ability to look after or provide for a child's needs
v. ability to meet the needs of the children in the event of a multiple birth
vi. risk of harm e.g. that of inherited disorders, transmissible disease or abuse, multiple birth, neglect or abuse
vii. risk a new born may put on the existing child in the family

It is our statutory duty to identify the person/s who will have the parental responsibility and who will be responsible for the raising of the child. Where necessary, we obtain reports from the general practitioner, other medical specialists, authorities and agencies e.g. social workers, police etc for information to ensure that the child would not be at risk. When treating single women or those in a single sex relationship we ask the couple to identify a father figure to ensure that the child's/children's right for both paternal and maternal nurturing will be met.

7) Donors' rights

The donor has the right to change her mind up to the point the embryos have been placed in the recipient. Embryos created using donated eggs can only be stored for a patient with the consent of the donor. On the other hand, the donor has no rights once embryos have been transferred to the recipient.

8) Limitation to the number of pregnancies with each donor

Legally in the UK, eggs or sperm from any one donor can be used to produce a maximum of TEN children or TEN families. In reality, this possibility is mostly with sperm donors and extremely unlikely for egg donors. However, donors may set a lower limit should they wish to do so.

9) Consents

As stated above, we can only advise you with respect to the current law and the changes that we can envisage. You are advised to seek more specific and independent legal advice if you are concerned about how a retrospective change in the law might affect your legal position.

All donors and recipients are asked to sign appropriate consent forms after they have read the information booklets, have discussed the medical/ ethical issues with the doctors/nurses/counsellor, and are satisfied that their questions have been answered fully. Consents are obtained prior to donation.

Your consent advises us of your informed choice. You always reserve the right to change your mind until but not after the embryos have been transferred to the recipient. It is however important that all issues are thoroughly considered beforehand so that sudden and unexpected changes that you may later regret are avoided.

Training - All of your eggs, sperm and embryos will be first and foremost used in your treatment or stored for future use.

In all treatment cycles, there are some unfertilised eggs, supernumerary sperm or embryos. Embryos that are not growing at the desired rate or have abnormalities in the appearance of their cells are not suitable for freezing as they are very unlikely to implant and become babies and if frozen they are also very unlikely to survive the freezing and thawing process. These cells are normally allowed to perish.

We request that you permit use of these cells for training in the laboratory. Training of new and young scientists and learning / incorporating new skills for an improvement in our success rates form an essential part of our service. Once these cells (eggs, sperm and embryos) have been used for training, they are always humanely discarded.

10) Confidentiality

All information regarding your treatment is strictly confidential and subject to both the HFEAct and the Data Protection Act. We may communicate with your general practitioner, referring consultant and other carers only with your written consent.

Once the information has been disclosed to unlicensed individuals it can no longer be controlled by the HFE Act although it will still be under the Data Protection Act and General Law of Confidentiality. At your GP's practice, information will be accessible to other GPs and staff. When changing GPs, your medical records will be transferred to your new GP practice without our involvement or written named consent from you.

From time to time your notes may be inspected by HFEA members for audit, by Commission of Health Improvements (CHI), individuals working for Patient Safety Agency (PSA) and National Care Standards Commission.

You have a right to decline consent to communicate with specific people or agencies, in which we may need to consider the reasons for your refusal to consent in our assessments.

We advise you to keep your G.P. informed. They are your primary carers, will also be committed to confidentiality. Sometimes patients request their GP to keep written information regarding egg and sperm donation separate from the practice notes so that this information is not freely available to all the staff in their surgery. You may request them but they may not be obliged to do so.

We request photographic evidence of your identity (e.g. passport) which we will photocopy and along with a photograph of yourself placed in your notes, so that as treatment proceeds we can confirm your identity.

11) **Treatment for single sex couples and single women is considered on an individual basis after careful consideration of the Welfare of the Future Child/Children (see below).**

7. What to do if you are interested in receiving donated eggs?

Only clinics that have been inspected and are licensed by the Human Fertilisation and Embryology Authority (HFEA) can set up an egg donation programme.

You may have recruited a donor to assist with your treatment via the newspaper or television, or via a friend or relative who is willing to undergo IVF treatment in order to donate eggs.

Once a donor has been recruited to assist you directly or indirectly by donating anonymously with in the programme, the first step is to go and see your GP and ask him to refer you to our centre or if you are already a patient contact our egg donation nurse co-ordinator.

You and your donor will be sent an appointment to be seen in The Leeds Centre for Reproductive Medicine (LCRM) itself and will be seen by a doctor within the team. It is preferable to come together as a couple with your partner and also the donor if known to you. The doctor will discuss your motivation, the social, medical and legal aspects of egg donation; explain the techniques involved and the potential side-effects and risks. A full medical and family history will be taken from you unless you are already known to us.

For donors it is of particular importance to mention any inherited diseases in your family. It may be necessary to obtain further details from other clinics or your GP. You will be given some further literature to read at home and some time for reflection.

8. Implication counselling

Implication counselling is required for both donors and recipients.

In addition to this:
Free counselling service with a trained counsellor is routinely available to all upon request. It is carried out by HFEA licensed counsellor/s, away from the unit in the Department of Clinical Psychology which you may find less stressful. Appointments can be made directly by yourselves or via the ACU. If you require an interpreter, you are advised to give sufficient notice for an independent interpreter to be arranged.

The counselling is entirely confidential and private between you and the counsellor and will not be judgmental or prejudicial. The counsellor is also HFEA licensed and has a statutory duty to give essential information that may affect the Welfare of future or existing children to the team. This is exceptional.

The effect of egg donation on the donor, her partner and any existing children is carefully discussed. Wherever possible the partner's participation and agreement is sought before proceeding with the donation. If the children of the donor are of an appropriate age the donor is also asked to discuss the matter with her children.

9. Screening of Donors

The donor by law has to be 18 to 35 years in age, of normal intelligence, in good health and with no past or family history of severe physical, mental or genetic disease. All donors are required to undergo a medical examination and details are asked about their personal, medical and family history. A donor may not be accepted whenever a risk is envisaged to her, her existing children or to the future child.

All donors are carefully screened according to current guidelines and best practice. Please be advised that it is possible that a donor-conceived person who is disabled as a result of an inherited condition that the donor knew about, or ought reasonably to have known about, but failed to disclose, may be able to sue the donor for damages.

10. Which screening tests are performed on the donor?

a. Genetic Testing:

All prospective egg donors have an analysis performed of their chromosomes.

In addition, we routinely test for **cystic fibrosis**. The screening will be performed **for only the 12 commonest gene mutations** in the Caucasian and Northern European populations. These mutations account for 85% of all varieties known to medicine to date. Exclusion of these mutations reduces the risk of being a carrier for cystic fibrosis to about 1% for these populations. In other population's e.g. Asians, the incidence of cystic fibrosis is much lower than that among Caucasians. Whilst all 12 mutations known to be common in the Caucasian and Northern European populations are excluded, the risk of being a carrier among the Asian donors cannot be accurately determined.

In addition, wherever appropriate additional screening tests may be applied. For example:

- East European, South Asian and Middle Eastern donors are screened for Thalassaemia.
- Donors with African descent are screened for Sickle cell disease.
- Jewish donors are screened for Tay Sach's disease.

It is very important for the recipient couples to understand that not all known gene mutations are or can be possibly screened for and even after screening of some, there may be others for the same disease that are either uncommon or are not yet known. Hence the likelihood of developing these illnesses can be minimised with this screening but cannot be completely eliminated.

b. **Screening for infections:**

- All egg donors are screened for HIV, hepatitis B and C.
- **Syphilis:** All egg donors are screened for syphilis
- **Cytomegalovirus (CMV):** This virus commonly infects people and in normal circumstances gives a minor flu like illness. However it can become activated in pregnancy and can harm the baby. It is a very common infection in the normal population and many of us are exposed to it during our lifetime. We screen all donors and use CMV negative donors only for CMV negative recipients. On the other hand, CMV positive recipients can have gametes from both negative and positive donors.

11. What is the risk of a congenital abnormality?

The risk of a congenital abnormality after treatment using donor eggs is believed to be the same as for natural conception in a normal couple that is approximately 1 - 2%. The risk of having a child with Down's syndrome and other similar abnormalities, miscarriage or a still birth as a result etc is that in the donor's age group in the normal population. GP's and those responsible for the obstetric care (obstetricians and midwives) routinely advise the recipient couples about prenatal diagnostic tests as appropriate.

12. How are the Donors matched to the Recipients?

Physical characteristics such as height, weight, body build, hair colour, complexion, eye colour, race and blood group etc are recorded. We try to provide an acceptable match. There are fewer donors and detailed matching for physical characteristics can prove difficult. Matching for ethnic origin and rhesus blood group is always performed. Exceptions are always discussed with the recipient couple in advance.

13. Freezing of Embryos

Decisions regarding freezing, storing and discarding embryos formed with donated eggs **must** comply with written consents of both the **donor** and recipient. This includes how long embryos can be stored and whether or not they can be used after the death or mental incapacitation of the donor or recipient.

It is possible for either donor or recipient to withdraw consent to storage, in which case the embryos have to be allowed to perish.

We usually advise embryo freezing only if there are at least three suitable embryos. The embryos can be kept frozen for 5 years (up to a maximum of 10 years in certain circumstances) from the date of freezing.

Recipients may wish to have embryos frozen for 6 month quarantine period (as in the case of sperm donors) to ensure that the risk of transmission of infections is minimised. However there is a loos of viability in some of the embryos when they undergo the freezing and thawing process and pregnancy rate may be lowered by 5-10% per cycle on an average. There is also delay in your ability to receive the embryos for transfer and pregnancy which you must consider.

- **Embryo donation:**

The donor's eggs could be used to create embryos with donated sperm that are then donated to a recipient couple who has een specifically and suitably matched to both donors. Such an option is only possible if both an egg donor and donated sperm are available as per the legal requirements. Occasionally other couples donate their spare embryos to other recipients who need both the sperm and the egg. The donating couple are screened as per legal requirements for any donor and as descried above.

- **Embryo research:**

Research is carefully regulated and centres have to obtain specific research licences for the projects that they conduct or take part in. From time to time we are involved in research projects and we will provide relevant information to you if appropriate.

14. Treatment Procedure

14.1 A Typical Cycle:

This section has been written in the expected order of various steps in treatment. You may find helpful to refer to this section regularly during treatment.

a. First clinic appointment: A full discussion of the relevant personal and family history takes place in The Centre. We aim to minimise your visits and do not repeat investigations unless deemed essential for the conduct of your treatment.

b. Screening tests. These tests are arranged as explained above.

c. New Patient's Seminar. We very strongly recommend that you attend this open seminar by the team. Dates are available on request from the unit.

d. Implication counselling: You will be advised to see the counsellor so that implication of what you r donation to you , your spouse and your family can be discussed fully and all legal issues can be discussed.

f. Follow up clinic visit. You will attend the clinic for discussion of screening tests and you have this opportunity to clarify any outstanding issues that have arisen in your mind with respect to your treatment. At this visit, you will receive a prescription and also be advised to see the Egg Donation Nurse co-ordinator on your way out so that you can be given a start date for your treatment.

g. Consultation with the Nurse Specialist. Both Partners must attend this appointment (see details) because you both will be required to sign consents, receive instruction for self administration of injections and a cycle plan.

h. Suppression of your natural hormones. Your treatment needs to be co-ordinated with that of the donor if you are to receive 'fresh embryos'. Hence for women with regular periods, we prefer to inactivate your menstrual cycle first. We do this by starting drugs on the 1st or the 21st day of the menstrual cycle using a nasal spray, a daily injection or a single depot preparation. This is maintained until you are ready to receive oestrogen tablets and can last for 3 to 7 weeks. In women without a menstrual cycle as in case of women with premature menopause, we simply stop the HRT tablets allow you to have a period and then do not start the next packet until we are able to start your oestrogen tablets in co-ordination with the donor's cycle. A baseline scan is performed, usually prior to starting this phase, unless you have had another recent scan within the preceding 3 months.

i. Endometrial Stimulation.
In order to develop your lining of the womb we start you on the oestrogen tablets at the correct time and in co-ordination with the donor's cycle unless the embryos have been created and frozen already. This treatment can lasts for approximately 9-14 days and until the donor is ready to receive her HCG injection to begin the final phase of egg maturation. Then you also start the progesterone in the form of pessaries or injections. These medoications continue until the pregnancy test and can take further 20 days.

j. HCG injection. This injection prepares the eggs for ovulation and is given late in the night (usually between 10 p.m. and 2.00 a.m.) to the donor.

k. Egg Collection. The eggs are collected approximately 35 to 37 hours after the hCG injection.

l. Insemination or ICSI. Male partner of the recipient gives a sperm sample (unless a frozen sample is already available) for preparation and insemination of the eggs by the direct method or by the ICSI procedure.

m. Checking Fertilisation. The recipient will receive a telephone call with necessary information on this day.

n. Embryo Transfer and Hormonal Support. The embryos are replaced in the womb of the recipient.

n. Luteal phase medication. This is provided to all recipients until the pregnancy test as described above. Once pregnant theses medications are continued until we know that the placental function is fully established which is usually at 9-10 weeks gestation. After this we can gradually withdraw all hormonal support and allow the pregnancy to progress naturally.

o. Follow-up consultation. This is arranged after the cycle has been completed and if you have not conceived.

p. Pregnancy scans: These are preformed for successful couples at 7 weeks and at 10-12 weeks gestation.

14.2 Nurse consultation

This appointment follows your clinic appointments with the doctors and your attendance at the New Patient seminar.

- You should have become fully informed before you reach this stage so that you are happy that you are signing *'Informed Consents'*.

The primary objectives of this visit are for the nurse:

- to assist with the completion of your consents
- to discuss any further issues that have arisen and/or you are not clear about.
- to provide instruction regarding the administration of drugs
- to check your prescription or drugs that you should have already received before this visit
- to provide a prescription if you have not received one until then
- to give you a Cycle plan in a flow chart format to help you further
- to give you the *'Common Questions and Answers'* booklet
- to book your next appointment

Please do not hesitate to ask, if after this appointment, you still feel the need for further discussion. Please also return to the New Patient's Seminar as many times as you require to fully understanding the process.

14.3 Downregulation or the Suppression phase

In women with a menstrual cycle (regular or irregular) it is important to co-ordinate the cycle with that f the donor if fresh embryo transfer is anticipated. This is not required for women undergoing transfer with frozen embryos that have been subjected to the quarantine procedure for 6 months. Usually this is a less popular option and hence most women under go this phase of treatment. The pituitary gland may interfere and affect the development of the lining of the womb and as this can lead to a lessening of the success rate, we choose to inactivate this gland before stimulating your womb.

- **Baseline scan**

A vaginal scan is performed before starting any medication unless the scan performed as part of Pre-assessments was done within the last 3 months. This is to ensure that there are no new developments that we should be aware of before starting the drugs.

- **Pre-stimulation or Down regulation scan**

The scan is repeated at the appropriate time after starting the suppression phase. This should show inactive ovaries and a thin lining of the womb. The usual time taken for this phase is 10 days to 2 weeks.

- **Drugs used**

A number of methods can be employed for the same ultimate effect. These in our programme include the following:

1. **Nafarelin Nasal Spray**: This is taken as one sniff in one nostril three times per 24 hours at 8 hourly intervals for first 2 weeks and then twice daily thereafter until the day of HCG. This medication is not suitable for those suffering from hay fever, chronic nasal discharge or who may not remember to use the spray regularly.
2. **The Buserelin Injection**: This injection is taken once a day sub-cutaneously with a very fine needle-injection just under the skin. It is given daily at approximately the same time but an absolute and accurate precision is not essential (give or take 30 minutes).
3. **Prostap Depot Injection:** This is a once only injection and works for 4-5 weeks in total. This is very convenient for many donors / patients except those with reduced ovarian reserve. If the suppression phase is prolonged because of the agonistic/stimulatory response from the ovary, a 'top-up' with Buserelin/Nafarelin in the later stages of the cycle may be needed.

- **Side effects**

1. Hot flushes, night sweats, headaches, vaginal bleeding, temperamental behaviour. These are due to a fall in your oestrogen level, usually last for a short time and will disappear once we start stimulating your ovaries.
2. Agonistic/ stimulatory response: In the initial stages all of the 3 preparations above can stimulate the ovary. This means that a follicle or cyst develops that has to resolve before we can proceed with treatment. It can naturally take up extra 2-3 weeks. If the cyst is aspirated the resolution may be slightly earlier and this requires extra scan to see it disappear and for the endometrium to become thin. If you are prone to develop agonistic response seen in the form of cysts after starting this medication, we can use the oral contraceptive pill for a few days before starting the downregulation and this usually avoids such problems recurring.

- **Time to start**

This treatment can be started on the first or the second day of your cycle especially when your cycle length is variable. It can also be started on the 21st day of the preceding cycle if your cycle is very regular.

- **Choices**

We can prescribe any one of the above preparations and methods dependent on your preference and knowledge of past response. They are equally effective and are self administered. There is a relatively small difference in their costs with Buserelin being the cheapest.

- **Important notice:**

The Nafarelin nasal spray and/or the Buserelin treatment is continued in the stimulation phase. We will specifically advise in writing when to discontinue which is the day you are advised to take hCG. Those with Prostap normally do not have to take additional medication during the stimulation phase.

14.4 Stimulation phase

There is some variation in how well the lining of the womb develops with some people being more responsive than others. Our aim is to give you medication in sufficient dosage so that your treatment has the greatest likelihood of being successful. We can assess the optimum dose many times from the knowledge of your past treatment even if in a different form before.

- **What does it involve?**

The hormone oestrogen stimulates the lining of the womb to grow. It is given in the form of oestradiol valerate tablets and it centers the blood in its natural oestrogen form after it is absorbed into the liver from the gut.

Occasionally we use oestrogen skin patches which allow the skin directly to absorb the natural oestrogen into your blood stream from the patch. We may make changes when needed and sometimes even use the combination of the two.

- **My choices?**

There is no difference in the drug that is eventually delivered to the womb via the blood stream. However there is a difference in the preparation and how it reaches there. Some absorb the drug better from the gut and others from the skin. There are individual variations also in how the womb reacts to the same dose of medication. There is little difference in terms of success rate provided the womb has responded well. We often choose them in combination or separately to suit.

- **How to take medication?**

Oral tablets scan be taken in two or three daily divided doses. Skin patches are changed every three days. The medication can be given in the following regimens:

1. Fixed and continuously given moderately high dose to ensure timely and adequate endometrial development.
2. Step wise escalation to try and mimic the natural rise in oestrogen
3. Step wise rise to promote endometrial growth when the response is suboptimal.

- **Side effects**

The oestrogen can give the feeling of nausea in some women. Other than that there are no notable side effects because the hormone is in fact one that your ovary produces naturally and your system is used to it.

Theoretically oestrogen when passing through the liver can affect the way blood is helped to clot. This is usually an effect only in susceptible individuals and only after prolonged use e.g. when given as HRT and not when they are used for short periods such as in treatment even though in higher doses.

Skin patches can give local reaction to the adhesive. We can use alternative patches as the reaction is to the adhesive and not to the drug.

- **Undesirable effects**

Lack of adequate endometrial proliferation is undesirable but not always preventable .

- **How effective are they?**

We have used both the tablets and the patches although the former are used most commonly. All regimens are also used freely to suit individual circumstances and clinical preferences.

14.5 The progesterone support

When your donor's follicles have reached an appropriate size, as assessed by scan, she is ready to be prepared for the Egg Collection. The hCG injection is essential to bring the eggs to the correct stage of maturation for this stage.

This injection is usually given late in the night normally between 10.00 p.m. and 2.30 a.m. It is specifically timed to be between 35-37 hours before the time of your egg collection and to start the rise in progesterone levels which is the 2nd hormone much needed during the implantation phase and afterwards for support of the pregnancy.

Your ovaries cannot produce progesterone. So on the same day as the donor's day of HCG, you will start progesterone support.

- **What does it involve?**

The hormone progesterone after the initial growth of the lining of the womb brings in the second phase of development. It is given in the form of progesterone pessaries or injections. The pessaries can also be used in your back passage as a rectal suppository.

The pessaries once inserted in the vagina or the rectum, will dissolve and from there the skin of the vagina or the bowel will absorb it and transfer it to the uterus through local and systemic blood supply.

The progesterone injections involve inserting the hormone into the muscle from where it is absorbed into the blood stream and transferred to the womb for necessary action. Blood levels of this hormone are much higher after injections than after inserting the pessary but it is thought that some progesterone gets to the womb from local transfer/ exchange mechanism.

- **My choices?**

There is no difference in the drug that is eventually delivered to the womb. However there is a difference in the preparation and how it reaches there. Some absorb the drug better from the vagina or the bowel than others. There are individual variations also in how the womb reacts to the same dose of medication.

- **How to take medication?**

Pessaries can be inserted in prescribed doses digitally in the vagina or the back passage 4 times per 24 hours with reasonable but not accurate amount of equal spacing.
Injections are given once a day into the gluteus muscle (buttock) or in the Quadriceps muscle (thigh). We ask you to rotate the injection site as repetitive injection at one site can cause pain and local reaction.

The oral tablets or the oestrogen skin patches or both continue during this second phase also as prescribed. They could continue as previously in the following regimens:

1. Fixed and continuously given moderately high dose to ensure timely and adequate endometrial development.
2. Step wise escalation to try and mimic the natural rise in oestrogen
3. Step wise rise to promote endometrial growth when the response is suboptimal.

- **Side effects**

The progesterone as in the second half of the natural menstrual cycle can cause abdominal bloating, breast tenderness, feeling of lethargy, tiredness and even a change in temperament or mood. These problems do not necessarily occur and stress of treatment is also an important factor to remember.

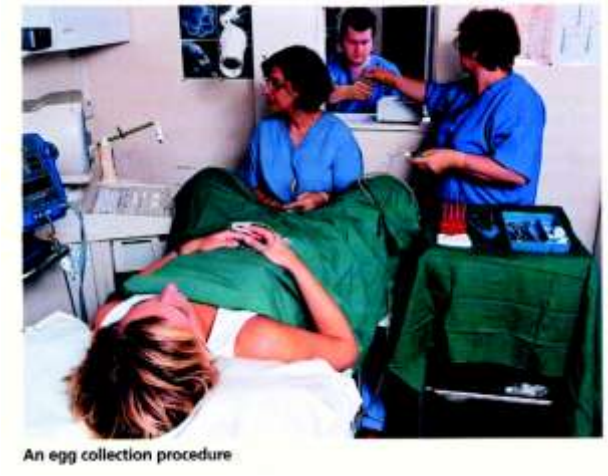
- **Undesirable effects**

Early bleeding with pessaries and local pain at the site of injections are undesirable effects.

- **How effective are they?**

There is evidence that injections achieve better results than the pessaries in fresh IVF-ICSI cycles. Whether this is also true for egg donation and frozen embryo transfer cycles is not known. We are involved in research projects that aim to assess these very issues at present and therefore cannot give conclusive answers.

We have used both the pessaries and the injections for many years and all preprations are used freely to suit individual circumstances and clinical preferences.


An egg collection procedure

14.6 Egg collection in the donor

Approximately 35-38 hours after the time of your hCG injection the egg recovery will be performed. This is performed in the Procedure rooms with the help of an Ultrasound machine. It is very similar to vaginal scanning except that we take sterile precautions to protect the donor and the eggs.

- **Preparation**

It is important for the donor to be as relaxed as possible for the egg recovery. Familiarity with the team will dispel some of the anxiety and fear. Her ovaries are considerably larger than their normal size which can lead to a dull ache and tenderness in the lower part of her abdomen before, during and after the egg collection. She will be advised to take an analgesic suppository on arrival and a further intravenous sedation and analgesia just before the procedure. We intend to relieve your discomfort as far as is possible. This is a short procedure and she should still be prepared for some discomfort as the needle enters the ovary. This procedure is outpatient based; she should be able to return home a few hours after the procedure.

It is necessary for you/ her husband/partner/or a relative to drive her home and stay with her for the remaining part of the day. As she would have received sedatives she should refrain from operating machinery, driving and should retire to bed after her return home.

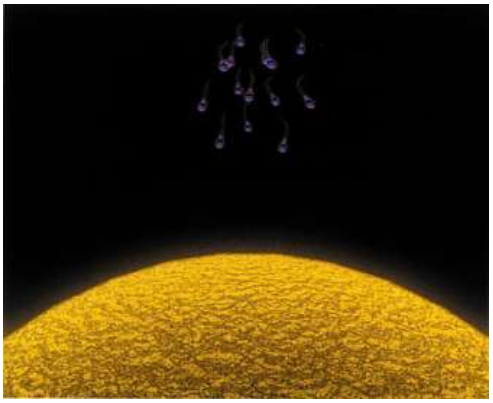
We will tell you the number of eggs collected during and at the end of the egg collection. Very occasionally the eggs can be difficult to identify and we will need to have another look in the laboratory. So your final egg number may be slightly less than that quoted to you immediately after the egg collection.

Mature egg

14.7 Insemination of the eggs

- **Time:** Although the time that the sperm sample is produced is not critical, we ask that the male partner attends at the specified time in order to avoid an undue delay in treatment. Many men would have frozen the sperm sample in advance of donation.

- **What happens?** After the sample is given, the sperm are washed and prepared. The live and progressively motile sperm are selected to inseminate the eggs 40-42 hours after your hCG injection i.e. 3-7 hours after the egg collection. Overall 50-70% of the eggs will fertilise but this number is variable in different patients and varies with age (both male and female).

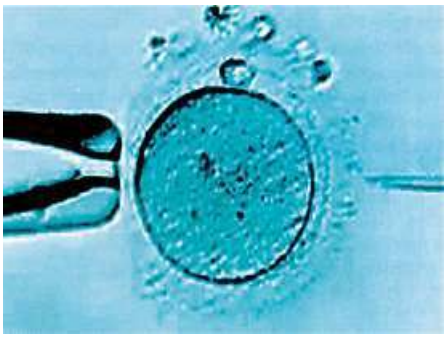


14.8 Fertilisation of the eggs (Insemination or ICSI)

If the sperm count is normal and the sperm preparation is satisfactory we will conclude that the risk of failure of fertilisation is very low (not completely eliminated still) and will inseminate the eggs with a preparation of the sperm approximately 4 to 5 hours after egg recovery.

If the sperm count or motility is known to be low, there is a substantial increase in the risk of failure of fertilisation. We would have assessed this risk as part of our mandatory pre-assessments. In this situation, we would have also advised the recipient of the need for ICSI.

Sometimes the sample given on the day of egg collection is not satisfactory unlike the pre-assessment. In those circumstances we may feel that the risk of sperm not fertilising the eggs is increased. We would discuss this risk with the recipient and proceed with ICSI. Therefore all donors and recipient couples are advised to read through the section of *'risks of ICSI'* very carefully. This is still considered to be an experimental procedure. We therefore ask you to consider this possibility in advance and also consent (if you agree) for this to happen at the time of your nurse consultation.



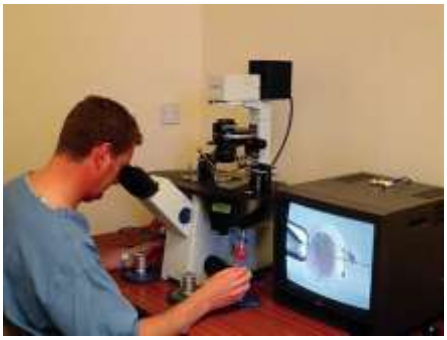
- **Insemination**

This simply involves making a preparation of the sperm and transferring a measured number of sperm that are suspended in an appropriate fluid at the correct temperature and ph into the vicinity of the egg. The sperm will then find and fertilise the egg naturally.

IVF

- **Intra-cytoplasmic Sperm Injection**

This technique involves injection of one sperm inside the egg under microscopic vision. The egg is very small, smaller than a pin prick and the sperm is smaller still. the procedure is done under 300 times magnification where a sperm is lifted out individually using a micropipette or needle and this then is directed to the sheel of the egg penetrating it and the membrane of the egg, the whole sperm left inside the egg. The sperm and the egg have to undergo necessary changes after this for fertilisation to take place.



14.9 Checking Fertilisation

This assessment is performed approximately 18-20 hours after insemination or ICSI procedure.

Please ensure that we have your day time contact number. Our embryology team will be pleased to ring you to give you the result of this assessment. If fertilisation has occurred we will also give you a provisional appointment for embryo transfer which could be the following day (day 2 after egg collection), the day after next (day 3) or even on day 5.

14.10 Prolonged culture of embryos

- **Purpose**

Prolonged culture of embryos provides us with more time to observe the developmental potential of the embryos and select those suitable for transfer better. It does not make the embryos more or less capable. It also does not help in removing all abnormal embryos from those that are available and your risks will remain as they would be appropriate for the donor's and the male partner's age along with your clinical circumstances. We would have discussed risks in specific circumstances beforehand but you can ask further if you wish when you attend the follow-up appointment before you start your cycle.

- **Why choose prolonged culture?**

This is a clinical decision. We choose to culture the embryos until such time we feel appropriate to select the best for transfer. Hence this is an option for only those couples where a number of equally good embryos are available. Pregnancy rate is higher when appropriately growing day 3 embryos or day 5 blastocysts are transferred than with day 2 embryos or day 6 blastocysts.

When there a lot of embryos with an equivalent appearance and growth, we may put them into prolonged culture in order to differentiate and select those with a better continued growth. It also gives us time to observe when you are at risk of ovarian hyperstimulation so that we can avoid doing a transfer for those who develop problems early but at the same time do not deprive those who remain well from a fresh transfer which has a higher success rate. The developmental potential of fresh embryos tends to be higher than that are frozen and thawed.

The spare embryos can also be maintained in culture until they are deemed suitable for freezing, stop growing or develop into the blastocysts when they can be frozen also if deemed suitable.

The risk of keeping embryos in culture is that you will find information about the embryo's development before your pregnancy test. None may progress sufficiently and despite having a number of embryos, none may be frozen because of suboptimal growth.

14.11 Embryo transfer

As explained above, the fertilised eggs are called `embryos'. These are examined the day following fertilisation and then daily to monitor cell division and growth to determine the day of embryo transfer. If the embryos have not grown after fertilisation, an embryo transfer is not performed.

Day 2: 2 cell embryo Day 2: 4 cell embryo

Day 3: 8 cell embryo Day 4: Morula Day 5: Hatching Blastocysts

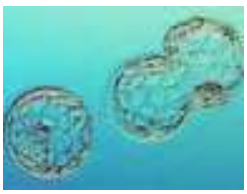
- **Risk of a multiple pregnancy**

This is a very important clinical matter for both us and you. We know that transfer of multiple embryos increases the likelihood of at least one continuing growth and implanting. However your risk of a multiple pregnancy is also increased with the transfer of multiple embryos. Your chance of conceiving a multiple pregnancy depends most of all upon your donor's age, your cause of sub-fertility and also the programmes overall success rate. Occasionally embryos split to form two identical babies. This risk is also increased with IVF and ICSI.

In the past even though approximately 85-90% of our cycles receive 2 embryos only, 25-30% of all our births were still twins. The risk is greatest when the donor is under 35 years of age and in those who respond well which is true for the vast majority if not all donors.

Legally we are permitted to transfer up to 2 embryos when the donor is less than 35 years in age and never more.

The complications of multiple pregnancies include miscarriage, prematurity, fetal growth retardation, increased risk of pregnancy complications in the mother and the need for delivery by caesarean section. Additional complications of identical twinning include polyhydramnios and twin to twin transfusion syndrome. These complications have high risks for premature delivery. Extremely premature birth has the risk of death in infancy or survival with long-term mental and physical handicap in the children.



- **Our mission *'One at a time'***

Our intention is to give the best chance of a pregnancy but without a high risk of a multiple pregnancy. Whilst trying to come to a decision we balance the probability of a pregnancy against the risks of a multiple pregnancy. We therefore analyse our data extensively and we know of a number of features that will help us identify those couples who are specifically at high risk of a multiple pregnancy. The same couples also have a good chance of getting pregnant even with a single transferred embryo provided we select well. We therefore choose methods of prolonged culture and optimal day of embryo transfer so that we do not compromise your success rate but at the same time we give you a low risk of a multiple pregnancy.

Our embryology team will keep you informed of the embryo's progress and choose the best day for your transfer as per our centre's 'strategy to minimise multiple pregnancies. All couples will have a further discussion on the day of the embryo transfer.

- **Fetal reduction**

The term `fetal reduction' is used for an ultrasound directed procedure that selectively terminates one foetus while permitting the other to continue growth and development as normal. Sometimes this procedure is employed to reduce the number of foetuses that have implanted after infertility treatment e.g. for reducing a triplet pregnancy to twins. Some pregnancies with a triplet implantation will spontaneously reduce to twins or singleton. Details regarding this `natural' risk of *'spontaneous reduction'* are available in our annual report and we can discuss this with you. If you have an ongoing triplet pregnancy of non -identical foetuses, then fetal reduction may be considered in line with the requirements of the Abortion Act. Equally you may consider this option if you conceive a set if identical twins with a non-identical triplet at the same time after the transfer of 2 embryos. Further discussion with your obstetrician will be necessary at that time.

This procedure is performed by passing a fine needle into the pregnancy sac and injecting potassium chloride into the fetal heart. The procedure carries a 4-5% risk of miscarriage. The world's combined data suggests that the duration of pregnancy is unlikely to be altered greatly by embryo reduction. Please ask for more up to date information or clarification regarding our own programme.

- **Technique of embryo transfer**

Usually at least 80-90% of those eggs that have shown normal fertilisation will grow in culture to day 2. However some of these will slow down or discontinue growth completely between day 3 and day 5. We check the embryos every morning before we call you for an embryo transfer. If there is no growth after fertilisation, we regret that we will need to cancel the transfer and arrange a follow-up. In others, we will discuss the number, growth rate and appearance of the embryos and what we have selected for your transfer when you arrive.

- **Preparation for embryo transfer**

The procedure of embryo transfer itself is quite simple and normally pain free. The embryos are very sensitive to light, temperature and pH changes. Ideally therefore for the embryo survival and growth the transfer procedure should be quick, simple and atraumatic.

We take the following preparation for this to happen.

1. You are advised to have a full bladder before the transfer because in most circumstances doing so straightens the uterine shape and makes the transfer procedure which is good.
2. The outer sheath of the embryo transfer catheter is inserted first in order to only remove the embryos from their environment when all at your end is ready to receive them.
3. The selected embryos are put into a fine catheter and transferred gently into the uterus in a very small volume of fluid.
4. Occasionally and especially when the bladder is not full, an instrument to hold and straighten the neck of the womb may become necessary. This can give you temporary discomfort.

The embryos are not visible to the naked eye at this stage but can be seen with the microscope or on the television screen attached via a camera to the microscope. The embryo transfer procedure literally takes under a minute and you do not require pain relief. After the embryo transfer, we will check that the embryos have left the catheter and reached the uterus. Very occasionally, the embryos will not have left the catheter and the transfer procedure has to be repeated. You may rest for a few minutes afterwards before returning home.

- **After the embryo transfer**

You are advised to continue with your daily routine as normal and there is no need to take special rest. However, we would advise you to refrain from strenuous physical exercise, taking of any form of drugs or medicines without checking with us first and avoid contact with contagious illnesses including `flu like illnesses' as much as possible.

In this cycle your symptoms of premenstrual syndrome are likely to be exaggerated because of high hormone levels. If unluckily you fail to conceive then the pattern of menstruation may also be different.

If you have any worries you can get in touch with us at any time of the day during the week on our direct telephone line and at other times via the hospital switchboard as instructed in the front of this booklet. We would very much advise you to contact us during the working week as far as is possible so that you receive timely advice. We do not mind if you ring us for what you may consider a trivial matter.

Please note that this is a much specialised form of treatment. Although your G.P. would gladly attempt to help you, he/she will not be fully aware of the details of your treatment or the necessary action. Hence it is in your interest to contact us first and before the problem is too advanced.*

14.12 Hormonal Support after the ET

On the day of embryo transfer, you will be given a letter which will explain further essential hormonal support in the second half of your cycle. The progesterone support has also been described above on page…. Clinicians as well as patients can have their preferences:

1. **Progesterone pessaries (Uterogestan or Cyclogest):** These are given in the dose of 200 mgms, 6 hrly or four times every 24 hours. They can also be used rectally as a suppository.

   Advantages: Apart from the inconvenience of frequent vaginal and rectal administration, it is painless and easy to administer.

   Disadvantages:

   a. The medication can flow out of the vagina or the rectum and hence not have the full benefit.
   b. The absorption of the hormone from the vaginal skin into your body can also vary between patients.
   c. Some patients may thus experience premature bleeding despite this support.
   d. Occasionally women can develop an allergic reaction to progesterone in the form of urticaria or skin rashes and sometimes the allergy can be severe.
   e. When you become pregnant, we continue this support in early pregnancy until placenta is well established in the uterus (normally at 9-10 weeks gestation).

2. **Progesterone Injections (Gestone):** This is a daily intramuscular injection of progesterone.

   Advantages:

   a. For some once daily administration is an advantage.
   b. It also ensures that premature bleeding does not occur. In fact most women would not have had bleeding until we do the pregnancy test 14-16 days after the embryo transfer.

c. There is published scientific evidence for higher success rates with this form of support.
d. We have an unpublished observation that it provides some protection against the risk of OHSS. This has not been scientifically tested and hence we are conducting a prospective trial.

Disadvantages:

a. This is a painful injection and causes local discomfort. We advise you to rotate sites of injection in order to ensure that no one site becomes excessively inflamed.
b. Occasionally women can develop an allergic reaction to progesterone in the form of urticaria or skin rashes and sometimes the allergy can be severe.
c. When you become pregnant, we continue this support in early pregnancy until placenta is well established in the uterus (normally at 9-10 weeks gestation).

14.13 The Pregnancy Test

- **When to come?**

You are asked to come to TLCRM, 14 to 16 days after the embryo transfer for a pregnancy test, irrespective of whether you have menstruated or not. This involves you bringing an early morning urine sample. If this test is positive then we will ask you to return to us 2 or 3 weeks later for an ultrasound scan.

We obviously hope that every patient will become pregnant but in reality 55-70% patients depending on your age group do not conceive. You will understandably feel a sense of grief in the event of failure. Please do not hesitate to ask for help in the form of counselling support with our psychologists if you require. We will also arrange a review consultation after the completion of each treatment cycle. At this time we will have an opportunity to discuss those factors that may have become apparent during your treatment and consequently may require modification in further attempts.

14.14 Risks

There are no treatments that are completely free of risk. In an Egg donation cycle there are the following risks:

- **Miscarriage:**

The risk of miscarriage after a positive pregnancy test alone is approximately 10-20%. This is no different to that after a normal conception. Once the pregnancy sac has been seen and the fetal heart action identified then the risk of miscarriage is substantially less. The risk of a congenital or genetic abnormality in babies born after IVF has not been higher than that in spontaneously conceived pregnancies. Your personal risk is more likely to relate to your age, your family history and whether or not you have a multiple pregnancy. Please see the section on multiple pregnancies inside on page … insert page no for further detail.

- **Risk of an ectopic pregnancy:**

The embryos are not ready to implant at the time of their replacement. At that time they are in a very small volume of fluid which we expect to spread like a thin film on the surface of the lining of your womb. The embryo may sit in a fold of the lining of the uterus until it reaches the stage of implantation. The risk of embryo floating away in the direction of the fallopian tube exists in all patients. In normal circumstances we expect that the fine hair in the tube that beat in the direction of the womb will prevent such a migration. However in some cases this may not happen and the embryo enters the tube. Unable to return to implant in the uterus and especially in women with damaged tubes, it may attach itself to the tube and thus a tubal pregnancy occurs. If left undiagnosed, the tube may rupture and internal bleeding may take place. We endeavour to make an early diagnosis by performing an ultrasound scan at 7 weeks of pregnancy (3 weeks after your pregnancy test).

Notes:

1. It is therefore important to attend for the pregnancy test even if you have bled and for the scan after a positive test. If a pregnancy sac is not seen on scan, a blood test is taken to measure the pregnancy hormone (hCG) level in your blood. You may be asked to attend for more tests after a few days interval. If this level is rising or static then we may perform a laparoscopy.
2. If you are unlucky and have a tubal pregnancy then you will require the removal of the tube. We may also counsel you regarding the future of your remaining tube in case it is already known to be irreparably damaged or is found to be such at surgery. We advise you to consider removal of both tubes in those circumstances in order to avoid a recurrence of this complication in future. This is an important decision as it is sterilising and no steps are taken with out your written consent and complete agreement.
3. For the operation you will be admitted to St James's to prevent an untoward occurrence whilst travelling. The risk of an ectopic pregnancy is approximately 3-4%.
4. Occasionally you can have a combined intrauterine and an ectopic pregnancy (*heterotopic pregnancy*). These are more difficult to diagnose. If present then often but not always, the tubal pregnancy can be removed with out harming the uterine pregnancy.
5. We perform a risk assessment for this complication too in our pre-assessments. If you are already known to have damaged tubes you may choose to have removal of the tubes (*salpingectomy operation*) performed before the treatment cycle in order to minimise the risk of this complication. This is a sterilising procedure and future pregnancies will only be possible after IVF. Therefore you have to be completely at terms with your infertility if you undertake this procedure. It is performed in most cases laparoscopically (*key hole method)* and you do not need prolonged recovery or delay to treatment afterwards.

- **Risk of equipment failure:**

The trust maintains service contracts for all equipment that is regularly serviced. There are also many standard operating procedures in the laboratory that help us have an early warning for problems. Despite all our efforts and very uncommonly equipment failure may sometimes lead to loss of eggs or embryos. This is a 'Category A' incident that will be immediately notified to HFEA, the trust and you. There would usually be a thorough investigation and steps taken to prevent a recurrence of similar problems. The HFEA also operates an Alert system which we use to learn from incidents elsewhere.

- **Other risks**
  1. Although some have raised alarm over the risk of ovarian cancer with the use of hormones, these preparations have been used in treatment since early 1960's without any notified cases that can be directly liked to the use of these hormones. The available evidence suggests that there is no increase in your risk over and above that exists naturally. Infertility per se, delay in first pregnancy, and failure to breast feed, family history, obesity and smoking are known risk factors for the cancer of the ovary and the breast.
  2. There have been no cases of complications with protein impurities in the urinary preparations. Theoretically some have worried those external proteins when injected could transfer viruses or prions that could lead to an illness like CJD at a later date.

This section is there for your information and to reassure you that as far as we know none of the publicised risks have been scientifically confirmed.

14.15 Risks of ICSI

ICSI was pioneered by a group in Brussels in 1992 and hence since rapidly become accepted in IVF centres around the world. The oldest child is therefore very young still and as it is significant invasion into natural processes where a natural fertilisation and pregnancy would not have occurred, its long term risks are not known. ICSI is an invasive technique and may also use sperm that would not otherwise be able to fertilise an egg. For these reasons, concerns about the potential risks to children born as a result of ICSI have been raised, and several follow-up studies have been published. ICSI is still a relatively new technique, and all children conceived using ICSI are still very young. Consequently, these follow-up studies involve relatively small numbers of children and do not include effects that may be seen in older children or in the next generation. The HFEA considers follow-up studies to be extremely important and would encourage patients to talk to their treatment centre about participation in such studies. Clearly, more studies are needed, but the use of ICSI has been potentially linked with certain genetic and developmental defects as explained below:
These risks are only to the offspring and primarily relate to the recipient and the male partner's cause of Subfertility. It is therefore appropriate that you consider it an experimental procedure. Hence this section is not described here in detail. However further information can be provided to those who are interested.

15. Common causes of failure

These are as follows:

1. Failure to recruit optimum number of follicles with or without poor hormone levels.
2. Premature release of the eggs (very uncommon)
3. Unexpected illness
4. Failure to Fertilise: This may be due to defective sperm, low number of sperm, functional abnormalities of the sperm, unknown technical failure and infection in the seminal sample (uncommon).
5. Failure of Cleavage: Occasionally fertilised eggs fail to divide and continue their development. Not all fertilised eggs will cleave to form embryos.

Although these are common causes of failure, sometimes failure also occurs even when everything has apparently gone well. Sometimes we may not have an explanation for why a pregnancy fails to occur. Mostly in these cases the embryos have failed to maintain their growth and development because of indigenous, not necessarily repetitive genetic abnormalities. We know that the risk of genetic abnormalities in naturally formed embryos and In normal couples is nearly 50%. Embryos created in IVF cycles have the same incidence overall but this risk exponentially increases with age and is substantially increased in women at or above the age of 40 years.

Most genetically abnormal embryos fail to implant, maintain growth to become pregnancies or may miscarry after a positive test. In this situation usually the prognosis for future attempts is good and we will discuss any specific predisposing factors that you may have. We may consider the removal of hydrosalpinges (swollen tubes), endometrial polyps or fibroids (if present) in some cases before repeating the treatment cycle.

16. Glossary of terms

Ovary: Female gonad responsible for development of the eggs and female sex hormones.

Pituitary gland: Master gland near the brain that controls most other glands in the body.

GnRH Agonist: These hormones first stimulate and then suppress the pituitary gland function in relation to the ovary.

GnRH Antagonist: These hormones instantly suppress the pituitary gland function in relation to the ovary.

Gonadotrophins: Hormones produced by the pituitary gland for the stimulation of the ovary.

There are 2 types: FSH and LH.

FSH: This is the follicle stimulating hormone and promotes development of follicles (see below) with eggs in the ovary.

LH: This is the luteinising hormone responsible for preparing the follicle for rupture and release of the egg. It also prepares the egg for fertilisation by the sperm.

HCG: This is the human chorionic gonadotrophin produced naturally only in pregnancy by the embryo's placenta. It has similar effects to LH but it is more potent. It is therefore used for inducing ovulatory changes in the egg before collection and for the stimulation of the ovary after egg collection to produce progesterone.

Urinary Gonadotrophins: Purified extract of the menopausal women's urine containing both the FSH and the LH.

Synthetic Gonadotrophins: Pure FSH only synthesised in the laboratory using new technology.

Oestrogen: Produced by the follicles in the ovary. Responsible for the development of the lining of the womb.

Progesterone: Hormone produced by the follicle after ovulation and responsible for preparing the lining of the womb for implantation.

Eggs: Specialised female cell that develops in the ovary

Follicles: Sac in the ovary that contains an egg. One develops every month naturally. Several develop in an IVF cycle leading to ovarian enlargement.

Sperm: Specialised male cell that develops in the testis

Gametes: A name for eggs and sperm

Fertilisation: A term for the process by which the sperm enters the egg and its genetic material joins that of the egg.

Cleavage: A term for growth of the egg after fertilisation with an increase in cell numbers by division.

Embryos: A term for the growing ball of cells after fertilisation. Capable of developing into a human being.

Blastocyst: An advanced 5-6 day old embryo containing a large ball of cells that has divided to define parts that will form the placenta and the foetus. It contains a cavity of fluid. At this stage the embryo is ready to hatch and embed into the lining of the womb.

17. USEFUL ADDRESSES:

In addition to the counselling facilities that exist at St James's you may wish to contact:

Androgen Insensitivity Support Group
2 Shirburn Avenue, Mansfield NG18 2BY
01623 661749

British Agency for Adoption & Fostering
Skyline House, 200 Union Street, London SE1 01Y
0207 593 2000

British Fertility Society (National Society for Healthcare Professionals
16 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ
01454 642211
www.bfs.co.uk

British Infertility Counselling Association (BICA)
96 Divisional Street, Sheffield, S1 4GE
01342 843880
www.bica.net

Childlink Adoption Society
10 Lion Yard, Tremdoc Road, London SW4 7NQ
0207 498 1933

Cot Death Foundation
14 Halkin Street, London SWIX 7DP
0207 235 1721

COTS (Childlessness Overcome by Surrogacy
Loandhu Cottage, Gruids, Lairg, Sutherland, Scotland IV27 4EF
01549 402401

Daisy Network (premature menopause support group)
PO Box 293, High Wycombe, Bucks, HP15 7SH

Department of Health Social Care Group
Wellington House, 133-155 Waterloo Road, London SE1 8UG
0207 972 4347/4084
Department of Health & Social Services
Child Care Branch, Dundonald House, Upper Newtownards Road, Belfast B24 3SF
01232 520000

Donor Conception Network
PO Box 265, Sheffield S3 7YX
0208 245 4369
www.dcnetwork.org

Human Fertilisation & Embryology Authority (HFEA)

Finsbury Tower, 103-105 Bunhill Row, EC1Y 8HF, London
0207 291 8200
www.hfea.gov.uk

Infertility Network UK
National support organisation with newsletters & helpline.
Charter House, 43 St Leonards Road, Bexhillon on Sea, E Sussex TN40 NJA
01424 732361
www.infertility.uk

International Social Service of the UK
Cranmer House, 39 Brixton Road, London SW9 6DD
0207 735 8941

Miscarriage Association
c/o Clayton Hospital, Northgate, Wakefield WF1 3JS
01924 200700

Multiple Births Foundation
Hamm House, Hammersmith Hospital, Du Cane Road, London W12 0HS
020 8383 3519

National Endometriosis Society
50 Westminster Palace Gardens, Artillery Row, London SW1P 1RL
020 7222 2776

Turner Syndrome Support Society
1/8 Irving Court, Hardgate, Clydebank G81 6BA
01389 380385
turner.syndrome@tss.org.uk
www.tsss.org.uk

Twins & Multiple Births Association (TAMBA)
PO Box 30, Little Sutton, South Wirral L66 1TH
01732 868000

Verity (National PCOS Support Group)
Graystone Centre, 28 Charles Square, London N1 6HT
veritymembs@aol.com
enquiries@verity-pcos.org.uk
www.verity-pcos.org.uk

The details of other useful contacts can be obtained from ACU staff.

Please do not hesitate to discuss any aspect of this information booklet with us.

We wish you good luck.

Mrs Vinay Sharma
Mr Anthony Rutherford
Professor Adam Balen