



# WELCOME TO THE ASSISTED CONCEPTION UNIT

Thank you for your interest in the Assisted Conception Unit (ACU) at Guy's Hospital. This booklet is an introduction to our unit and the assisted conception techniques we practise. We hope it answers any questions you have about assisted conception treatment and help to guide you through what it involves.

We also have detailed information sheets about the specific treatments mentioned in this booklet. If you would like one of these, or have any questions or concerns, please speak to a member of our team. We believe when you have a fertility problem it is essential to have rapid access to expert advice, given in a sympathetic manner which takes your individual needs into account. We are a team of medical and scientific experts dedicated to giving a comprehensive and caring fertility service. The services we offer are of the highest standard – our results exceed the national average for all common assisted conception techniques, including In Vitro Fertilisation (IVF) and Intracytoplasmic Sperm Injection (ICSI).

We regularly review and update our practice through research and audit with the aim of improving your experience and success rates. However, we also feel that it is important to be honest and realistic with our patients and we acknowledge that, sadly, we will not be able to achieve a pregnancy for all couples that we treat. We hope that, whatever the outcome, your experience with us will be a positive one – we will give you as much support as possible both during and after your treatment.



## THE ACU TEAM

We are an experienced team of doctors, nurses, embryologists, counsellors and administrative staff. We work together to give a comprehensive service for the investigation and treatment of infertility.

### Administration team

A member of the administration team will probably be the first person you meet when you come to the ACU. Please speak to a member of this team if you have a question about:

- your referral
- our waiting lists
- a patient information evening
- the funding of your treatment.

### Doctors

You will meet an ACU doctor on your first visit. Our team of reproductive specialists oversee all aspects of your treatment in the unit. They perform:

- ultrasound scans
- egg collection
- embryo transfer.

### Nurses

Our team of specialist fertility nurses will plan your treatment schedule and teach you about any medicines used in your treatment. The nurses perform:

- ultrasound scans
- blood tests
- assist at egg collection and embryo transfer.





- perform Intracytoplasmic Sperm Injection (ICSI)
- perform the embryo biopsy step in pre-implantation genetic diagnosis (PGD) - the removal of one or two cells from an embryo to test for genetic diseases.
- freeze sperm, eggs and embryos for later use in treatment where appropriate.

### Counselling

We think counselling is an important part of your treatment in the ACU. All counselling is confidential and free of charge. For more information, please call **020 7188 7641**.

- We would encourage all couples or individuals to see a counsellor for support.

### Embryologists

The embryologists are responsible for looking after your eggs, sperm and embryos while they are in the laboratory. After egg collection, they prepare the eggs and sperm for In Vitro Fertilisation (IVF) and look after the embryos. They also:



## THE NEXT STEPS

After your doctor/hospital has referred you to the ACU, we will send you an information pack, which has forms and a questionnaire for you both to complete. We have a legal obligation to consider the welfare of any child born following treatment.

We ask you questions about your background, which are relevant to you having treatment. We also ask for your written permission to contact your GP and any other doctors involved in your care.

### Acceptance onto the programme

We consider each case individually, but our rules are:

- the female partner should be under 46-years old and the male partner should be under 60-years old
- couples should be living together and in a stable relationship

- the female partner's hormone levels should be within a range that suggests they will respond to medication
- the female partner's Body Mass Index (BMI) must be less than 35.

Your own Clinical Commissioning Group (CCG) might have separate criteria, which will have to be taken into account before they will consider funding your treatment. They may not, for example, give funding if either of you already have children, the female partner is over a certain age, or she has a BMI over 29. We can give you the specific criteria for your region. The Assisted Conception Unit will apply for funding on your behalf but the decision lies with your local commissioning group.





# YOUR FIRST APPOINTMENT WITH AN ACU DOCTOR

During this visit, the doctor will take a full medical history from both partners and arrange any extra tests or investigations that are needed. At this visit the woman will have:

- a transvaginal (internal) ultrasound scan - a small probe is placed inside the vagina to look at the uterus and both ovaries. Most women find this less uncomfortable than a smear test.

Both partners will have:

- blood tests - it is a national recommendation that all men and women having IVF treatment have a blood test for Hepatitis B and C and HIV and other relevant tests - for example, screening for sickle cell or hormone tests.

It is useful to have information about any previous fertility treatment you may have had, especially IVF or ICSI attempts. The doctor will make sure you are suitable to start a particular treatment and will be happy to answer any questions that you may have.

## Consent

Before you receive any treatment, your doctor will explain what he or she is recommending and the risks involved. He or she will also answer any questions you might have. We want to involve you in all the decisions about your care and treatment. If you decide to go ahead, you will be asked to sign several consent forms. Signing these confirms that you agree to have the treatment which has been discussed with you and that you understand what is involved. We will give you more information about consent before you have treatment.

# TREATMENT OPTIONS

If you would like more information about any of the treatments described below, please ask a member of the ACU team.

## What is assisted conception?

Assisted conception is a term used to describe the different treatment methods available to help you become pregnant. It is sometimes called fertility treatment. There is no single treatment that is suitable for all situations. This booklet gives you information about the treatments available at our unit and who can benefit from them.

## Who can be helped by IUI?

We offer IUI when we know the woman's fallopian tubes are open and:

- you are having difficulties with intercourse
- you are using donor sperm
- unexplained fertility.

## What normally happens in an IUI cycle?

If the female partner does not normally ovulate, we will prescribe tablets called clomiphene and/or hormone injections to stimulate the ovaries to produce one or two follicles. If you normally ovulate, the ACU doctor will discuss whether to give you more medicine to stimulate the ovaries further.

This may improve the chances of becoming pregnant but also increases the risk of a multiple pregnancy. If additional medicine is used, an injection is given to mature the eggs when the follicle(s) reach a certain size on the ultrasound scan. The IUI is performed later that day or on the next day.

# INTRAUTERINE INSEMINATION (IUI)

A sample of sperm - prepared by our embryologists - is placed directly inside the uterus. We do this using a very fine catheter (soft plastic tube). If conception occurs it does so naturally inside the body.





### What is the success rate of IUI?

The success rate of having a live birth with IUI is 12% per cycle. We recommend that you try a maximum of three cycles of treatment before considering other options. We do not recommend IUI to women aged 40 years or over as we have had limited success in this group.

### Ovulation Induction

Patients who have irregular or absent periods and are not providing eggs regularly usually benefit from ovulation induction treatment before going onto more complex treatments. Ovulation induction is stimulating the ovaries with either tablets or injections to produce a single fully ripened egg, the couple then have intercourse naturally. Restoring regular ovulation will give the couple a normal chance of conception. We have a specialised ovulation induction programme and have extensive experience in treating patients with both polycystic ovaries and complex endocrine conditions.

## IN VITRO FERTILISATION (IVF)

In Vitro fertilisation (IVF) is sometimes called “test tube baby” treatment. During IVF, sperm and eggs are placed together in a culture dish in the laboratory to allow fertilisation to occur.

### Who can be helped by IVF?

IVF might help if:

- the female partner has blocked or damaged fallopian tubes - the egg and sperm may not be able to meet or the fertilised egg may not be able to make its way into the womb
- the female partner has problems with ovulation (the release of an egg each month)
- the female partner has endometriosis - a condition in which cells that normally line the womb are found elsewhere in the body

- unexplained infertility - no cause has been found for not being able to conceive, especially when couples have been trying for more than two years to get pregnant.

## INTRACYTOPLASMIC SPERM INJECTION (ICSI)

ICSI involves injecting a single sperm into the centre of each egg to try to achieve fertilisation. We were the first NHS unit in the country to have a baby born from the intracytoplasmic sperm injection technique.

### Who can be helped by ICSI?

ICSI might help if:

- the sperm sample contains decreased numbers of sperm, reduced movement, or the sperm shows a high number display or an abnormal appearance
- the male partner has no sperm in his ejaculate but sperm can be obtained from the testicles, using surgery
- the male partner produces high levels of antibodies against his own sperm - this can affect the ability of the sperm to bind to the egg
- couples have already had IVF treatment but had unexplained failed fertilisation of all of the eggs
- the male partner has retrograde ejaculation - the sperm passes backwards into the bladder and can be found in the urine.



### How successful are IVF and ICSI?

On average, we expect 50% couples to achieve a positive pregnancy test and 33% to have a baby, but the success is highly dependent on the age of the woman. These results compare favourably with those from other centres in the UK and around the world.

Only one living sperm is needed per egg for ICSI. In a small number of cases we use surgery in order to collect sperm from the testicles by:

- PESA - a fine needle is passed into the area above the testicle where sperm is stored (epididymis) and sperm is removed.

If PESA doesn't work we can also try:

- TESA - a fine needle is inserted into the testicle to remove tissue/sperm
- Testicular biopsy - a small cut is made in the scrotum and a small amount of testicular tissue is removed.

### When is surgical sperm retrieval carried out?

We can do sperm retrieval procedures before starting a treatment cycle or on the day of the egg collection (a procedure to collect the woman's eggs from her ovaries). The doctor will discuss with you the reason for the timing, depending on the cause of your azoospermia and whether sperm has

## SURGICAL SPERM RETRIEVAL FOR AZOOSPERMIA

Azoospermia is a condition where no sperm are present in the fluid a man ejaculates. A man might have azoospermia because:

- of a blockage in the connecting passages from the testicles - called obstructive azoospermia
- very few sperm are being produced in the testicles - called non-obstructive azoospermia.

previously been found. We have close links with our local urology department and offer joint care for complex cases.

How successful is surgical sperm retrieval?

If the reason for low levels of sperm is obstructive azoospermia, we can normally get the sperm using PESA, TESA or biopsy. These procedures can be done under local or general anaesthetic. Local anaesthetic is medication that ‘freezes’ an area so it is pain-free. General anaesthetic will make you completely unconscious and unable to feel pain throughout your body. We can give you more information about the type of anaesthetic that is recommended for you.

If the problem is non-obstructive azoospermia, there is about a 25-30% chance of finding mature sperm. If sperm are found, they are frozen and can then be used in treatment.

EMBRYO TRANSFER

During embryo transfer we place the best one or two embryos into the woman’s uterus. The number that is transferred depends on the quality of the embryos and the age of the woman. This is a much simpler procedure than egg collection and there is no need for sedation (please read our IVF leaflet for more information about egg collection).

During the procedure, we do an ultrasound scan to help us place the embryos where they have the highest chance of implantation.

Blastocyst transfer

Five days after egg collection, the best embryos develop into fluid-filled balls of cells called “blastocysts”.

Who benefits from blastocyst transfer?

The patients who benefit most from a blastocyst transfer are those who we think have a very good chance of pregnancy but who also have a very high chance of a twin pregnancy if two embryos are transferred.

About 30% of our patients fall into this group. If we transfer a single embryo, we aim to reduce the incidence of twin

pregnancies, without reducing the overall chance of pregnancy. So, depending on your age and the number of good quality embryos available, on day three after egg collection we may recommend that you consider the transfer of a single blastocyst on day five and we will freeze all excess good quality blastocysts for your future use.

FROZEN EMBRYO TRANSFER

In a frozen embryo transfer (FET) cycle we thaw your frozen embryos and transfer one or two of them into the uterus. The number of embryos to be thawed in any one attempt will be discussed with you in advance by an ACU doctor or embryologist.

Although we are very selective about the embryos we freeze, only 90% survive after being thawed. Our current successful pregnancy (live birth) rate for frozen embryo transfer is about 25%. This is better than the average national rate.

An advantage of a FET cycle is we do not need to use injections to stimulate the ovaries; you will simply need the nasal spray, estrogen tablets, and supportive progesterone pessaries. An increasing number of NHS funded cycles now include the cost of freezing embryos and a FET as part of the cost of a ‘full IVF cycle’ (as recommended in the National Institute for Health Care Excellence (NICE) guidelines). A FET cycle is a separate cost for those funding their own treatment cycles. Please speak to a member of our team for more information about FET.

OTHER TREATMENTS

Pre-implantation genetic diagnosis (PGD)

Pre-implantation genetic diagnosis (PGD) is a specialised treatment for couples who carry an inherited genetic defect that could cause serious health risks for their children, such as cystic fibrosis, sickle cell disease or Huntington’s disease. A single cell

is removed from each embryo to test if the disease affects that embryo. Only unaffected embryos are replaced in the uterus. We are the largest and most successful PGD centre in the UK and perform more than 60% of the PGD cycles carried out in the UK. For more information - including our results - visit our website at [www.pgd.org.uk](http://www.pgd.org.uk) or speak to a member of our team.

Treatment with donor sperm

Treatment with donor sperm is available for heterosexual and same sex couples and single women. This treatment can be either carried out by intra uterine insemination (IUI) or In Vitro Fertilisation (IVF/ICSI).

Sperm donors can be known or anonymous. Known donors might be friends or relatives who may wish to donate. For patients who opt to use anonymous donors, we work with a number of independent sperm banks both abroad and in the UK. We will provide you with the list of sperm banks we work with, as well as the information about ordering the samples that you require.

Donor eggs

We offer the use of donor eggs if the female partner does not produce eggs or has poor quality eggs.

Partner sperm can be used to fertilise eggs donated by another woman. The resulting embryos are then placed in the recipient mother. We treat women in good health up to the age of 50.

There is a shortage of egg donors throughout the country. We work with egg donation agencies and known donors.

- All couples thinking about using donated sperm or eggs will receive counselling before treatment. We have information sheets on egg donation and donor insemination. Please ask us for a copy.

If you decide to have egg donation treatment abroad, we can help you by offering advice and liaising with the clinic.

Fertility preservation

If you have been diagnosed with cancer or are likely to undergo treatment that will impair your fertility there are new techniques that can be performed to preserve your fertility. Some women may also choose to freeze their eggs when they are younger until they decide to use them later in life.

What can be done to preserve the fertility?	
• For the male	freezing of sperm
• For the female	freezing of eggs
	freezing of embryos

We have a dedicated service that was established in 2008 to provide rapid access for patients at short notice. Since commencement of this service more than 1200 patients have benefited from this service. Our unit is one of the few in UK that has successfully achieved live births in patients who preserved their fertility before cancer treatment.

Surrogacy

Surrogacy refers to when another woman carries and gives birth to the child. It can be the only option for some couples, male partners or single people.

The decision to use surrogacy to have a child is a big step and requires serious thought from all involved. We understand surrogacy is a long process and, as such, we offer all our surrogacy patients support throughout this time.





# RISKS ASSOCIATED WITH ASSISTED CONCEPTION TECHNIQUES

There are risks associated with all types of medical treatment and procedures. The ACU doctors or nurses will explain the risks to you before you sign the consent forms.

Please ask questions if you are uncertain. There are some risks common to all the procedures (IUI, IVF, ICSI). These include:

## 1. Multiple pregnancy

The major complication of IVF is multiple pregnancy. Multiple pregnancies have a significantly increased risk of complications, including late miscarriage, high blood pressure and premature birth. Premature babies have an increased risk of complications, such as a weakened immune system, physical and mental disability, and feeding and breathing difficulties. The risks at all stages of a triplet pregnancy are particularly high and so the chance of having even one healthy baby at the end of treatment is lower than with either a single pregnancy or twins.

Human Fertilisation Embryology Authority (HFEA) guidelines only allow the replacement of three embryos in women over the age of 40, but even with the replacement of two embryos, natural twinning of one can occur resulting in triplets.



## 2. Miscarriage and ectopic pregnancy

Unfortunately, treatment that results in a positive pregnancy test may end in miscarriage (24%) or, rarely, an ectopic pregnancy - a pregnancy in the fallopian tube that is life threatening and cannot continue (less than 1%). This can be diagnosed by ultrasound scan or from symptoms of pain and bleeding.

## 3. Ovarian hyperstimulation syndrome (OHSS)

Some women respond very sensitively to fertility drugs and produce many follicles. This causes the ovaries to enlarge and blood oestrogen levels to rise. This is more common in younger women and those with polycystic ovarian syndrome. The symptoms include abdominal swelling or bloating due to the enlarged ovaries. Nausea is another symptom and can progress to vomiting as the condition gets worse. In serious cases it may be necessary to be closely monitored in hospital. Development of OHSS is not always predictable or avoidable. We will identify if you have an increased risk and try to prevent it by monitoring your ovarian stimulation with extra ultrasound scans and blood tests.

## 4. Pelvic infection

Pelvic infection can occasionally follow an egg collection and, rarely, an abscess might develop. We try to make sure this does not happen by performing the collection under sterile conditions and giving antibiotics to women who are at higher risk of infection (for example, if you have had previous surgery, pelvic infection or endometriosis).

## 5. Bleeding

There is a very small risk that the needle that is passed through the vagina for egg collection can puncture the bowel or blood vessels. The needle used is very fine and it is unusual to have any complications. Most cases of vaginal bleeding can be stopped at the end of the procedure by applying pressure to the puncture site.

## 6. Drug side effects

Any medicine can have side effects which affect patients in different ways. We will explain all the common side effects to you as you go through your treatment cycle. Fortunately the majority are short lived and not serious.



## 7. Fetal abnormality

There is evidence that IVF/ICSI babies are more likely to be born early (prematurely) and weigh less than naturally conceived babies born at the same age.

It is important to remember that the risk of an abnormality in a natural conception is about 2%. A well regarded study has shown that IVF treatment increases the risk of abnormalities to 3%. When ICSI is used in the treatment of men with severely low sperm counts, it is thought that there might be an increased risk of inherited abnormalities. Please feel free to talk to us

about any concerns you might have about any treatment or ask for our patient information about this subject.

### Specific risks associated with ICSI include:

- some of the eggs that we collect cannot be injected with sperm because only mature eggs can be used
- up to 10% of the eggs can be damaged and lost during the ICSI procedure.

### Specific risks associated with embryo freezing:

- There is a 10% risk that embryos will not survive the freezing and thawing process.

# RESEARCH

Our unit is dedicated to constantly striving to improve treatment outcomes for our patients. Assisted Reproduction Technology has progressed vastly due to past research. However, much still remains uncertain. In Guy's ACU we run an extensive research portfolio which includes both academic and commercial clinical trials. During your treatment journey with us you may be approached to participate in our studies. Please contact us if you would like any further information.

# FURTHER INFORMATION

You can find some useful links and information you may find useful on our website - [www.ivfdirect.com](http://www.ivfdirect.com)

Infertility Network UK - This national charity is the largest network in the UK for those experiencing fertility problems. You can contact them on:  
t: 0800 008 7464  
e: [admin@infertilitynetworkuk.com](mailto:admin@infertilitynetworkuk.com)  
[www.infertilitynetworkuk.com](http://www.infertilitynetworkuk.com)

## What if I am unhappy with the service?

Please talk to us if you are unhappy with any aspect of your treatment in the ACU. We will do everything possible to put things right.

If you do not want to do this or are not satisfied with the response you receive, then please contact the Patient Advice and Liaison Service (PALS). PALS offers patients and visitors information, support and advice about the services at Guy's and St Thomas' NHS Foundation Trust. It can also give you information about the formal complaints process.

t: 020 7188 8801 at St Thomas' or 020 7188 8803 at Guy's  
e: [pals@gstt.nhs.uk](mailto:pals@gstt.nhs.uk)

# GET IN TOUCH

If you have any questions or concerns about assisted conception and the services we provide, please speak to a member of the ACU team.

t: 020 7188 2300  
e: [ivf.info@gstt.nhs.uk](mailto:ivf.info@gstt.nhs.uk)  
[www.ivfdirect.com](http://www.ivfdirect.com)

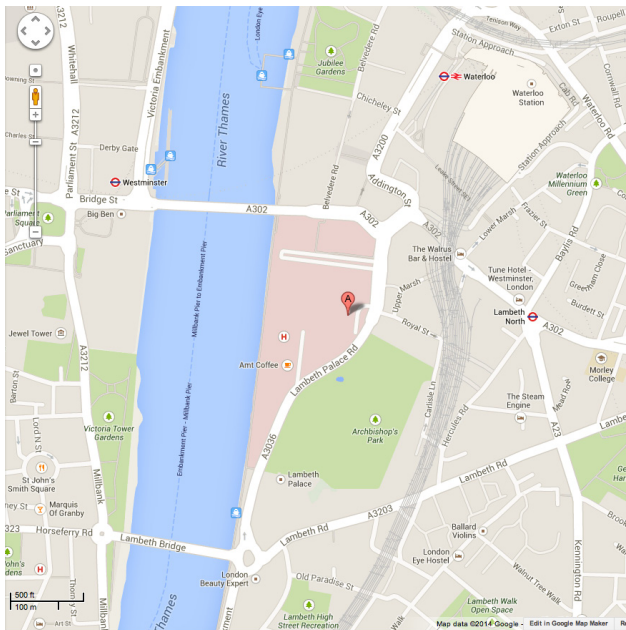
Our opening hours are:  
Monday to Friday - 8.00 am to 5.00pm

We have a team of dedicated nurses and administrative staff who are available on the phone during our opening hours. If you have to leave a message, we aim to return your call on the same day.

We also have an on-call number for emergencies. You can contact our nurses via email at [ivf.nurses@gstt.nhs.uk](mailto:ivf.nurses@gstt.nhs.uk). You can contact our PGD team via email at [PGDGenetics@gstt.nhs.uk](mailto:PGDGenetics@gstt.nhs.uk).







# Guy's and St Thomas' Private Healthcare

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