

Information about  
**In Vitro Fertilisation (IVF)**

Assisted Conception Service  
Glasgow Royal Infirmary  
Queen Elizabeth Building  
16 Alexandra Parade  
Glasgow G31 2ER  
Telephone: 0141 211 0505

## **This leaflet will give you more information about In Vitro Fertilisation (IVF).**

Before explaining what IVF is, it is useful to explain the natural fertilisation process (getting pregnant).

Each month an egg (oocyte) is released from the ovary and passes down the fallopian tube towards the womb (uterus). Sperm released into the vagina during intercourse swims towards the egg and combines with it. This is fertilisation. This fertilised egg (an embryo) then begins its journey towards the uterus and approximately 5 days later becomes embedded in the thick lining of the uterus. This is called implantation and is the first stage of pregnancy.

### **What is IVF?**

IVF involves the collection of eggs directly from the ovaries (using a needle), then mixing them with a partner or donor's sperm in a sterile dish. This is where fertilisation occurs and the embryos (fertilised eggs) are produced. These embryos are then placed in the uterus.

### **Assessment and Tests Required**

During your first appointment at the Assisted Conception Service (ACS) we will discuss:

- your infertility investigation results
- what assisted conception treatment involves
- the welfare of a child that may be born as the result of treatment and the impact that child may have on the family group

Before treatment can begin, we need to take samples from the female partner for the following tests:

- Rubella (German measles) (blood sample)
- Full blood count (blood sample)

- A cervical smear test (unless one has been done within the previous 3 years)
- High vaginal swab
- Chlamydia (vaginal swab)

Both partners will also be tested for HIV, Hepatitis B and Hepatitis C testing (blood samples).

You may need other tests to help us decide the best treatment for you.

## **Counselling**

We offer counselling to each individual and couple attending this service. This can help you through the investigations and treatments. You can make an appointment for our Counsellor by telephoning 0141 211 4218 or 4478 or a doctor or nurse at ACS can arrange an appointment for you.

The counselling is confidential and independent of the service.

Most of the nurses working at ACS have counselling skills and can also provide support and information.

## **The Stages of Treatment**

### **Stimulation of Your Ovaries**

IVF treatment involves the suppression (stopping) of your normal menstrual cycle ('down regulation'). We then stimulate your ovaries to produce more eggs than the one or two usually produced naturally each month.

To stop your normal menstrual cycle we give you an injection (or occasionally a nasal spray). We usually inject you on day 21 of your menstrual cycle. This may cause some menopausal

type symptoms (for example, mild headache, hot flushes, mood swings).

Several days later you should have a menstrual period. You will then have a transvaginal ultrasound scan (to look at your ovaries) and we will also take a blood sample to test your hormone levels.

If all is well at this stage, we will give you a daily hormone injection to stimulate your ovaries. We can show you how to do these injections yourself. If you prefer, appointments can be made for us to give you these injections.

We will monitor your response to these injections using regular transvaginal ultrasound scans and take blood samples to test your hormone levels from time to time. This means a whole series of appointments being made for you to attend ACS.

Each woman's response to this treatment is different. Daily hormone injections are usually required for 8-10 days. Some people respond much more quickly while others can take up to 15 days. Depending on the results from the regular tests, the dose of drug used in your treatment may be changed to help stimulate your ovaries.

Unfortunately, some women may not respond to this treatment. In this case the treatment will be stopped and we will review your case. You will be given a clinic appointment to discuss your options.

Once an adequate number of follicles (fluid filled sacs some of which contain eggs) are present in your ovaries, you will be given one final hormone injection called the 'hCG booster'. This helps mature the eggs in your follicles. You will be given this booster 38 hours before having your egg retrieval. Please note that the timing of this injection is **critical**, and it must be done at the exact time specified to you by the ACS staff.

## **The Retrieval of Eggs from Your Ovaries**

The night before your procedure please fast from midnight (**do not eat or drink anything**), as you will be given sedation.

When attending the procedure:

- Give yourself plenty of time to travel to Glasgow Royal Infirmary on the day of your appointment. Allow time for traffic delays and finding a parking place which can be time consuming.
- Please remember to bring your treatment information card with you so that oocyte retrieval data can be added to it.
- Please bring with you a dressing gown, slippers or socks, toiletries and a towel. We will provide you with a hospital gown to wear.
- You should not wear nail varnish, perfume, make-up or body lotion.
- Do not bring large sums of money or valuable jewellery with you (except your wedding ring).

### **On the day**

Please report to the General Outpatient Reception Desk in the Queen Elizabeth Building of Glasgow Royal Infirmary. They will direct you to the ACS Suite.

At the ACS suite, a nurse will help you prepare for the retrieval procedure. A doctor will:

- describe the procedure to you in detail
- take a history of your general health
- answer any questions you may have
- ask you to sign a consent form for the treatment.

A sedationist will also discuss the procedure and will be present throughout to control your sedation and monitor your wellbeing.

## The Procedure

We will take you to a nearby operating theatre.

The procedure begins with a needle assembly (called a venflon) being inserted into a vein in your hand or your arm.

Your sedation will be given through a tube attached to the venflon. You may feel yourself drifting off to sleep but still be aware of noise around about you and remain sensitive to touch.

Your ovaries are viewed on an ultrasound monitor by gently placing an ultrasound probe into your vagina.

Within each ovary, there will be a number of follicles. A fine needle is passed down a specialised guide attached to the ultrasound probe and the tip of the needle is directed right into the centre of each follicle. Gentle suction is applied through the needle, removing the contents of the follicle into a specially prepared container, which is then carefully examined to see if an egg is present.

This retrieval procedure ends when all the follicles have been dealt with and usually takes about 30 minutes to complete.

Afterwards, you will go back to the recovery area to rest until you feel ready to go home, which is usually 1-3 hours later. You should make arrangements for someone to collect you from the ACS Suite and go home with you.

For 24 hours after your sedation you should not:

- drive nor operate machinery
- drink alcohol
- take sleeping tablets
- sign legal documents.

# Sperm Collection and the Fertilisation of Your Eggs

## Sperm Sample (for men)

On the day that your partner's eggs are to be retrieved you will need to produce a fresh sperm sample. Do not have sex or ejaculate for 3-5 days before your appointment. We will show you into a private room in the Embryology Laboratory to produce your sperm sample.

## The Procedure (for women)

A fresh sperm sample is prepared to maximise the number of healthy sperm available for mixing with your eggs. There is no guarantee that all of your eggs will be fertilised and very occasionally there will be no fertilisation at all. Any fertilised embryos that do form are left to grow for 2-5 days depending on your treatment regime.

We will ask you to contact our laboratory the day after your oocyte retrieval (and in some cases, on the day of embryo transfer) to find out how many of your eggs were fertilised and to confirm the number of embryos for transfer and how many will be placed in frozen storage. Please note that not all patients will have embryos suitable for freezing.

## Embryo Transfer

A few days after the retrieval process, the embryo(s) produced will be transferred into your uterus.

Please attend the ACS Suite at your appointed time for the embryo transfer. Please note that, by law:

- if you are under 40 years of age, the maximum number of embryos transferable is 2
- if you are over 40 years of age, the maximum number of embryos transferable is 3

In line with the requirements of the Human Fertilisation and Embryology Authority, it is ACS's policy, in certain well defined circumstances, to transfer a single embryo (for more details see the leaflet entitled: 'Information about the Embryo Transfer pathway'). Please note that the number of embryos that we can transfer into your uterus will depend on your individual circumstances and we will discuss this with you before the actual transfer takes place. This is to reduce the chance of multiple births as they can lead to a higher risk of complications during pregnancy, such as raised blood pressure, and an increased risk of miscarriage. Multiple births can also increase the risk of premature birth, low birth weight or still birth. The chances of illness, disability and death are increased for multiple births, because the babies are premature. Also, the social, psychological, physical and financial pressures of a multiple birth can be overwhelming.

The embryo transfer procedure itself is quite straightforward. It will feel similar to having a cervical smear test performed, and you do not usually have to be sedated or anaesthetised. A specially designed tube (called a catheter) is used to place the embryo(s) into your uterus. It would be helpful if you did **not** empty your bladder before the procedure.

After your embryo(s) have been transferred you will require hormone treatment to help thicken the lining of your uterus. This is delivered in the form of vaginal pessaries. One pessary should be inserted in the morning and one at night for the next 12 days.

### **Test Results (Treatment Outcome)**

We will give you an appointment at ACS to provide a blood sample so that we can perform a pregnancy test. You will usually be contacted (on the telephone number you provided) with the result of your test in the afternoon of the day that your sample was taken. A clinic appointment will be offered to enable you to discuss your treatment and outcome.

## Possible Side Effects from Drug Therapy used in Treatment

The drugs used during the 'down regulation' phase may cause hot flushes, headaches, mood swings and vaginal dryness. These symptoms should pass.

We carefully and regularly monitor you when drugs are used to stimulate your ovaries. However, in a small number of cases there may be side effects.

### Side Effects

In mild cases, the ovaries become slightly enlarged which might cause some abdominal cramps. You can:

- discuss this at your next clinic appointment
- Contact ACS on **0141 211 0505** (Monday - Friday 8:15am - 3:30pm). If you need to contact someone outside normal working hours, phone Glasgow Royal Infirmary switchboard on **0141 211 4000** and ask for the Gynaecology Doctor on call.

In severe cases, the ovaries become much enlarged and fluid gathers in the abdominal cavity causing discomfort or pain. Very rarely, there can be vomiting, diarrhoea, abdominal swelling and breathlessness. There may be a feeling of weakness and fainting, and you may not pass much urine. These rare complications **require immediate attention** and you or your doctor should:

- Contact ACS on **0141 211 0505** immediately to discuss what to do next. Out with normal working hours phone Glasgow Royal Infirmary switchboard on **0141 211 4000** and ask for the Gynaecology Doctor on call.

You may need to be admitted to hospital for observation and treatment, in which case referral back to ACS rather than to a local hospital is strongly advised.

## Research Programmes at Assisted Conception Services

ACS regularly takes part in research projects, which we hope will lead to improved infertility treatment methods. When you attend the clinic for a consultation, you will be given information relating to our current research projects and invited to take part. You are **not** under any obligation to participate.

## Suggestions and Complaints Procedure

We are constantly striving to improve the quality of our service to you and value your opinions about how we could do that. Your comments and suggestions can be delivered in one of several ways:

- While you are at the clinic itself, ask to speak to Senior Charge Nurse Traynor, Doctor Lyall, Doctor Vani or Professor Nelson
- Write to the above at Assisted Conception Service, Glasgow Royal Infirmary, 84 Castle Street, Glasgow, G4 0SF
- While you are at the clinic, ask for a suggestion sheet, fill it in and put it into the suggestions box located in the waiting room.

We also want to hear of any complaints you may have. Please speak to Senior Charge Nurse Traynor, Doctor Lyall, Doctor Vani or Professor Nelson who will discuss your complaint with you.

If there is an aspect of your **hospital** care that you wish to comment on, you should write to:

Complaints Manager,  
Glasgow Royal Infirmary,  
Walton Annexe - 4th Floor  
84 Castle Street,  
Glasgow G4 0SF.



