James Paget University Hospitals NHS
NHS Foundation Trust

Fertility Service

Information for Patients

James Paget University Hospitals' Fertility Service

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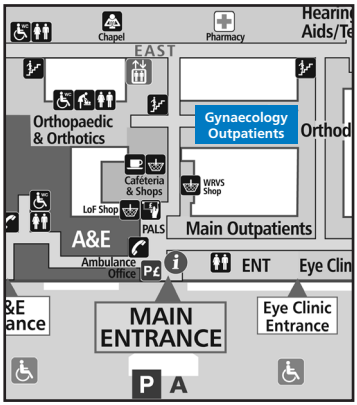
Welcome to the James Paget University Hospitals' Fertility Service

We are located within the Gynaecology Outpatient department which is on the ground floor of the hospital, on the right along the main entrance corridor past the Cafe.



The contact number is 01493 452366

Open for telephone enquiries:

Monday to Thursday 8.30-4.30pm

A messaging service is available out-of-hours or if staff are unavailable.

Mission Statement

The aim of the fertility service is to provide the best possible assessment and treatment for each individual couple and give them the best chance of achieving a pregnancy. We also aim to give as much support as possible to couples where the treatment proves unsuccessful. We welcome any suggestions that you may have to improve the care we provide, especially to reduce the inevitable stress that all couples feel during treatment.

The Fertility Team

Consultant Gynaecologists

Registrar in Gynaecology: (in a rotational post)

Fertility Sister

Clinic Co-ordinator

Referral to the Fertility Service

There are set criteria that need to be met for you to be eligible for assessment, and treatment related to fertility. Your GP will request some initial investigations and will need to complete what is called a primary to secondary care proforma. Once this referral proforma has been received and checked to be fully completed, you will be sent your first appointment.

We will process your referral as soon as possible, but this may take a few weeks to complete.

Your first appointment

Ideally both partners should attend the first appointment and you will be seen together. This will take around 40 minutes. During the appointment you may be examined and occasionally it might be necessary for your partner to be examined too.

A Trans-vaginal Ultrasound scan is often carried out at the time of the first appointment to assess the uterus and ovaries but this will be discussed with you and you may decline this if you wish. If you are having a period at this time, please still attend and another appointment can be arranged to perform this scan.

Further tests and investigations may be necessary and will be discussed with you along with any instructions for these tests. If you are unsure about anything, please ask us. We actively encourage all couples to ask questions about their investigations, results and plans for treatment.

It is often important to plan a test to see if your fallopian tubes are open. This may be done either by arranging an X-Ray test called a Hysterosalpingogram, or by an operation called a Laparoscopy and Dye test. A patient information sheet about these will be given to you when these tests are discussed with you in clinic on your first or subsequent appointment.

Further appointments

These are arranged depending on the findings of the first appointment. The reasons and timings of any follow-up appointments will be discussed with you.

General information on fertility

Fertility

In couples of proven normal fertility the chance of conception per monthly cycle is 20% (1 in 5) in the first month, then subsequently falling to about 5% (1 in 20). The average monthly conception rate is 15% (1 in 7). If conception has not occurred after 12 months, a fertility referral is suggested. One in 10 fertile couples take more than a year to conceive and 1 in 20 take more than two years. Therefore many couples that have been trying to conceive for only a year or two will conceive without help.

About 1 couple in 6 will seek specialist advice about fertility issues. Either the man (30%) or woman (50%) has the main fertility problem, and in about 20% there seem to be problems on both sides. Fortunately in the majority of cases the problem is minor and only time or occasionally simple treatment is required to get pregnant. In the minority a more serious problem is present that may require complicated treatment to achieve a pregnancy.

Preparation for pregnancy

All women planning a pregnancy should take some precautions before they conceive.

Rubella (German measles) can cause serious damage to the baby in early pregnancy so it is important to check by a blood test that you have immunity to Rubella and for you to be vaccinated if you are not already immune.

Chlamydia screening and cervical smears should be up to date. These are normally done by your GP as part of your referral to us.

BMI You should aim to be near their ideal weight for your height. This is normally a BMI above 19 but below 30. If you are overweight for your height you will be strongly encouraged to lose weight before starting treatment, as research has shown that overweight women conceive less easily, require higher doses of drugs to stimulate the ovaries and if they do conceive have a statistically higher rate of miscarriage and complications throughout pregnancy.

Diet A good mixed diet with plenty of iron and folic acid (in green leafy vegetables and breakfast cereals) is advisable. Caffeine and alcohol intake should be low to none.

Smoking should be stopped completely by both partners as it reduces fertility, increases the miscarriage rate, causes low birth weight and increases the likelihood of premature delivery and stillbirth. It is also an essential part of the eligibility criteria for NHS funding if advanced fertility treatments are needed.

Folic Acid supplements are recommended for all women trying for a pregnancy as there is good evidence that it reduces the chances of Spina Bifida. The advised dose is 400 micrograms per day and it is available over the counter in all pharmacies. Women with a BMI above 30 will need a higher dose of 5mg which will need to be prescribed by their GP.

Medical conditions Women *with diabetes, epilepsy, high blood pressure, depression or other illness* should seek advice about their treatment from their GP or condition specialist before trying to conceive. This is to minimise complications in the fetus and themselves in any future pregnancy that may be achieved.

For conception to occur

Semen needs to be ejaculated close to the cervix. Sperm penetrate the cervical mucus, leaving the seminal fluid behind in the vagina (don't be concerned that it runs away afterwards). The sperm are stored in the mucus in the cervical canal for a day or two and are released in a steady stream to swim up the Fallopian tubes to meet the egg.

Sexual intercourse is best timed when the cervical mucus is at its best and most receptive to sperm, a day or so before your ovulation. In that way a constant supply of sperm is provided ready for the egg as soon as it is released. When the egg follicle in the ovary is fully grown it ruptures to release the egg. The egg is picked up by the finger-like fimbriae of the tube and is wafted along the tube, towards the uterus.

Fertilisation of the egg by the sperm occurs in the fallopian tube and the fertilised egg (now called an embryo) begins to divide into 2, 4, 8 cells etc. It remains in the tube for several days before reaching the uterus. There it begins to implant itself in the lining of the uterus (endometrium) about six days after ovulation, and after implantation begins to grow in size.

Soon after implantation, the hormone human chorionic gonadotropin (HCG) from the embryo can enter the woman's bloodstream, and so stimulate the ovarian follicle to keep producing the hormone progesterone. That in turn supports the endometrium and prevents menstruation occurring; normally the first sign of pregnancy. HCG can be detected in the woman's blood and urine and is the basis of pregnancy tests. Later the pregnancy may be seen on ultrasound scan (usually at around 6 to 7 weeks).

Causes of fertility problems

Poor sperm quality (very low counts or poor sperm function)
If the semen analysis shows a low count on repeat testing the man will need to be fully assessed by examination and blood tests to see if anything can be done to increase the number or activity of the sperm. Treatment of the man to improve the sperm count is often not possible. However, cutting down on alcohol consumption, stopping smoking completely and taking a multi-vitamin containing vitamin C and E, zinc and magnesium can lead to an improvement in the sperm quality and count.

Ovulation Problems
The woman may have infrequent periods or even no periods at all. Occasionally the periods are regular but the progesterone blood test 5-10 days before the onset of menstruation will show that ovulation is not occurring properly. Further hormonal blood tests will be required to find the reason for the failure to ovulate properly. Treatment will often be with oral fertility drugs such as clomifene (Clomid) or sometimes with FSH (follicle stimulating hormone) injections. Treatment for ovulation problems, if there are no other fertility problems, is normally very successful.

Damaged fallopian tubes
When a laparoscopy shows blocked or damaged fallopian tubes there may be little chance of pregnancy without more complex treatment. The fallopian tubes may also need to be examined to check on the exact site of the blockage and the health of the inside lining of the fallopian tube. If the damage is mild then it may be possible to carry out an operation that would provide a realistic chance of pregnancy without further treatment. However, often the only realistic chance of pregnancy would be through In-vitro fertilization (IVF) treatment.

Sometimes the fallopian tubes are so damaged that it is best to remove them completely before IVF treatment in order to improve the success rate of IVF. This removal is called a bilateral salpingectomy and is considered if both fallopian tubes are unhealthy and full of fluid (hydrosalpinges).

Endometriosis
In this condition some of the tissue (endometrium) that is normally only found lining the uterus starts to grow outside the uterus. It is often found behind the uterus in the pelvis or on the ovaries. It is thought that 20% of all women before the menopause have a degree of this condition. It is not usually a serious condition but it can be associated with subfertility and can sometimes cause pelvic pain. Laparoscopic treatment to destroy the endometriotic deposits seems to be beneficial in improving the chance of pregnancy but long courses of drug

treatment (six months) are not helpful. (Further information can be accessed via links to the internet at the back of this booklet).

Unexplained infertility (all tests normal)
In 20% of couples presenting with fertility difficulties the basic tests are normal. Most are fertile and have just been unlucky so far and the outlook is good. In couples with two years unexplained subfertility over 50% will conceive in the following two years without treatment.

Treatment with the mild fertility tablet clomifene (Clomid) can slightly increase the chance of conception but only in women where an ovulation problem has been identified. Clomid should not be used long term (see under Drugs used in fertility treatments at JPUH).

When a couple has been trying to conceive for three years, the chance of conception without treatment is decreasing and IVF may be considered. There may also be specific age concerns for individual couples as the chance of spontaneous pregnancy and of successful treatment decline significantly from the age of 35 in the female.

Fertility investigation and treatment

A range of investigations and treatments are offered at the James Paget University Hospital Fertility Unit.

This booklet provides information regarding fertility investigations and treatments at the James Paget University Hospital. It also provides a short summary of information regarding more advanced treatment options offered through referral to other fertility service providers. Please ask if you require any additional information, some of which can be accessed on the internet.

The following investigations may be necessary:-

- Male and Female Hormone profiles.
- Full semen analysis and sperm survival tests.
- Trans-vaginal ultrasound scan.
- Hysterosalpingograpy

- Hysteroscopy.
- Laparoscopy and dye test.

Further details are available later in this booklet.

Fertility tests

Ultrasound Scan
This is a simple, painless way of getting a picture of the uterus and ovaries. These scans are normally carried out using a narrow vaginal probe and are performed in the fertility clinic appointment. The procedure will be explained beforehand but it is important to have an empty bladder for this particular ultrasound scan.

Progesterone blood test
This test checks on whether ovulation is occurring (making an egg). A level of over 25nmol/l, 5-10 days before the onset of your period is good evidence that you are ovulating normally. Healthy fertile women do not always ovulate every month so if the level is low the test will need repeating before coming to any definite conclusion.

Ovarian reserve blood test
This checks the number of eggs you have left in the ovaries (your ovarian reserve). The test is normally done on day 2, 3 or 4 of your cycle (day 1 being the first day of your period) and tests for hormones including follicle stimulating hormone (FSH), LH and E2. FSH levels of less than 9 indicate a good ovarian reserve and over 9 can indicate a low reserve but may need the test to be repeated in another cycle to confirm this. Alternatively you may be given an additional hormone test called Anti-mullerian hormone (AMH) which can be done at any point in your cycle to confirm an ovarian reserve result.

Semen analysis
It is important for a reliable result that the instructions are followed carefully and the specimen examined in the laboratory as soon as possible after collection (an instruction sheet will be given to you in clinic).

The seminal fluid is examined under the microscope and the number and the activity of the sperm counted. A normal man will ejaculate 1.5mls or more of fluid and there will be more than 15 million sperm/ml with at least 40% of them motile (swimming actively). Normal sperm morphology (normal looking sperm) should be at least 4%.

Normally fertile men may from time to time have an abnormal test result, so if the first test is abnormal the semen analysis will need to be repeated. An abnormal result does not necessarily mean infertility but does indicate the need for further tests. A normal test result is encouraging but does not necessarily mean that there is no sperm problem. Some men with normal counts make sperm that do not fertilise the egg (defective sperm function).

Chlamydia cervical swab or Urine test
Chlamydia is an infection which can be carried in the cervix and pelvis of the female. It can be detected by taking a cervical swab or carrying out a urine test. This test is normally done by your GP as part of your referral to us. It is important to be sure that there is not an active infection present before carrying out assisted conception techniques. Such procedures may make the infection worse leading to pelvic inflammatory disease. The presence of Chlamydia may reduce the chances of successful pregnancy outcome.

HIV and Hepatitis B and C blood tests
Couples being referred for IVF procedures must have HIV, Hepatitis B and Hepatitis C blood tests in order to guard against the risk of cross-infection of embryos in long-term storage tanks. This will be explained to you at that time in your clinic appointment. Any positive result would be discussed with you before any treatment was offered. IVF treatment for couples where one or both partners is infected with Hepatitis B, C or HIV is offered by designated IVF Units in the East of England NHS IVF programme, which would also be discussed with you at the time.

Laparoscopy
This is a telescope examination under a general anaesthetic to check on the uterus, fallopian tubes and ovaries. The examination is normally carried out between menstrual periods and before or after the expected date of releasing an egg (ovulation). If the examination is scheduled for after ovulation then it is important to **take precautions against pregnancy in that cycle.** (See your **Patient Information Sheet** for more details).

Hysterosalpingogram
This is an outpatient examination in the X-ray Department at the James Paget University Hospital. It is used to check on whether or not the fallopian tubes are open. It is normally carried out between the 6th and 12th day of a regular menstrual cycle which is after the period has finished and before ovulation occurs. If it is done after ovulation date you will be asked to take precautions against pregnancy in that cycle (an information sheet will be given to you in clinic and the consultant will discuss details of the procedure with you).

Treatment options available at the James Paget University Hospital

- Induction of ovulation with medication
- Laparoscopic tubal surgery
- Laparoscopic ablation of endometriosis
- Laparoscopic bilateral ovarian diathermy for polycystic ovary syndrome

If you require advanced treatments such as IVF this will be discussed with you and you will be given options of where you may receive this treatment.

The current options for patients in the East of England are:

- Bourn Hall Clinic Norwich, Colchester or Cambridge
- Create Health Limited London
- London Women's Clinic
- Guy's & St Thomas Hospital, London.

Starting fertility treatment

Before you start fertility treatment the following points will be explained to you.

- The limitations and possible outcomes of the proposed treatments
- The possible side-effects and risks of the treatment
- The techniques involved
- Alternative treatments
- The possible disruption to your life
- The Fertility Service's statutory duty to take into account the welfare of any children resulting from the treatment and the effect on any existing children
- The importance of telling the unit about any pregnancy and its outcome
- The advantages and disadvantages of continuing treatment after a certain number of attempts.

Consent to treatment

- Before commencing any treatment you will both need to sign a consent form specific to that particular type of treatment
- Consent forms should only be signed after full discussion with members of the clinical team, and when you have been given sufficient verbal and written information.

Drugs used in fertility treatments at JPUH

Clomifene

This drug is used in women who do not ovulate or irregularly ovulate to stimulate the ovaries to ovulate regularly. It is taken from day 2-6 of the menstrual cycle. **You will be given written information in clinic. Evidence is NOT conclusive regarding the long-term effects of the medication on the ovaries therefore. Currently it is felt that this treatment should NOT be continued beyond 12 months** and if pregnancy has not been achieved by that stage then a different treatment should be offered.

Tamoxifen

This drug is sometimes used as an alternative to Clomid and may be offered to women with ovulation problems.

Metfomin

This drug is sometimes used on its own or in conjunction with those above and works particularly well in women who have polycystic ovary syndrome (PCOS).

Follicle Stimulating Hormone FSH

Is a substance which is essentially the same as FSH produced by the human pituitary gland. It stimulates the growth of egg follicles in the ovary similar to the action of Clomid treatment.

Human chorionic gonadotrophin - HCG

This is a hormone which is naturally produced by early pregnancy which is purified and used by injection to mature the developing eggs in the ovary.

Crinone gel or Cyclogest suppositories

A progesterone type drug which helps maintain a receptive lining to the uterus ready for the embryo. It is given either rectally or vaginally and is continued as long as there is a chance of pregnancy becoming established or until the end of the 12th week of an ongoing pregnancy.

Human fertilisation and embryology authority (HFEA) Licensed Infertility Treatments via other service providers

In-Vitro Fertilisation (IVF)
may be considered for:

- Couples where the woman has blocked fallopian tubes
- Male factor sub-fertility
- Sub-fertility associated with endometriosis
- prolonged unexplained subfertility (more than three years).

Treatments offered:

- In-vitro Fertilisation (IVF)
- IVF with Intra-cytoplasmic Sperm Injection (ICSI)
- ICSI IVF following Percutaneous Epididymal Sperm Aspiration (PESA).
- Freezing of spare embryos and later replacement (FET).

In-Vitro Fertilisation (IVF) IVF is the fertilisation of eggs outside of the woman's body. The technique involves many stages starting with ovarian stimulation to encourage the women to produce many eggs instead of the normal one produced each cycle. These eggs are then retrieved and placed into specialist fluid in an incubator in the lab. The man is then asked to produce a semen sample which is prepared in the lab and the healthiest sperm used for the treatment. The two are then added together, put in the incubator overnight and checked the next day for fertilisation. If fertilisation has occurred they develop into embryos and are grown in the incubator for up to six days before the best embryo(s) are transferred back into the woman's womb.

Intra-Cytoplasmic Sperm Injection IVF (ICSI)
ICSI is a technique that has been developed to assist fertilisation when sperm quality is particularly poor. The technique involves injecting a single sperm into the center of each egg. The treated eggs are checked the day after the ICSI procedure to see if fertilisation has occurred. The embryo will then be transferred into the uterus as in a normal IVF cycle and any suitable spare embryos will be frozen and stored for you, if that is your wish.

Useful information

The Human Fertilisation and Embryology Authority produce a wide range of pamphlets, patient guides to IVF and Donor Insemination Clinics and also an Annual Report. These are available from the HFEA website: www.hfea.gov.uk

Also: **British Fertility Society (BFS)**
Website: www.britishfertilitysociety.org.uk/public-resources/

Live Well – NHS Choices gives current information and advice regarding all aspects of fertility enhancement, tests and treatments. It also gives lifestyle advice, smoking cessation, weight reduction, adoption and fostering information.

Website: www.nhs.uk/Livewell

Donor Conception Network provides contact and support for those who have children, or plan family creation, conceived using donated gametes through donor insemination and IVF with donor sperm of eggs.

154 Caledonian Road, London N1 9RD. Tel: 02072 782608
Website: www.dcnetwork.org

Infertility Network UK (IN UK)
IN UK provides practical and emotional support to those experiencing difficulties in conceiving whatever stage of their journey they are at. They have a telephone advice line, medical advisers and a website with news, forums and information.

Tel: 01424 732361 Website: www.infertilitynetworkuk.com

Endometriosis UK
Provides information, help and support for those diagnosed or suspected of having endometriosis.

Tel: 08088 082227 Website: endometriosis-uk.org

Multiple Births Foundation
Provides professional support and information about all aspects of multiple births.

Tel: 02033 133519 Website: www.multiplebirths.org.uk

The Miscarriage Association
Provides support and information around the subject of pregnancy loss.

Tel: 01924 200799 Website: www.miscarriageassociation.org.uk

Useful Websites

There are many websites that provide information about infertility and opportunities to ask questions and exchange personal experiences with others.

www.hfea.gov.uk
www.fertilityfriends.co.uk
www.gettingpregnant.co.uk
www.ivf-infertility.com

If you have unresolved questions please raise these with the Fertility Clinic Staff. It is important that you do not undergo investigations or treatment unless you are fully informed of the indications and possible outcome.

The contact number is 01493 452366

Feedback

We want your visit to be as comfortable as possible. Please talk to the person in charge if you have any concerns. If the ward/department staff are unable to resolve your concern, please ask for our Patient Advice and Liaison (PALS) information. Please be assured that raising a concern will not impact on your care. **Before you leave the hospital you will be asked to complete a Friends and Family Test feedback card.** Providing your feedback is vital in helping to transform NHS services and to support patient choice.

Trust Values

Courtesy and respect
- A welcoming and positive attitude
- Polite, friendly and interested in people
- Value and respect people as individuals

So people feel **welcome**

Attentively kind and helpful
- Look out for dignity, privacy & humanity
- Attentive, responsive & take time to help
- Visible presence of staff to provide care

So people feel **cared for**

Responsive communication
- Listen to people & answer their questions
- Keep people clearly informed
- Involve people

So people feel **in control**

Effective and professional
- Safe, knowledgeable and reassuring
- Effective care / services from joined up teams
- Organised and timely, looking to improve

So people feel **safe**

IN TRAN communication for all

The hospital can arrange for an interpreter or person to sign to assist you in communicating effectively with staff during your stay. Please let us know.

For a large print version of this leaflet, contact PALS 01493 453240

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