

Fertility Treatment

This leaflet is for women and their partners in East and North Hertfordshire who are trying for a baby and having difficulty getting pregnant.

General information

Around 1 in 7 couples may have difficulty conceiving. This is approximately 3.5 million people in the UK.

Some women conceive (get pregnant) quickly, but for others it can take longer. For every 100 couples trying to conceive naturally:

- 84 will conceive within 1 year.
- 92 will conceive within 2 years.
- 93 will conceive within 3 years.

It's a good idea for a couple to visit their GP if they have not conceived after 1 year of trying. Women aged 36 and over, and anyone who is already aware they may have fertility problems, should see their GP sooner. The GP can check for common causes of fertility problems and suggest treatments that could help.

For couples who have been trying to conceive for more than 3 years without success, the likelihood of pregnancy occurring within the next year is 25% or less.

When a couple cannot get pregnant (conceive), despite having regular unprotected sex, this is known as infertility.

Infertility

The diagnosis of infertility is made when a couple have been trying for a baby for 1 year and have been unable to become pregnant.

There are two types of infertility:

- **Primary Infertility** – where someone who has never conceived a child in the past has difficulty conceiving.
- **Secondary Infertility** – where a person has had one or more pregnancies in the past but is having difficulty conceiving again.

The treatment offered will depend on what is causing your fertility problems and what is available from your local Integrated Care Board (ICB).

Causes of infertility

Fertility problems can affect both men and women. There are many potential causes for infertility and, for 25% of couples, it may not be possible to identify a cause.

Infertility in women

Ovulation disorders

Infertility is most commonly caused by problems with ovulation (the monthly release of an egg). Some problems stop women releasing eggs at all, and some cause an egg to be released during some cycles, but not others.

Ovulation problems can occur as a result of many conditions, such as:

- Polycystic Ovary Syndrome (PCOS) – a condition that makes it more difficult for your ovaries to produce an egg.
- Thyroid problems – both an overactive thyroid gland (hyperthyroidism) and underactive thyroid (hypothyroidism) can prevent ovulation.
- Premature ovarian failure – where a woman's ovaries stop working before she is 40.

Womb and fallopian tubes

The fallopian tubes are the tubes along which an egg travels from the ovary to the womb. The egg is fertilised as it travels down the fallopian tubes. When it reaches the womb, it is implanted into the womb's lining where it continues to grow.

If the womb or the fallopian tubes are damaged or stop working, it may be difficult to conceive naturally. This can occur following a number of factors outlined below.

Scarring from surgery

Pelvic surgery can sometimes cause damage and scarring to the fallopian tubes. Cervical surgery can also sometimes cause scarring or shorten the cervix (the neck of the womb).

Cervical mucus defect

When you are ovulating, mucus in your cervix becomes thinner so that sperm can swim through it more easily. If there is a problem with your mucus, it can make it harder to conceive.

Submucosal fibroids

Fibroids are benign (non-cancerous) tumours that grow in or around the womb. Submucosal fibroids develop in the muscle beneath the inner lining of the womb wall and grow into the middle of the womb.

Submucosal fibroids can reduce fertility although exactly how they do this is not yet known. It is possible that a fibroid may prevent an embryo from implanting itself into your womb.

Endometriosis

Endometriosis is a condition where small pieces of the womb lining, known as the endometrium, start growing in other places, such as the ovaries.

This can cause infertility because the new growths form adhesions (sticky areas of tissue) or cysts (fluid-filled sacs) that can block or distort the pelvis. It can disturb the way that a follicle (fluid-filled space in which an egg develops) matures and releases an egg, making it difficult for an egg to be released and become implanted into the womb.

Pelvic inflammatory disease

Pelvic inflammatory disease (PID) is an infection of the upper female genital tract which includes the womb, fallopian tubes and ovaries. It is often the result of a sexually transmitted infection (STI). PID can damage and scar the fallopian tubes, making it virtually impossible for an egg to travel down into the womb.

Sterilisation

Some women choose to be sterilised if they do not wish to have any more children. Sterilisation involves blocking the fallopian tubes to make it impossible for an egg to travel to the womb. This process is rarely reversible and, if you do have a sterilisation reversed, it will not necessarily mean that you will become fertile again.

Medicines and drugs

The side effects of some types of medication and drugs can affect your fertility. These medicines are outlined below:

- Non-steroidal anti-inflammatory drugs (NSAIDs) - Long-term use or a high dosage of NSAIDs, such as ibuprofen or aspirin, can make it more difficult for you to conceive.
- Chemotherapy - Medicines used for chemotherapy (a treatment for cancer) can sometimes cause ovarian failure which means your ovaries will no longer be able to function properly. Ovarian failure can be permanent.
- Neuroleptic medicines are antipsychotic medicines often used to treat psychosis. They can cause missed periods or infertility.
- Spironolactone – this is a type of medicine used to treat fluid retention (oedema). Fertility should recover around 2 months after you stop taking spironolactone.
- Illegal drugs such as marijuana and cocaine can seriously affect fertility, making ovulation (the monthly cycle where an egg is released from the ovaries) more difficult.

Age

Infertility in women is also linked to age. The biggest decrease in fertility begins during the mid-thirties. Among women who are 35, 95% will get pregnant after 3 years of having regular unprotected sex. For women who are 38, only 75% will get pregnant after 3 years of having regular unprotected sex.

Infertility in men

Semen

Male infertility is caused by abnormal semen (the fluid containing sperm that is ejaculated during sex). Possible reasons for abnormal semen include:

- Decreased number of sperm – you may have a very low sperm count, or no sperm at all.
- Decreased sperm mobility – this will make it harder for your sperm to swim to the egg.
- Abnormal sperm – sperm can sometimes be an abnormal shape, making it harder for them to move and fertilise an egg.
- Many cases of abnormal semen are unexplained but can be due to a variety of factors.

Testicles

The testicles are responsible for producing and storing sperm. If they are damaged, it can seriously affect the quality of your semen. This may occur if you have, or have had in the past, any of the following:

- An infection of your testicles.
- Testicular cancer.
- Testicular surgery.
- A congenital defect (a problem with your testicles that you were born with).

- Undescended testicles (when one or both of your testicles has not descended into the scrotum).
- Trauma (injury) to your testicles.

Absence of sperm

Your testicles may produce sperm but it may not reach your semen. The absence of sperm in your semen is known as obstructive azoospermia. This could be due to a blockage in one of the tiny tubes that make up your reproductive system which may have been caused by an infection or surgery.

Sterilisation

A vasectomy is the surgical procedure for male sterilisation. It involves cutting and sealing off the vas deferens (the tubes that carry sperm out of your testicles) so that your semen will no longer contain any sperm. A vasectomy can be reversed, but reversals are not usually successful.

Ejaculation disorders

Some men experience ejaculation problems that can make it difficult for them to ejaculate. Ejaculation problems include:

- Retrograde ejaculation – where semen is ejaculated into your bladder.
- Premature ejaculation – where ejaculation occurs too quickly.

Hypogonadism

Hypogonadism is an abnormally low level of testosterone which is the male sex hormone that is involved in making sperm. This could be due to a tumour, taking illegal drugs, or Klinefelter's syndrome (a rare genetic condition where a man is born with an extra female chromosome).

Medicines and drugs

Certain types of medicines can sometimes cause infertility problems. These medicines are listed below:

- Sulfasalazine – an anti-inflammatory medicine used to treat conditions such as Crohn's disease (inflammation of the intestine) and rheumatoid arthritis (painful swelling of the joints). Sulfasalazine can decrease the number of sperm, but its effects are temporary and your sperm count should return to normal when you stop taking it.
- Anabolic steroids – often used illegally to build muscle and improve athletic performance. Long-term use or abuse of anabolic steroids can reduce sperm count and sperm mobility.
- Chemotherapy – medicines used in chemotherapy can sometimes severely reduce sperm production.
- Herbal remedies – some herbal remedies, such as root extracts of *Tripterygium wilfordii* (a Chinese herb), can affect the production of sperm or reduce the size of your testicles.
- Illegal drugs such as marijuana and cocaine can also affect semen quality.

Alcohol

Drinking too much alcohol can damage the quality of your sperm. Guidelines published by the National Institute for Health and Care Excellence (NICE) state that if men follow the Department of Health's recommendations of drinking no more than three to four units of alcohol a day, it is unlikely their fertility will be affected. However, drinking more than this could make it difficult to conceive.

Infertility in both men and women

There are many factors that can affect fertility in both men and women.

Weight

Being overweight or obese reduces both male and female fertility. In women, being overweight can affect ovulation. Being underweight can also have an impact on fertility, particularly for women, who will not ovulate if they are severely underweight.

Sexually transmitted infections (STIs)

There are several STIs that can cause infertility. For example, chlamydia can damage the fallopian tubes in women, and cause swelling and tenderness of the scrotum (the pouch containing the testes) in men.

Smoking

As well as affecting your general and long-term health, smoking can also adversely affect fertility.

Occupational and environmental factors

Exposure to certain pesticides, metals and solvents can affect fertility in both men and women.

Stress

If either you or your partner are stressed, it may affect your relationship. Stress can contribute to a loss of libido (sex drive), which in turn can reduce the frequency of sexual intercourse. Severe stress may also affect female ovulation and limit sperm production.

Diagnosing infertility - Tests for women

For women, a number of tests can be used to try and establish the cause of infertility:

Hormone tests

A sample of your blood can be tested for a hormone called progesterone, to check whether you are ovulating. The timing of the test is based on how regular your periods are. If you have irregular periods, you will be offered a test to measure hormones called gonadotrophins which stimulate the ovaries to produce eggs.

Checking your ovaries

Your ovaries may be tested before you are offered fertility drugs. This may be either a blood test to measure certain hormones or an ultrasound scan to examine the follicles in your ovaries.

Chlamydia test

Chlamydia is an STI that can affect fertility. A swab (similar to a cotton bud but smaller, soft and rounded) is used to collect some cells from your cervix to test for chlamydia. If you have chlamydia, you will be prescribed antibiotics to treat it.

Hysterosalpingogram

A hysterosalpingogram is a type of X-ray taken of your womb (uterus) and fallopian tubes after a special dye has been injected. This will outline the cavity of your womb and detect any blockage of the fallopian tubes.

Laparoscopy

A laparoscopy involves making a small cut in your lower abdomen (tummy). A thin, tubular telescope called a laparoscope will be used to look more closely at your womb, fallopian tubes and ovaries. Dye may be injected into your fallopian tubes through your cervix to highlight any blockages in them.

A laparoscopy is usually only used if there is a strong chance that you have a problem, for example, if you have had an episode of PID in the past.

Examination and tests for men

During a physical examination, your GP may check:

- Your testicles – to look for any lumps or deformities.
- Your penis – to look at its shape and structure, and for any obvious abnormalities.

Further testing may include:

- A semen analysis – your semen will be tested to determine whether you have a low sperm count, low sperm mobility or abnormal sperm.
- A chlamydia test – a sample of your urine will be tested to determine whether you have chlamydia. If you do have chlamydia, your GP will prescribe antibiotics to treat it.

Treating infertility

The treatment you are offered will depend on what is causing your fertility problems and what is available from your local ICB.

Eligibility for treatment

Fertility treatment funded by the NHS varies across the UK. In some areas, waiting lists for treatment can be very long. The criteria that you must meet to be eligible for treatment can also vary.

Your GP will be able to advise about your eligibility for treatment. If your GP refers you to a specialist for further tests, the NHS will pay for this. All patients have the right to be referred to an NHS clinic for the initial investigation.

Considering private treatment

If you have an infertility problem, you may wish to consider private treatment. This can be expensive and there is no guarantee of success. It is important to choose a private clinic carefully. You should find out:

- Which clinics are available.
- Which treatments are offered.
- The success rates of treatments.
- The length of the waiting list.
- The costs.

Ask for a personalised, fully costed treatment plan that explains exactly what is included, such as fees, scans and any necessary medication.

If you decide to go private, you can ask your GP for advice and make sure you choose a clinic licensed by the Human Fertilisation and Embryology Authority (HFEA). The HFEA is a government organisation that regulates and inspects all UK clinics that provide fertility treatment, including the storage of eggs, sperm or embryos.

Treatment options

There are three main types of fertility treatment:

- Medicines to assist fertility.
- Surgical procedures.
- Assisted conception.

Medicines to assist fertility

Medicines often used to assist fertility are listed below. These are usually prescribed for women although in some cases they may also be prescribed for men:

- **Clomifene and letrozole** help to encourage ovulation (the monthly release of an egg) in women who do not ovulate regularly or who cannot ovulate at all.
- **Metformin** is particularly beneficial for women with polycystic ovary syndrome (PCOS).
- Gonadotrophins can help stimulate ovulation in women and may also improve fertility in men.
- Gonadotrophin-releasing hormone and dopamine agonists are other types of medication prescribed to encourage ovulation in women.

However, medication that stimulates the ovaries should not be given to women with unexplained infertility as it is not thought to be an effective treatment in these circumstances.

Surgical procedures

Surgical procedures that may be used to investigate fertility problems and assist with fertility are detailed below:

Fallopian tube surgery

If your fallopian tubes have become blocked or scarred, perhaps as a result of pelvic inflammatory disease (PID), you may need surgery to repair the tubes. Surgery can be used to break up the scar tissue in your fallopian tubes, making it easier for eggs to pass along them.

The success of surgery will depend on how damaged your fallopian tubes are. One study found that 69% of women with the least damaged tubes had a live birth after surgery. Other estimates for live births in women following surgery are 20 - 50%.

Possible complications from tubal surgery include an ectopic pregnancy (when the fertilised egg implants outside of your womb). Between 8% and 23% of women may experience an ectopic pregnancy after having surgery on their fallopian tubes.

Laparoscopic surgery

Laparoscopic surgery is often used for women who have endometriosis (when parts of the womb lining start growing outside of the womb) to destroy or remove cysts (fluid-filled sacs). It may also be used to remove submucosal fibroids (small growths in the womb).

In women with PCOS, laparoscopic ovarian drilling can be used if ovulation medication has not worked. This involves using either heat or a laser to destroy part of the ovary.

Correction of an epididymal blockage

The epididymis is a coil-like structure in the testicles that helps to store and transport sperm. Sometimes the epididymis becomes blocked, preventing sperm from being ejaculated normally. If this is causing infertility, surgery to correct the blockage can be performed.

Surgical extraction of sperm

Surgical extraction of sperm may be an option for men with:

- an obstruction that prevents the release of sperm, such as an injury or infection.
- a congenital absence of the vas deferens (men born without the tube that drains the sperm from the testicle).
- a vasectomy or a failed vasectomy reversal.

Both procedures only take a few hours and are carried out as outpatient procedures under local anaesthetic. You will be advised on the same day about the quality of the material collected and if there are any sperm present.

Any material with sperm will be frozen and placed in storage for use at a later stage. If surgical retrieval of sperm is successful, enough sperm is usually obtained for several cycles of treatment (if required).

Assisted conception

Intrauterine insemination (IUI)

Intrauterine insemination (IUI) involves sperm being placed into the womb through a fine plastic tube.

- Sperm is collected and washed in a fluid. The best quality specimens (the fastest moving) are selected and passed through a tube that enters the cervix and extends into the womb.
- This procedure is performed to coincide with ovulation to increase the chance of conception. The woman may also be given a low dose of ovary stimulating hormones to increase the likelihood of conception.
- Some women may experience temporary cramps (similar to period cramps) after or during IUI, but other than that the procedure should be painless.

Availability and success

The National Institute for Health and Care Excellence (NICE) recommends that you should be offered up to six cycles of IUI if:

- You are unable (or would find it very difficult) to have vaginal intercourse – for example, due to a physical disability.
- You have a condition (such as a viral infection that can be sexually transmitted) that means you need specific help to conceive.
- You are in a same-sex relationship.

The availability of this fertility treatment on the NHS varies throughout the UK. In some areas, the waiting list for treatment can be very long. The criteria that must be met to be eligible for treatment can also vary.

Provided that the man's sperm and the woman's tubes are healthy, the success rate for IUI in women under 35 is around 15% for each cycle of treatment.

In-vitro fertilisation (IVF)

During in-vitro fertilisation (IVF), the fertilisation of the egg occurs outside the body. The woman takes fertility medication to encourage her ovaries to produce more eggs than normal. Eggs are then removed from her ovaries and fertilised with sperm in a laboratory dish. A fertilised embryo is then put back inside the woman's body.

There are several different methods that can be used during IVF and intracytoplasmic sperm injection (ICSI). You can read more about these and other fertility procedures on the HFEA website.

Availability and Success

NICE recommends that IVF should be offered to women up to 42 years of age, depending on their circumstances. However, the implementation of these guidelines currently depends on your local ICB. Priority is often given to couples who do not already have a child living with them.

The success rate for a cycle of IVF is about 32% for women under 35 years of age. The success rate decreases as the woman's age increases.

Egg and sperm donation

If you or your partner has an infertility problem, you may be able to receive eggs or sperm from a donor to help you conceive. Treatment with donor eggs is usually carried out using IVF.

Anyone who registered to donate either eggs or sperm after 1st April 2005 can no longer remain anonymous and has to provide information about their identity. This is because a child born as a result of donated eggs or sperm is legally entitled to find out the identity of the donor upon reaching the age of 18.

Complications of infertility treatment

Some infertility treatments can cause complications, including side effects from medication, multiple pregnancy and stress.

Side effects of medication

Some medications used to treat infertility can cause side effects. These may include:

- Nausea.
- Vomiting.
- Diarrhoea.
- Stomach pains.
- Headaches.
- Hot flushes.

For a full list of possible side effects, please see the patient information leaflet that comes with your medication.

Ovarian hyperstimulation syndrome

Ovarian hyperstimulation syndrome (OHSS) is a rare complication of in-vitro fertilisation (IVF). It occurs in women who are very sensitive to the fertility drugs taken to increase egg production. Too many eggs develop in the ovaries which become very large and painful.

OHSS is more common in women under 30 and in women who have polycystic ovary syndrome (PCOS). OHSS generally develops in the week after egg collection.

The symptoms of OHSS are pain and bloating low down in your abdomen (tummy), nausea or vomiting. Severe cases can be dangerous. Contact your clinic if you have any of these symptoms; you may need to go to hospital so that your condition can be monitored and treated by healthcare professionals.

Ectopic pregnancy

If you have IVF, you have a slightly higher risk of an ectopic pregnancy. This is where the embryo implants in the fallopian tubes rather than in the womb.

- If you have a positive pregnancy test, you'll have a scan at 6 weeks to make sure the embryo is growing properly, and that the pregnancy is normal.
- Tell your doctor if you experience vaginal bleeding or stomach pain after having IVF and a positive pregnancy test.

Pelvic infection

The procedure to extract an egg from an ovary may result in a painful infection developing in your pelvis. However, the risk of serious infection is very low. For example, there is likely to be less than one serious infection for every 500 procedures performed.

Multiple pregnancy

If more than one embryo is replaced in the womb as part of IVF treatment, there's an increased chance of producing twins or triplets.

Having more than one baby may not seem like a bad thing, but it significantly increases the risk of complications for you and your babies. These include:

- A higher risk of miscarriage, anaemia and heavy bleeding. You are also more likely to go into early labour and need a caesarean section or assisted ventouse or forceps delivery.
- Up to 25% of multiple pregnancies cause pregnancy related high blood pressure.
- Two to three times more likely to develop gestational diabetes during pregnancy if you're carrying more than one baby.
- The risk of pre-eclampsia is three times higher for twin pregnancies and nine times higher for triplets.

The 2013 NICE fertility guidelines recommend that double embryo transfers should only be considered during treatment in women aged 40-42. Younger women should only be considered for a double embryo transfer if there are no top-quality embryos.

Stress

Infertility can be stressful and put a strain on relationships. It may be helpful to join a support group where you can talk through your feelings with others experiencing similar problems.

Finding out you have a fertility problem can be traumatic and many couples find it helpful to talk to a counsellor. They can discuss treatment options, how they may affect you and the emotional implications. Your GP should be able to refer you to a counsellor as part of your fertility treatment.

Preventing infertility

For some, adopting a healthier lifestyle through simple lifestyle changes, or staying up to date with regular health checks and tests, may help to prevent infertility.

Lifestyle changes

Weight

Women who are either underweight or overweight ovulate (release an egg) less regularly or sometimes not at all, compared to women of a healthy weight. Therefore, ensuring you maintain a healthy weight will make it easier to conceive.

Women with a body mass index (BMI) above 30 are likely to take longer to conceive and your GP may recommend that you lose weight. A BMI of less than 19 may mean you are ovulating less frequently.

Men with a BMI of 30 or over are likely to have reduced fertility and your GP may recommend that you lose weight. Regular exercise and a healthy diet can help maintain a suitable weight.

Diet

Make sure that you eat a nutritious, balanced diet of at least five portions of fruit and vegetables a day. Include carbohydrates such as wholemeal bread and pasta, and proteins such as lean meat, fish and pulses. Green, leafy vegetables are high in folic acid which can help prevent birth defects.

Stress

Stress can often affect fertility because it may lead to you having sex less frequently. For the best

chance of becoming pregnant, you need to have sex every two to three days. Talk to your partner if you are feeling stressed and consider using counselling (talking therapy). You may also find regular exercise helpful.

Medicines and drugs

Illegal drugs such as marijuana or cocaine can affect fertility and can seriously damage the development of your baby if you fall pregnant. You should therefore avoid using them. You should also avoid using some prescription medicines if you are trying to get pregnant. Ask your GP for further advice.

Health checks and tests for women

Make sure you are up to date with your cervical screening tests (smear tests). You need to have one every 3-5 years, depending on your age.

You should also visit your local sexual health clinic (GUM clinic) to make sure you do not have any sexually transmitted infections (STIs). Infections such as chlamydia may not have symptoms but can cause infertility if left untreated.

Pre-pregnancy advice

If you are planning a pregnancy, you should be taking Folic Acid 400mcg daily.

Additional information

The following details are provided to help you choose a fertility centre if assisted conception is recommended.

Provider choices for assisted conception

Bourn Hall Clinic - Cambridge

High Street

Bourn

Cambridge CB23 2TN

Tel: 01954 717210

<http://www.bourn-hall-clinic.co.uk/>

Bourn Hall Clinic - Colchester

Charter Court

Newcomen Way

Colchester

Essex C04 9YA

Tel: 01954 717210

<http://www.bourn-hall-clinic.co.uk/our-fertility-clinics/bourn-hall-clinic-colchester/>

Bourn Hall Clinic - Norwich

Unit 3, The Apex

Gateway 11, Farrier Close

Wymondham

Norfolk NR18 0WF

Tel: 01954 717210

<http://www.bourn-hall-clinic.co.uk/our-fertility-clinics/bourn-hall-clinic-norwich/>

London Women's Clinic - Harley Street

113 & 115 Harley Street

Marylebone

London W1G 6AP

Tel: 020 7563 4309

<https://www.londonwomensclinic.com/>

London Women's Clinic - London Bridge

The Bridge Centre

One St Thomas Street

London Bridge SE1 9RY

Tel: 020 7563 4309

<https://www.londonwomensclinic.com/>

London Sperm Bank

112 Harley Street

London W1G 7JQ

Tel: 020 7563 4309

<https://www.londonwomensclinic.com/>

Create Fertility - Wimbledon

St George's House

3-5 Pepys Road

West Wimbledon SW20 8NJ

Tel: 0333 240 7300

<https://www.createfertility.co.uk/fertility-clinics/london-wimbledon>

Create Fertility - St Paul's

150 Cheapside

London EC2V 6ET

Tel: 0333 240 7300

<https://www.createfertility.co.uk/fertility-clinics/london-st-pauls>

The Centre for Reproductive and Genetic Health (CRGH)

230-232 Great Portland Street

London W1W 5QS

Tel: 020 7837 2905

<https://crgh.co.uk/>

Guys and St Thomas'

11th Floor, Tower Wing

Great Maze Pond

London SE1 9RT

Tel: 020 7188 2300

<https://www.guysandstthomas.nhs.uk/our-services/acu/overview.aspx>

Further information

- **NHS Website for England** - www.nhs.uk/conditions/infertility/treatment/
- **Human Fertilisation and Embryology Authority (HFEA)** - www.hfea.gov.uk
- **National Institute of Clinical Excellence (NICE)** - www.nice.org.uk/guidance/CG156

Useful contact details

East and North Hertfordshire Teaching NHS Trust:

- Website www.enherts-tr.nhs.uk
- Telephone 01438 314333

Leaflet information

You can request this information in a different format or another language; please speak to your doctor or nurse.

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