

## What causes infertility?

There are many potential causes of infertility, and fertility problems can affect either the man or the woman. However, it is not always possible to identify the cause. Common causes of infertility in women include lack of regular ovulation (the monthly release of an egg), blockage of the fallopian tubes and endometriosis. However, for 25% of couples, the cause is unexplained. In men, the most common cause is poor quality of semen (the fluid containing sperm that is ejaculated during sex). For some people, leading a healthy lifestyle and staying up to date with regular health checks and tests may help.

## When should I seek help?

Around 84% of couples conceive naturally within one year of having regular (every two to three days) unprotected sexual intercourse. You should visit your GP if you have not conceived after one year of trying. You should visit your GP sooner if:

- you have any reason to be concerned about your fertility – for example, if you have had treatment for cancer
- you are a woman aged 36 and over

Fertility testing and investigation can be a lengthy process, and female fertility decreases with age, so it is best to make an appointment early on. It is always best for both partners to visit their GP, because fertility problems can affect a man or a woman, and sometimes both partners. The process of trying to conceive can be an emotional one, so it is important to support each other as much as possible.

The GP can check for common causes of fertility problems, and suggest treatments that could help. You may be offered medical treatment for lack of regular ovulation or surgical procedures, such as treatment for endometriosis, or you may be referred for Assisted Conception. The treatment offered will depend on what is causing your fertility problems and what is available from your local Clinical Commissioning Group (CCG).

## Am I eligible for NHS funded Assisted Conception?

The criteria you need to meet for NHS funding approval varies between each CCG around the country. As a first step to secure funding for treatment, you will need to see your GP. They will be able to start the processes required before you are referred on to secondary care. Once you have completed all your medical investigations in primary and secondary care, your referral is passed to the CCG for approval.

## What are the access criteria for Brighton and Hove CCG?

- The woman should be aged under 40 at the time of treatment
- No more than 1 previous cycles of IVF (privately funded or NHS)
- Women must have a body mass index within the range 19-29.9 kg/m<sup>2</sup>
- Both partners should be non-smoking at time of referral and time of treatment
- Women should have an AMH >4.9 pmol/l
- Neither partner in a couple should have a living child from their relationship or any previous relationship
- Neither partner should have undergone previous sterilization
- Couples should have had 12 months of regular unprotected sexual intercourse and attempting to conceive for at least 12 months for women under the age of 36, women 36 years and over will be offered an earlier referral

## What happens if I am accepted for NHS funding?

You will be referred to a Fertility Clinic where one of the doctors will assess your unique situation and recommend the best course of treatment for you.

## How many cycles of IVF treatment does the CCG offer?

A full cycle of IVF treatment, with or without ICSI, should comprise one episode of ovarian stimulation and the transfer of resultant fresh and frozen embryo(s), in line with the relevant policy.

Couples will not be funded if either partner has already had two previous fresh cycles of IVF, with or without ICSI, irrespective of how these were funded.

This means that eligible couples will be funded:

- Two fresh cycles of IVF, with or without ICSI, if no previous fresh cycles have been undertaken
- One fresh cycle of IVF, with or without ICSI, if the couple has already received one previous fresh cycle

Overall, eligible couples will be funded for a maximum of four embryo transfers (including no more than two transfers from fresh IVF cycles), in line with the relevant policy.

## What can I do if I am not accepted for NHS funding?

You may wish to consider private treatment. This can be expensive, and there is no guarantee it will be successful.

It is important to choose a private clinic carefully. You can ask your GP for advice, and you should make sure you choose a clinic that is licensed by the Human Fertilisation and Embryology Authority (HFEA).

## What is In Vitro Fertilization (IVF)?

During *in vitro* fertilization (IVF), eggs and sperm are taken from the couple and are incubated together in a dish in a laboratory to produce an embryo. A health care provider places the embryo into the woman's uterus, where it may implant and result in a successful pregnancy.

The steps of IVF are:

- Stimulation of Egg Maturation
- Egg Retrieval
- Fertilisation
- Embryo Transfer

### Stimulation of Egg Maturation

In this process, also known as ovarian stimulation or ovulation induction, a woman takes medication to stimulate the ovaries to make many mature eggs at one time.

These medications are given by injection for 8 to 14 days. A health care provider closely monitors the development of the eggs using transvaginal ultrasound. Blood is drawn frequently to assess oestrogen production by the ovaries. When the eggs are mature—as determined by the size of the ovarian follicles and the level of oestrogen—an hCG injection initiates the ovulation process. A health care provider takes out (egg retrieval) the eggs 34 to 36 hours after the injection.

### Egg Retrieval

This is the process used to remove the eggs from the ovaries so they can be fertilized. The procedure is performed in a physician's office as an outpatient procedure. A mild sedative and painkiller are often used during the procedure, and it normally takes about 30 minutes. The steps for egg retrieval are:

- An ultrasound probe is inserted into the vagina to visualize the ovaries and the follicles, which contain the eggs.
- A needle is inserted through the wall of the vagina to the ovaries.
- Suction is used to pull the eggs from the ovaries into the needle.

### Fertilisation

A man provides a semen sample. If the sperm are healthy, they are placed in a dish with the egg and left overnight in an incubator. Fertilisation usually occurs on its own. However, sometimes sperm are not able to fertilise the egg on their own. When this is the case, a single sperm is injected into an egg using a needle. This process is called intracytoplasmic sperm injection (ICSI). Embryos that develop from IVF are placed into the uterus from 1 to 6 days after retrieval.

### **Embryo Transfer**

This procedure is performed in a physician's office. The procedure is normally painless, but some women may experience cramping. A health care provider inserts a long, thin tube through the vagina and into the uterus and injects the embryo into the uterus. The embryo should implant into the lining of the uterus 6 to 10 days after retrieval.

### **What are the success rates for IUI and IVF?**

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.

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.

### **Are there any complications associated with Assisted Conception?**

Assisted conception may result in:

- side effects of medication
- increased risk of ectopic pregnancy
- multiple pregnancy
- stress

### **What is not funded by the NHS?**

The following are not funded by Brighton and Hove CCG:

#### **Third Party Assisted ART**

When couples do not achieve pregnancy from infertility treatments or traditional ART, they may choose to use a third party assisted ART method to have a child. Assistance can consist of:

- Sperm Donation
- Egg Donation
- Surrogates and Gestational Carriers

#### **Sperm Donation**

Couples can use donated sperm when a man does not produce sperm or produces very low numbers of sperm, or if he has a genetic disease. Donated sperm can be used with intrauterine insemination or with IVF.

#### **Egg Donation**

This can be used when a woman does not produce healthy eggs that can be fertilized. An egg donor undergoes ovary stimulation and egg retrieval steps of IVF. The donated egg can then be fertilised by sperm from the woman's partner, and the resulting embryo is placed into the woman's uterus.

Egg donation may be particularly helpful for women who:

- Have primary ovary insufficiency (POI)
- Have had chemotherapy or radiation therapy
- Have had surgical removal of the ovaries
- Were born without ovaries
- Are carriers of known genetic diseases

The donation of eggs, sperm and embryos is subject to strict UK regulations. Donors may be family, friends or strangers. In 2005, the law was changed so that donors can no longer remain anonymous. Now children born as a result of using donor gametes or embryos can, once they reach 18, discover

their donor's identity (HFEA, 2007b). The regulation of donors in other countries is different to that in the UK.

### **Surrogates and Gestational Carriers**

If a woman is unable to carry a pregnancy to term, she and her partner may choose a surrogate or gestational carrier.

A surrogate is a woman inseminated with sperm from the male partner of the couple. The resulting child will be biologically related to the surrogate and to the male partner. Surrogacy can be used when the female of the couple does not produce healthy eggs that can be fertilised.

In contrast, a gestational carrier is implanted with an embryo that is not biologically related to her. This alternative can be used when a woman produces healthy eggs but is unable to carry a pregnancy to term. If needed, egg or sperm donation can be used in this situation.