

Patient information from BMJ

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Fertility problems: what treatments work?

Definitions of fertility problems vary in different countries. But couples are usually diagnosed as having fertility problems if they have been trying for a baby without success for between one and two years.

If you're a woman aged over 35, your doctor might suggest some tests and perhaps offer treatment after as little as six months.

What happens in fertility problems?

For couples trying to have a child, facing the possibility of fertility problems can be very stressful. You might worry that you'll never be able to have a baby.

But fertility problems are common and there are treatments that can help.

The treatments you are offered will depend on what's causing your problems. The most common reasons for fertility problems are that:

- The woman is not releasing eggs (ovulating) regularly. The most common cause of this is a condition called **polycystic ovary syndrome (PCOS)**
- The eggs are being released but cannot get from the ovaries to the womb (uterus), because the **fallopian tubes** that connect them are blocked or damaged. You might hear this being called tubal infertility
- The man is not producing enough sperm
- The sperm are abnormal in shape and can't fertilise the eggs
- The woman has a condition called **endometriosis**.

You will have a range of tests to try to find out what the most likely problem is. But some couples never find out what is causing their infertility.

This doesn't mean that they can't get pregnant. It just means that doctors will offer treatments that may help without being completely sure of what the cause of infertility is.

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What treatments are available?

There are several different treatment options to help infertility.

These include:

- Medicines (including hormone treatments)
- Surgery, or
- 'assisted conception' treatments such as in vitro fertilisation (**IVF**).

It's important to remember that not everyone who has fertility treatment gets pregnant. This means it can be an uncertain and emotionally difficult process.

Even if treatment is successful and couples do get pregnant, there's still a risk of miscarriage.

Treatment for infertility doesn't make a miscarriage less likely. The older the woman, the greater the chance of miscarriage.

The overall success of infertility treatment depends on the woman's age, the cause of infertility, and the treatment given.

Counselling

Before starting any kind of fertility treatment it's important to think about what's involved. Couples should weigh up the strain of treatment and the risk of possible side effects against the chances of success.

It might help you to talk with an infertility counsellor. They can help you and your partner understand your options and chances of success.

Medicines to stimulate the ovaries

Women whose infertility is caused by problems with ovulation (often caused by **PCOS**) are usually offered drugs to encourage ovulation as their first option. The treatment is called controlled ovarian stimulation.

The first treatment you're likely to be offered will either be a medicine called clomifene or another called letrozole. Clomifene and letrozole are both tablets that help you ovulate.

Treatment with clomifene has been shown to help:^[1]

- About 70 in 100 women with ovulation problems ovulate and
- About 35 in 100 get pregnant. That's three times as many women getting pregnant as would have done without treatment.

These medicines can cause side effects in some women but they're usually not serious and don't need treatment. They include feeling bloated, puffy, or uncomfortable, and having hot flushes. In rare cases, these medicines can also cause a more serious side effect called ovarian hyperstimulation syndrome (OHSS). This is when a woman's body over-reacts to the hormones, causing the ovaries to swell. If you notice weight gain, swelling in your legs or belly, or difficulty breathing, get medical help straight away.

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Women who get pregnant after taking clomifene are more likely to have twins. About 10 in 100 women who get pregnant using clomifene will have twins.^[2] A small number of women (around 1 in 100) have more than two babies. Women who get pregnant after taking letrozole are also more likely to have twins, but not as much when compared to other treatments.

Some research has shown that letrozole can be more effective in women with PCOS who are trying to get pregnant.

If you have PCOS you may be offered a medicine called **metformin**. It's normally used to treat diabetes. But it may also help you ovulate if clomifene alone hasn't helped. Your doctor will likely suggest that you try losing weight if you are overweight or obese too.

You may be treated with clomifene or letrozole if you have a condition called endometriosis. In endometriosis, cells from the lining of the womb (the endometrium) grow outside your womb. This can cause scarring and damage and reduce your chances of becoming pregnant.

Treatment with these medicines might be combined with **insemination**. This means putting sperm directly into the womb. Insemination may increase your chances of getting pregnant, compared with trying to get pregnant by having sex.

Insemination may help if the man has problems with his sperm: for example, a low sperm count or sperm that doesn't swim well.

Hormone injections

Hormone injections can be used for several types of infertility problems.

Doctors often suggest hormone injections for women with ovulation problems if clomifene, letrozole, or metformin have not worked. They might also be offered to women who have a condition where they are not making sufficient hormones (hypogonadotropic hypogonadism).

These injections are taken from the start of your menstrual period. Your doctor will then use a scan called an ultrasound to check how your eggs are growing.

Hormone injections contain one or both of follicle-stimulating hormone (FSH) and luteinising hormone (LH). They help you to ovulate.

Hormone injections can cause common side effects, including hot flushes, nausea and vomiting, and tiredness. They can also increase your risk of OHSS so it's important to get medical help if you notice any serious symptoms.

As with clomifene and letrozole, taking hormone injections can make you more likely to have twins or triplets.

Hormone injections are also sometimes combined with **insemination** to increase your chances of getting pregnant.

IVF and other assisted conception treatments

IVF (in vitro fertilisation) is the most common form of assisted conception fertility treatment. It can be used for couples with various types of fertility problem, including:

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- ovulation problems
- blocked or damaged fallopian tubes
- problems with the man's sperm, and
- unexplained infertility.

IVF helps many couples to conceive who otherwise would not. But it's a demanding treatment, both physically and emotionally, and it can have major side effects. It may help to talk to a counsellor first before deciding to have this treatment.

With IVF the man's sperm is mixed with the woman's eggs in a laboratory. The sperm are allowed to join with the eggs. Doctors then put back the fertilised eggs (now called embryos) into the woman's womb (uterus) so that they can grow.

Success rates for IVF vary from country to country. But generally:^[3]

- for women aged under 35, about 55 in 100 will have a baby at the first attempt
- for women aged 35-37, the success rate drops to about 42 in 100
- for women aged 38-40, this further decreases to 27 in 100
- for women aged 41-42, this drops to about 13 in 100, and
- for women aged over 42, only about 4 in 100 will have a baby at the first attempt.

Remember that these figures are averages, and your individual chances will depend on many things.

Ask your doctor how well IVF works for couples with your particular fertility problem, in your age group, at their clinic.

Children born through IVF are more likely to be born **premature** and have a **low birth weight**. But this is probably due to the greater number of multiple pregnancies and the older age of women having IVF.

There is no evidence that babies born after IVF are more likely to have birth defects.

If you have IVF, you will need to take hormone injections to help with your ovulation. So you may get the side effects that can occur with hormone treatment, including OHSS.

If you get pregnant through IVF you might have more than one baby, because doctors often put more than one embryo into the womb to give a greater chance of success. Talk to your doctor about how many embryos will be put into your womb.

Other assisted conception treatments include using **donated eggs or sperm**. You can discuss these with your doctor if you think they might be suitable for you.

Surgery

There are several types of surgery that can be used to help women with fertility problems. Doctors usually only suggest surgery when other treatments haven't worked or if surgery will make it more likely that other treatments will work.

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As with all types of surgery, procedures do carry risk: for example, having a reaction to the anaesthetic or getting an infection. Your doctor can give you more information about what specific risks are involved with different procedures.

Surgery for ovulation problems in PCOS

If you have problems with ovulation and medicines haven't worked for you your doctor might suggest a type of surgery called **laparoscopic drilling**. With this kind of operation a surgeon makes a series of small holes in your ovaries. This helps your ovaries release the eggs.

If you're having a test called a laparoscopy to check your ovaries your surgeon may be able to give you this treatment at the same time.

Laparoscopic drilling isn't done as often as it used to be, as other treatments have become more successful.

Surgery for blocked or damaged fallopian tubes

For most women with blocked or damaged tubes IVF is the treatment most likely to work. But if your fallopian tubes are swollen and full of fluid, having surgery to repair them before having IVF may improve your chance of getting pregnant.

Surgery for problems linked to endometriosis

If you have surgery for endometriosis the surgeon will take away damaged tissue that may be preventing you from getting pregnant.

Some research suggests that this surgery can help some women get pregnant. But there is uncertainty about how well it works.

Some women have both surgery and IVF in the hope that the surgery will make the IVF more likely to work. But the surgery might also be able to increase your chances of getting pregnant by sex.

Treatments for unexplained infertility

It's hard to say what the best treatments are for infertility that has no clear cause. The treatments offered will depend on your age. But IVF can be as successful for couples with unexplained fertility as for those with a clear cause.

Controlled ovarian stimulation (medicines to stimulate the ovaries) is sometimes used, but research suggests that it probably doesn't help. Insemination is often used alongside medicines to stimulate the ovaries. But it's not clear how well it works.

What to expect in the future

What you decide to do about your fertility problems is a very personal matter. It will depend on how important it is for you to have a child using your own eggs and sperm. Some couples are prepared to have far more tests and treatment than others.

Even without treatment, some couples go on to conceive.

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If you have treatment your chances of success will depend on several things:

- Your age (if you are a woman)
- The cause of your infertility
- The type of treatment you have.

You and your partner may want to consider other options if treatments don't work, such as donor eggs or donor sperm, or adoption.

Discussing how you feel about these options with your partner will help you prepare for whatever happens in the months to come.

Your fertility clinic should be able to give you more information about these options. Bear in mind that tests and treatments for infertility can be a strain, physically, emotionally, and sometimes financially.

Where to get more help

Help and services vary depending on where you live. For example, in the UK, the National Institute for Health and Care Excellence (NICE) has produced information about the types of fertility treatment couples can expect to be offered, which is available on its website: [nice.org.uk/guidance/cg156/ifp/chapter/About-this-information](https://www.nice.org.uk/guidance/cg156/ifp/chapter/About-this-information)

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