

my expert
midwife.

your guide to

trying to conceive

helping you through your journey,
every step of the way



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introduction

More people are using developments in technology, as well as tried and tested natural methods, to assist them when trying to conceive. The availability of ovulation prediction tests and pregnancy tests has made it easier to plan and understand the process of getting pregnant when you decide to start or expand your family.

At My Expert Midwife we have combined the biology of human reproduction with the latest technology to help you maximise your chances of becoming pregnant.

This handy guide has been specifically designed to help you understand how yours and your partner's bodies and reproductive cycles work together. It describes how to prepare your bodies to improve your chances of conceiving, explains how to recognise the different stages in the menstrual cycle so as to understand when you are most fertile, and explores the psychological impact that trying to conceive may have on us as individuals and as a couple and how we can offset this.

This guide is delivered in four easy to digest parts which help you through your trying to conceive (TTC) journey by using your newly acquired knowledge together with our specially developed charting and testing kit.

Our aim is to make the process of trying to conceive less complicated and easier to understand, and to provide you with the necessary information should your fertility need further assessment. If you are in a relationship, it would be beneficial for both you and your partner to read this guide. This could then help you provide support for each other throughout your TTC journey.



#1

how female fertility works



the reproductive system

The female reproductive system comprises of the ovaries, fallopian tubes, uterus, cervix and vagina, as well as the external genitalia.

Ovaries

Each ovary contains hundreds of female gametes (female sex cells) called ova (plural for 'ovum' which means 'egg') which have the potential to develop into mature eggs. When a female baby is born, her ovaries will contain all of her ova (eggs), unlike a male baby, who will start producing sex cells (sperm) in puberty and continue to do so throughout his life.

Fallopian tubes

They sit next to the ovaries and, if ovulation occurs, the egg is propelled into the tubes by fimbriae, which are finger-like extensions of the end of the fallopian tubes. Once in the tube the egg is moved towards the uterus by cilia, a hair-like lining of the fallopian tubes. The most likely place for the egg to meet the sperm is in the fallopian tubes, where fertilisation takes place by one sperm cell. It will then continue its journey into the uterus.

Uterus/ Womb

The uterus is an amazing part of the female body as it can grow from the size of a small pear to housing a full-term baby. It has great strength too as it needs to contract at the time of birth to expel both the baby and placenta. Due to this capability, it is known as the strongest muscle in the human body.

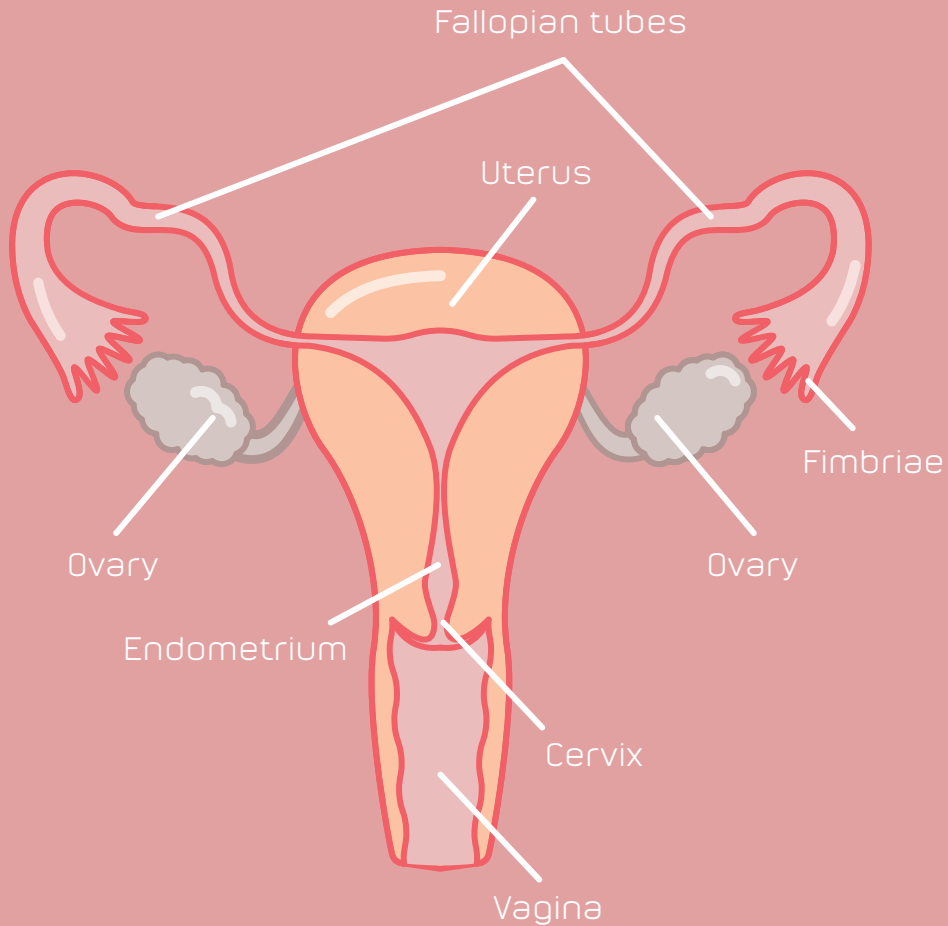
Cervix

The cervix connects the uterus to the vagina. It is a ring of muscle that is capable of changing position as well as shape and consistency, influenced by hormonal changes during the menstrual cycle and pregnancy. Most of the vaginal discharge that women see comes from secretions produced by the cervix.

Vagina

This is a muscular tube which connects the uterus to the outside world and through which a baby is born. It is very stretchy and has many folds to accommodate its elastic abilities.

female reproductive organs



the menstrual cycle

Nowadays it can be quite difficult for women to know their own menstrual cycle and the changes which it prompts in their body. This is usually because many women use hormonal contraception, which can mask useful signs that help us recognise the patterns within our cycles.

Once contraception has been stopped, your fertility usually returns to normal quite quickly. In fact, between 80-90% of women under the age of 40 will become pregnant within the first year of trying to conceive, if they are having sex regularly – that is, every 2-3 days.

Of the remaining 10-20%, half will become pregnant during the 2nd year of trying to conceive, whilst the other half will take longer or will need some help to conceive.

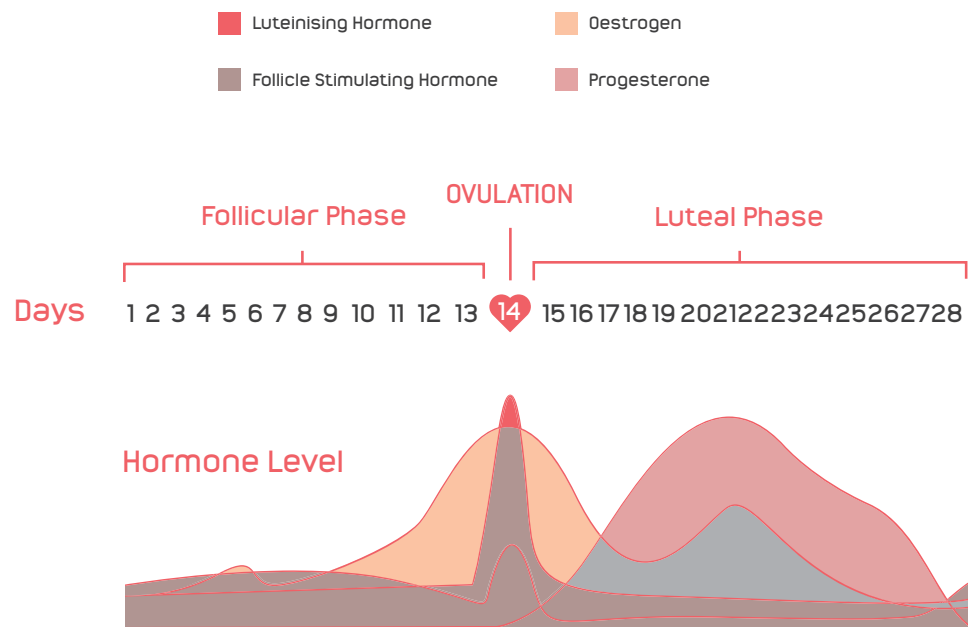
It should be noted that female fertility starts to decline in the mid-thirties, especially after 35 years of age.

Tracking your menstrual cycle to determine the most fertile time can be done in several ways. Using all of the indicators discussed below together can help to maximise the chances of pregnancy occurring.

Your body gives you several clues during your menstrual cycle as to when the most and least fertile times are, so it is good to learn a little bit more about what to look out for.



Menstrual Cycle



The average woman's menstrual cycle lasts for 28 days, some women will have shorter or longer cycles. The most likely time an egg will be released during this time is approximately 14 days after the first day of your last period. This means that you will be most likely to conceive when you have regular sex around the midpoint of your cycle.

During this time the main hormones involved are oestrogen and progesterone. These play their part in ripening egg follicles - of which

usually only one will be released - and in thickening the lining of the uterus, ready for a fertilised embryo to implant into. They also control the shedding of this lining if an embryo doesn't implant and change the cervical mucous produced during the cycle.

vaginal discharge

Every woman will have a discharge from their vagina during their menstrual cycle.

The discharge when you are not using hormonal contraception can be quite different to what you have been used to if you were on hormonal contraception, so spend some time watching for changes in this throughout your cycle. Knowing the different types of discharge can help you to recognise when you are more likely and less likely to be fertile.

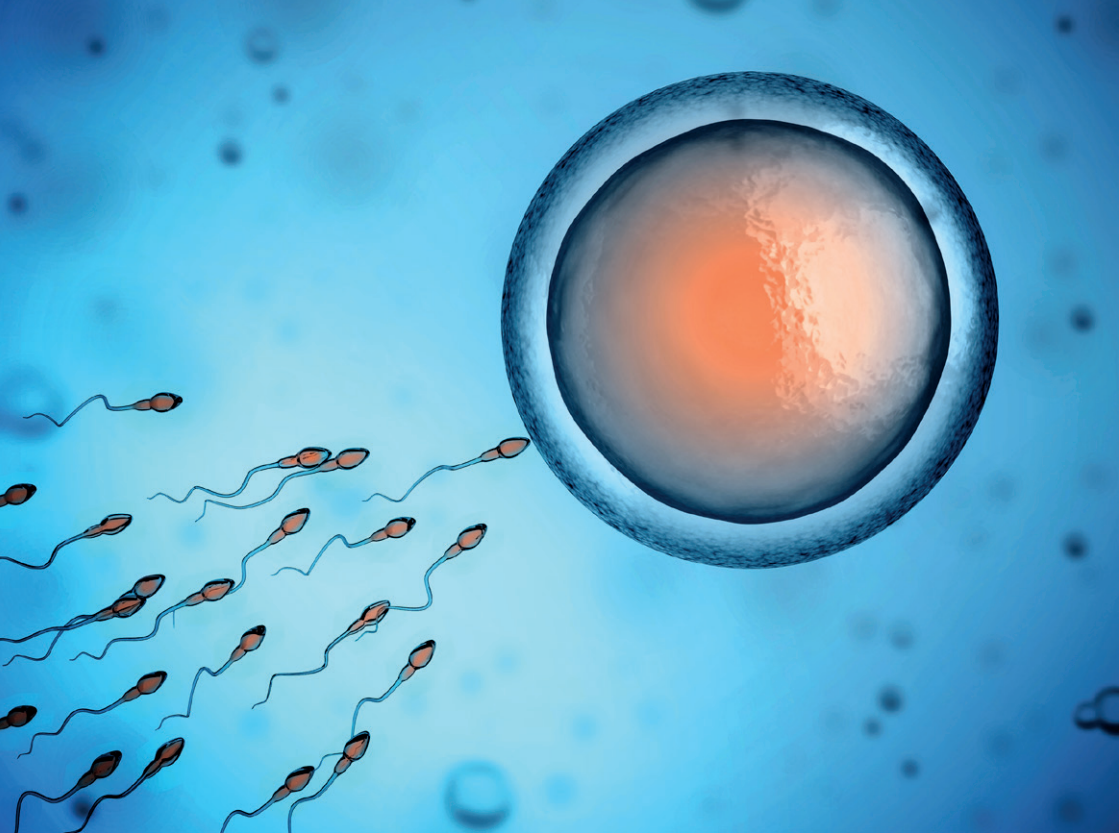
When we talk about vaginal discharge it would be easy to think that this discharge is produced by the vagina, however it is mainly produced by the cervix. The cervix is the entrance to the uterus and as such is like a guard and protector for the uterus. It has an important role to fulfil as it is there to help prevent harmful pathogens from entering the uterus which is, of course, especially important when there is a pregnancy within it. The cervix has the ability to change throughout your menstrual cycle. It changes position, consistency and shape and it produces secretions. These secretions are able to protect the uterus and act as a barrier to anything trying to pass through or, when the time is right, actually enable the passage of sperm into the uterus so they are able to reach the egg at the right time after ovulation.

Following menstruation, discharge usually becomes minimal and drier which significantly reduces the

chances of sperm entering into the uterus as the chances of conception during these days is low.

Within the first few days following menstruation, the body prepares for a new cycle to start by maturing a follicle (where the immature egg is contained) in one of the ovaries, which will become ready to release the mature egg at ovulation. The discharge at this time slowly increases and becomes a little sticky, varying in colour from white, cloudy or pale yellow.

Vaginal discharge continues to increase approaching ovulation, becoming looser and more elastic. When ovulation happens, the egg is released from the follicle in the ovary and is propelled into the fallopian tube, which is the place where fertilisation by sperm is most likely to occur.



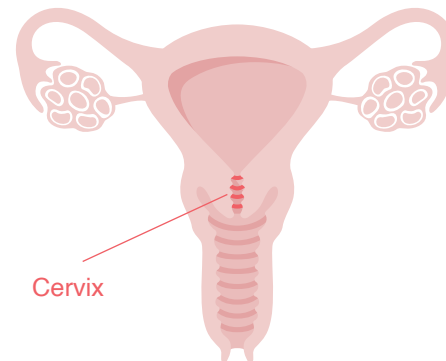
changes in the cervix

The position of the cervix and its consistency (how it feels to touch) change throughout the menstrual cycle.

During menstruation the ligaments holding the uterus relax and, as a result, the cervix sits lower and is easier to reach. It may also feel slightly softer and the os (the small central opening) may be wider to allow the passage of the menstrual blood.

Building towards ovulation and with higher levels of the hormone oestrogen present, the ligaments holding the uterus tighten and therefore pull the cervix higher- it may therefore be more difficult to reach.

After ovulation the hormone progesterone begins to work to relax the area and the cervix can be felt lower down. You may also notice that the os feels more closed.



On the days leading to ovulation vaginal discharge will start to increase in amount and should be noticeably clear, stretchy and slippery, resembling raw egg white. This discharge is less acidic and the perfect consistency for sperm to live and move in. If ovulation has occurred, sperm that has entered the woman's body during this time, or just before, will have a higher chance of living, moving and meeting the egg to fertilise it.

Another indication of ovulation can be mittelschmerz, meaning 'middle pain' in German, which some women experience as a dull ache on one side of their lower abdomen a few days before, during or just after ovulation.

Although the cause of this is uncertain, the possible irritation of nearby nerves by the fluid that is released with the egg is thought to play a part in it.

An egg that has not been fertilised can survive in your body for 12-24 hours and sperm may survive inside the woman's body for up to 5 days, meaning that many women are potentially fertile for up to 6 days in every cycle.

If you want to try and feel your own cervix remember that everyone's uterus can be positioned slightly differently and therefore this can affect where the cervix is felt. If you try this regularly, you will start to understand your body, cervix and menstrual cycle better.

- Start by finding a time when you will be comfortable and don't anticipate interruptions so you can relax.
- Wash your hands thoroughly.
- Squatting or raising one foot on the toilet, chair or bed can be easiest for some, but experiment with different positions to see which ones work best for you.
- Insert one or two fingers into the vagina until you can feel the cervix, which should feel similar to the end of your nose.
- You may be able to feel a small indentation or opening in the centre.
- Try doing this when you are feeling relaxed, such as after a soak in a warm bath.

hormones

There are four key hormones involved during the menstrual cycle: progesterone and oestrogen, which many people have heard of, and follicle stimulating hormone (FSH) and luteinising hormone (LH).

Progesterone and oestrogen are both produced by the ovaries.

Progesterone helps to keep the lining of the uterus, where a fertilised egg can implant, from shedding. Once implanted, the embryo and placenta maintain the progesterone levels to stop the lining (and the embryo) from being shed. If the lining is shed this would be the period.

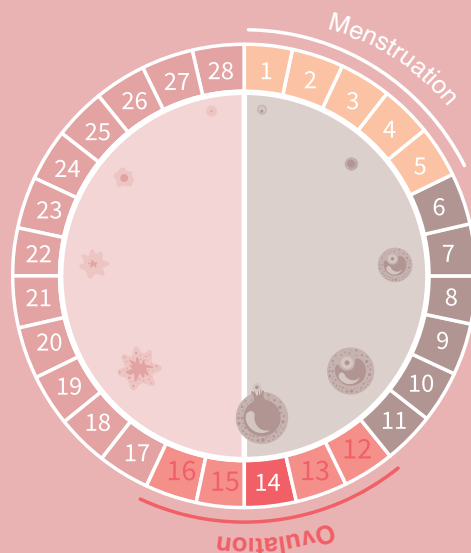
Oestrogen maintains and thickens the lining of the uterus after a period. It also stops FSH from being released so that it is most likely that only one follicle will mature and therefore one egg be released.

FSH is produced by the pituitary gland and is responsible for stimulating the ovaries to develop a mature follicle ready to release an egg at ovulation. This in turn produces oestrogen which feeds back to stop the FSH release, so multiple follicles don't mature and release eggs at the same time.

LH is also produced by the pituitary gland and triggers the release of the egg from the mature follicle. It peaks at around 24-36 hours prior to ovulation. So, detecting the LH surge

in the menstrual cycle can help to identify the time of ovulation and the most fertile time during the menstrual cycle.

If an egg is not fertilised, the levels of oestrogen that surged before ovulation will rapidly decline and progesterone will take over. The discharge will decrease and become sticky and cloudy again. These are most likely to be non-fertile days. The changes in hormone levels will lead to menstruation (the period), around day 28 of the cycle.



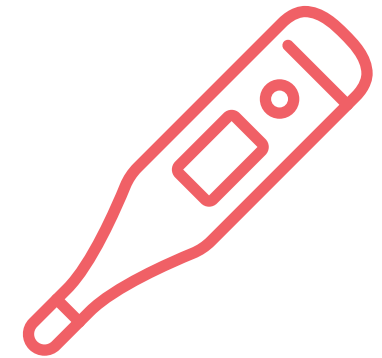
temperature

Basal body temperature (BBT) is the body temperature when at rest. An increase in BBT is experienced once ovulation has occurred and progesterone is released.

BBT can rise by around 0.5 degrees centigrade and stays raised until the body starts its period. Tracking your BBT can help you to understand possible patterns to your menstrual cycle and when it is most likely that you are ovulating each month. The best way to do this is to:

- Take your BBT at the same time every day before you get out of bed.
- Make sure it's the first thing you do, before talking or any other activity, as this can alter your reading.
- Use the same thermometer each time for consistency and note the temperature on your chart.

- Take your temperature in the same place - i.e., orally, vaginally, rectally (ensure the thermometer is cleaned after each use and, in particular, take care to disinfect it if used rectally).



what to expect when discontinuing different methods of contraception for pregnancy

Barrier contraceptives

These include condoms, diaphragm and cap. They do not interfere with your menstrual cycle so you can potentially become pregnant as soon as use is discontinued.

Spermicides don't affect fertility once usage has been stopped.

Hormonal contraceptives

As your hormones are the control centre for your reproductive system it is worth discussing what to expect from the different types of hormonal contraceptives once you stop taking them.



The combined pill

It is best to finish a packet and have one menstrual cycle before trying, as this will enable you to predict when you became pregnant more easily. You can use a different method of contraception such as condoms during this time

The mini pill (progesterone only)

You can stop this at any time but again finishing the packet will help you gauge more accurately the timing of pregnancy.

Intrauterine device (IUD)

This is more commonly known as the coil and is a small device inserted by a doctor or nurse into the uterus to prevent pregnancy. Once you have had your IUD removed by a trained doctor or nurse it is possible to become pregnant straight away. It may take some women's cycles slightly longer to return to normal if a

hormonal coil has been used such as Mirena, as it affects the thickening of the lining of the uterus. Waiting for a full menstrual cycle after removal can also help you gauge more accurately the timing of pregnancy.

The Depo-provera (contraceptive injection)

Once the time has expired from when the last injection covered you, wait until your menstrual cycle returns to a pattern normal for you. It can take some women longer than others for their cycle to adjust and return to normal. You can become pregnant before you have a period.

Implanon (progesterone implant)

You will need to make an appointment at your family planning clinic or doctors to have this removed. It can take some people longer after removal than others for their cycle to return to normal.

diet and lifestyle choices

What we eat can have both positive and negative effects on our body in ways we may not always realise.

A poor diet can have a negative effect on your hormonal function, disrupting ovulation and reducing your chances to conceive. A few simple changes can improve your chances of becoming pregnant and pave the way for a healthy pregnancy.

Diet

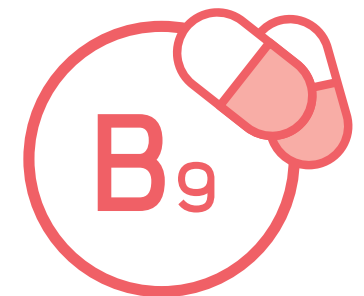
Nutrients that support a healthy ovulation

- Healthy **fatty acids**, like Omega-3 (found in oily fish and flaxseed, for example), can help improve the quality of your eggs and delay their aging.
- Increased intake of **vegetable protein** has been associated with improved fertility in women, whilst high intake of animal protein is linked to decreased fertility. Although it is still unclear exactly how protein affects ovulation, it is thought to play an important role in reducing hyperinsulinemia (excessive levels of insulin).

Vegetable protein is mostly found in beans and legumes, quinoa or in nuts and seeds and, in smaller quantities, in some vegetables. Popular foods rich in vegetable protein include tofu and tempeh (made from soybeans), hummus (made with chickpeas), all dishes containing beans or legumes

(stews, soups, veggie burgers), all nut butters, and salads, soups or curries prepared with or accompanied by grains like quinoa. Try swapping meat and dairy from your favourite dishes gradually.

- **Folate** is an essential B-vitamin that plays a crucial role in your overall health, helping with cell metabolism and the formation of new cells. Adequate amounts help to counteract the effects of stress in the body, in turn improving fertility. Foods rich in folate include dark leafy greens (broccoli, kale, brussel sprouts), asparagus, legumes, beets, citrus fruits and nuts, as well as some fortified grains. Together with diet, supplements containing folate or folic acid (its synthetic form) can help achieve and maintain optimal levels of folate in your body.





Whole grains and wholemeal cereals, beans, legumes, some fruits and most non-starchy vegetables - and some starchy vegetables such as sweet potato - are examples of complex carbohydrates.

How diet affects your hormones

Insulin is a hormone produced by the pancreas to help metabolise what we eat. When we eat too many of the “wrong” foods, our pancreas produces excessive amounts of insulin. Raised levels of insulin can affect ovulation.

Cutting back on processed foods, sugar (including sugary drinks), white flours (white bread, cakes, biscuits) and foods that are high in trans fats will help to regulate levels of insulin in your body to support hormone function.

Try to buy organic foods whenever possible as pesticides used in non-organic farming, when consumed, have been linked to reduced fertility - potentially affecting hormone function in women and men, and leading to poorer pregnancy outcomes.

When this is not possible, washing all fresh produce thoroughly under running water, drying, peeling or removing the outer leaves/layers of foods such as cabbage or lettuce, and trimming the fat and skin from meat, poultry and fish will help minimize the pesticide residue on the foods you eat.

- **Antioxidants** protect your cells from oxidative stress, which can cause damage, premature aging and inflammation in all your body systems, including your reproductive system. Berries, herbs and spices rank highest in concentration of antioxidants. Other antioxidant-rich foods include nuts, vegetables and dark chocolate.
- **Complex carbohydrates** and other foods with a low glycaemic index (GI) help prevent the peaks and troughs in blood sugar provoked by simple carbohydrates (such as white flour, sugary foods, white potatoes, etc.) and foods high in trans fats. Low GI foods release energy slowly, maintaining your blood sugar and, thus, your insulin levels steady and stable.

lifestyle choices

It may reassure you to know that there are adjustments you can make to your lifestyle which will not only improve your chances of becoming pregnant, but which will also help pave the way for a healthier pregnancy.

Achieving a healthier weight

Our hormonal balance can be influenced by our percentage of body fat and our chances of conceiving may be directly affected by how much or how little we weigh. Women who are either underweight or overweight are more likely to not ovulate, particularly if they also experience irregular menstrual cycles.

If you are underweight or very lean (that is, have less than 20% body fat) you can help regulate your hormonal function and improve your chances of getting pregnant by changing the way you eat. The idea is to put weight on slowly, by eating adequate portions of fresh, nutrient-rich foods. If you need support, your GP can refer you to a dietitian.

If you are overweight and struggling with your health and/or losing weight, a visit to your GP may also be beneficial. They can support you to achieve a healthier weight and, if indicated, may run tests to

ensure your excess weight and potential fertility problems are not being caused by conditions such as polycystic ovary syndrome (PCOS) or hypothyroidism. Don't be discouraged, though, if you feel like you may never achieve that 'healthy weight' bracket. It is thought that even a loss of 10% of your body weight can considerably improve your fertility.

In either case, nourishing your body with the right foods when you are preparing to get pregnant will enhance your overall wellbeing and your chances to conceive.

Breaking bad habits

Smoking, alcohol and drugs can have a negative impact on your fertility and increase the chances of miscarriage.



Smoking

When you smoke, the number of eggs in your ovaries (ovarian reserve) is reduced and your fallopian tubes can be damaged. This can mean that you are over twice as likely to struggle to conceive than a woman who doesn't smoke. As well as this, smoking is known to damage the eggs and sperm, increasing the rate of miscarriage. The health risks are similar if you are a passive smoker.

The chances of successfully quitting smoking are much greater if you engage the support of a professional or a support group. It is best if you can aim to quit at least 3 months before conception to ensure that your eggs and your partner's sperm are in good health.

Alcohol

Studies have shown that even drinking lightly can reduce fertility and the more heavily a woman drinks, the more her fertility decreases. Although alcohol is linked to an increase in ovulation disorders, exactly how this happens is still not clearly understood. Having a drink is often associated with relaxing, socialising and having fun and, understandably, this association can be hard to give up. Altering our social habits (movie and dinner out instead of the pub, for example) and finding replacement drinks (mocktails, alcohol-free G&T's, etc) can help us to start reducing our alcohol intake with the view to stopping before we start trying to conceive.

Because there is no known safe limit of alcohol in pregnancy, the advice is to abstain from alcohol when you start trying to conceive.



Drugs

There is more evidence on the effects of some medications on fertility than there is on the impact of illegal drugs on fertility. This is partly because the use of illicit drugs is often related to high alcohol consumption and other unhealthy lifestyle choices.

Long-term or high dose intake of some medications, such as ibuprofen or aspirin, has been linked to ovulation disorders, whereas more concrete evidence on other prescription-drugs points to definite adverse effects. If you are on regular medication, it is best to see your GP or specialist before you start trying for a baby.

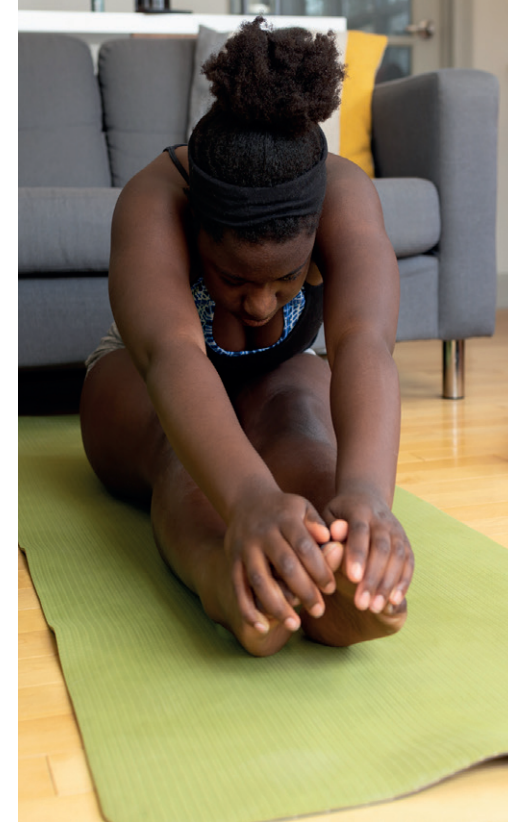
Illegal drugs can compromise your fertility and increase risks in pregnancy. Drugs like cannabis or cocaine can disrupt hormonal function and affect the function of your reproductive organs. Although there is no clear evidence on the effects of most illegal drugs on fertility, none have been deemed safe.

The environment around you

Environmental pollutants and toxins are everywhere, from the air we breathe to household cleaning products, plastics and pesticides. Because these can all have adverse effects on fertility, opting for organic produce and environmentally friendly or, better still, homemade cleaning products can significantly improve our health and our fertility.

Emotions are directly linked to our endocrine (hormonal) system and several studies confirm that women with high levels of stress have lower rates of conception.

Regular exercise, eating a fresh and balanced diet, connecting with your mind and body through meditation and/or yoga, getting enough sleep, and seeking support from a counsellor, support group or mental health professional can all help lower and manage your stress levels.



#2

how male fertility works



what is sperm and how is it produced?

Sperm are the male sex cells. They are not visible to the human eye and are similar to a tadpole in shape, which enables them to move quickly. All the male genetic data is carried within the head of the sperm.

Sperm production starts at approximately age 13-14 and happens in the testicles. The testicles are small organs responsible for making testosterone (the primary male hormone), as well as sperm. They are contained inside the scrotum – the sack that hangs outside a man's body - because sperm production requires a lower temperature than body temperature, by 1 or 2 degrees.

The process of sperm production, or spermatogenesis, not only involves building them but, also, enabling them to move and develop the properties that will allow them to bind to a woman's egg (ovum). This all takes around 3 months to be complete.

Once ready, they are stored until they are ejaculated.

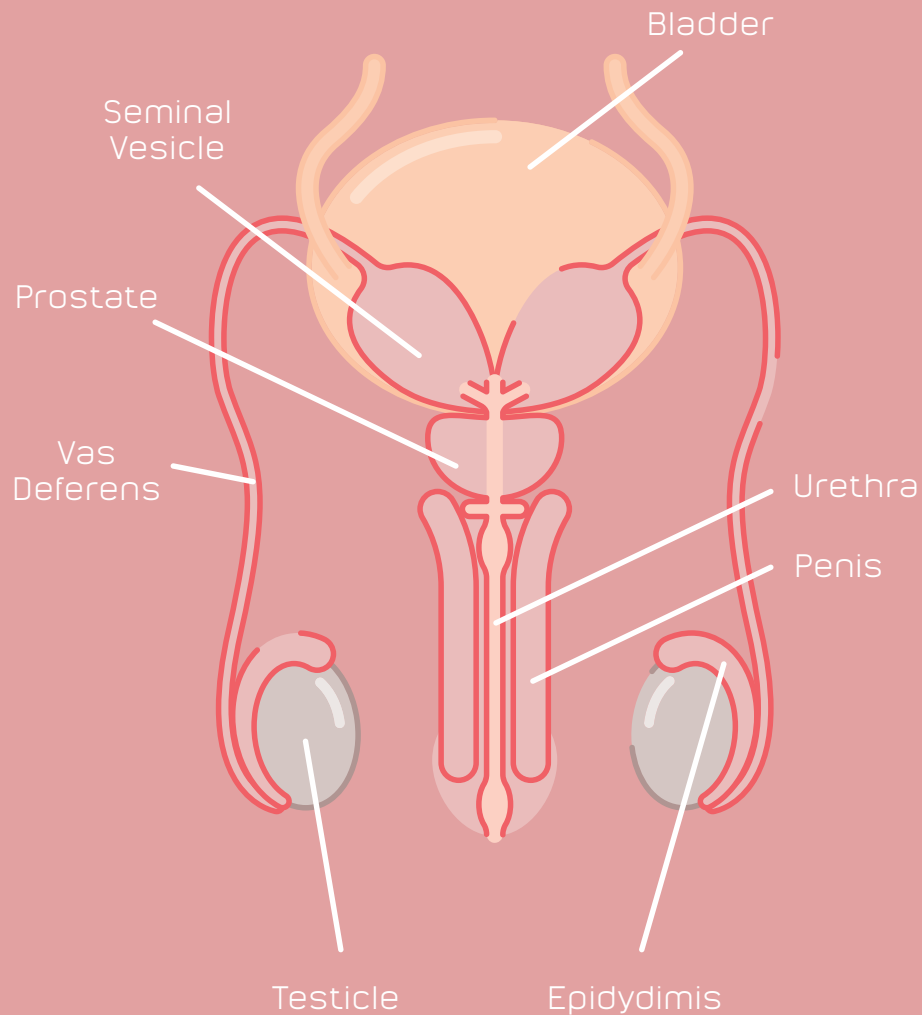
Inside the testicles (aka 'testes') are coiled masses of tubes called seminiferous tubules and this is where sperm is produced. Sperm then move to the epididymis, which is a cord-like structure that sits at the top of each testicle, where they complete their development and are stored.

During sexual arousal, the penis is filled with blood and becomes erect. Continued stimulation of the penis results in ejaculation, which is a reflex action controlled by the central nervous system. During this release process, mature sperm move from the epididymis (where they've been stored) to the vas deferens, a tube that transports sperm toward the base of the penis. Along this journey, secretions from the seminal vesicle and the prostate gland are released and mixed with the sperm to make semen. This is then propelled towards the urethra (the tube inside the penis which carries urine and semen) and ejaculated.

fact...

- ✓ You cannot run out of sperm.
- ✓ On average each ejaculation contains around 500 million sperm.
- ✓ Whether a healthy man ejaculates once a fortnight or several times per day, his semen will contain sperm because his body is constantly making new sperm cells.

male reproductive organs



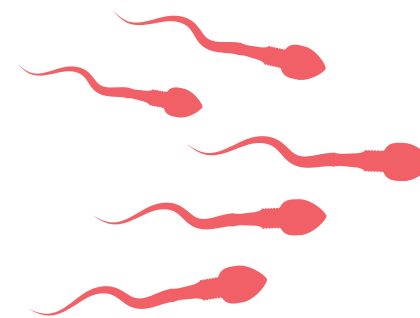
how long is sperm stored for in the male body?

Sperm take around 14 days to mature in the epididymis. After they complete their development, they remain here for an 'optimum storage time' of 2-3 days, although this can be longer.

After this time, if they are not ejaculated, sperm will simply be broken down and reabsorbed by the body.

A man does not ejaculate all of his sperm. Because sperm is being constantly produced by the body, there will always be sperm in a man's semen, regardless of how often he ejaculates.

Although more frequent ejaculation can slightly lower sperm count, this is unlikely to affect fertility in healthy males.



fact...

- ✓ Not ejaculating for a long period of time will not make you have lots of "super sperm" next time you ejaculate

false...

- ✗ Males don't ejaculate all of their sperm! More frequent ejaculation may slightly lower sperm count, but this is unlikely to affect fertility in healthy men.
- ✗ For most men, not ejaculating for a prolonged length of time will only result in a slight rise of their sperm count, as many of the sperm that are not ejaculated will simply be reabsorbed by the body.

what is healthy sperm?

When it comes to making babies, we could argue that the quality of the sperm is just as important as the quantity, if not more so.

Sperm's chances of success depend on 3 things:

- 1: Numbers** – the more swimmers are ejaculated, the higher the chance that one of them will reach the egg.
- 2: Movement** – aka motility. You need sperm with good movement ability to increase the chances of them getting to the egg.
- 3: Size and shape** – medically known as morphology. Regardless of the number of sperm, if they are the 'wrong' size and shape, the odds of them navigating towards the egg successfully will be against them.

in summary,
for a man's fertility to be optimal, they need to produce lots of healthy swimmers that are the correct size and shape.

sperm's journey to fertilise the egg

Contrary to what many people may think, sperm don't head straight to the woman's uterus (womb) when they are ejaculated.

In what can be described as a challenging obstacle race, sperm need to move up the vagina, go through the cervix (a ring of muscle that connects the uterus to the vagina) and into the uterus, before reaching the fallopian tubes, which connect the ovaries to the uterus and where fertilisation takes place.

During their journey, sperm will be helped along towards the fallopian tubes by the muscles of the uterus. Along the way, some sperm will get lost, some will perish and others will be stored in little 'chambers' within the cervix called crypts, where they'll await until ovulation takes place – as long as this happens during their lifespan.

lifespan of sperm and why this matters

Sperm can live up to 5 days inside the woman's reproductive system.

To maximise the chances of fertilisation around ovulation time, a woman's cervical mucus (what is commonly known as normal vaginal discharge) changes to become more copious and slippery – similar to raw egg-white. This special cervical mucus has nurturing and protective properties towards sperm and helps them move through the female's reproductive system more easily. The cervical crypts mentioned, will also widen and deepen around ovulation time, helping to retain live sperm for several days until ovulation takes place.

A woman's cycle is typically 28 days (counted from the first day of her period to the day before she starts her next period). In this average 28-day cycle - which may be longer or shorter for different women - ovulation usually occurs around day 14 (that is, 'mid-cycle'). Ovulation happens when the egg, or ovum, is released from the ovary and into the fallopian tube, where fertilisation by the sperm typically takes place.

The woman's egg can only survive between 12-24 hours once it's been released, and sperm cannot fertilise an egg that isn't there. Therefore, by staying alive inside the woman's reproductive system, sperm optimise their chances of fertilising the egg when this is finally released

(ovulation). This makes conception possible even when having sex up to 5 days before ovulation.

How to know if your sperm is healthy and enough.

Going to the doctor to discuss your fertility and, possibly, have sperm analysed can be embarrassing, even if it really shouldn't be.

Before walking into a doctor's surgery, some men may prefer the discretion of a home sperm test kit. Although these are likely to not be as complete or thorough as a laboratory test that's been ordered by a doctor, for many men they can signify the first step in engaging with their fertility.



If the home test was to suggest a problem, an appointment with the doctor should be the next port of call, as delaying further tests could be detrimental to a man's chances of becoming a father.

A sample of semen is likely to be required whether the man is having a home test or seeing his GP or fertility specialist. Although we've mentioned that frequent ejaculation shouldn't affect the fertility in a healthy man, for the purposes of obtaining an accurate result when there are concerns, the man will likely be required to go several days without ejaculating, so that their sperm count rises slightly and the lab can better assess if there are issues with sperm production.

There are cases where a man may produce good numbers of healthy sperm that cannot travel through the male reproductive system due to a blockage, or other physical problem. On the other hand, issues with a man's endocrine system or testicles can result in men producing fewer or no sperm. In all these instances, a physical examination by a doctor and blood/other tests would help reach a prompt diagnosis.



food, lifestyle and general health

The dos and don'ts for optimal male fertility and performance

Women become pregnant, carry their babies and give birth, yet the man's contribution is paramount, and it starts way before there is even a pregnancy test in sight.

Men's fertility is directly affected by their general health and lifestyle, which influence – for better or worse – their sexual desire and performance, as well as the quality and quantity of sperm they produce. Here's what you need to be aware of if you are looking at improving your chances of becoming a father:



what to do

Work towards a healthier weight

Obesity in men has been linked to lower sperm counts, poorer motility and erectile dysfunction. These are all thought to be related to the high levels of oestrogen (one of the primary female hormones) caused by excess body fat, changes in testosterone and increased temperature of the testicles.

Regularly engaging in moderate exercise (you're more likely to stick to it if you choose something you enjoy doing) and eating a healthy, balanced diet are key to achieving and maintaining a healthy weight. Your GP can also help you reach a healthier weight.

Keep them loose, keep them cool

Testicles hang from the body because they need to be kept cooler for optimal sperm production.

Men who wear tight underwear are more likely to produce less sperm than don't move as well as men who wear loose-fitting underwear. The slight but significant increase in temperature of the testicles caused by them being close against the body for prolonged periods of time is thought to be the cause of this.

Therefore, when looking at improving your fertility, your best bet is to keep

your testicles cooler by having cooler baths and showers, keeping the area away from direct heat, wearing loose-fitting pants like boxer shorts and favouring trousers that give your genitals plenty of room.

Pay attention to your diet

Observational studies have shown that there are associations between certain foods and nutrients and sperm quality and fecundability (sperm's ability to fertilise an egg and result in a pregnancy). Studies with larger prospective cohorts and well-designed randomised control trials would help to confirm such observations. Choosing organic where possible to reduce consumption of possible pesticides.



**Foods to include:
Antioxidants such as:**

- **Vitamin D** – strictly speaking, this is a hormone which we produce in our bodies from exposure to sunlight (weather and lifestyle permitting), but it can also be obtained from foods such as oily fish (sardines, tuna, salmon, trout), egg yolk, some mushrooms, cod liver oil, fortified dairy and plant milks, cheese and poultry.
- **Vitamin C** – blackcurrants, red and green peppers, papaya, strawberries, kiwi, kale, broccoli, raw and boiled red cabbage, cantaloupe melon and citrus fruits, are all good sources.

- **Zinc** – an essential mineral for overall health and, particularly, in men's reproductive health. Oysters are the food that is richest in zinc. Red meat, poultry, beans, nuts and some seafood (like crab and lobster) are good sources.
- **Selenium** – found in Brazil nuts, yellowfin tuna, halibut, sardines, roast ham, prawns, beef & beef liver, turkey and brown rice.
- **Beta-carotene** – this is a type of plant chemical that can be converted into vitamin A. Its pigment gives yellow and orange fruit and vegetables their vibrant colours. Carrots, red & yellow peppers, butternut squash and sweet potatoes, as well as dark green leafy veg such as spinach and kale, are good sources.

- **Lycopene** – is a powerful antioxidant which gives fruit and veg a red or pink colour. You can find it in tomatoes and all tomato products (sauces, paste, etc.), guavas, watermelon, papaya and grapefruit.
- **Cryptoxanthin** – another carotenoid that converts into vitamin A in the body. Although green leafy vegetables contain it, it is found to be more bioavailable from orange fruits & veg such as tangerines, persimmons, carrots, sweet potato and mango.



- **Omega-3 fatty acids** – are fatty-acids found in oily fish (such as mackerel, salmon, tuna, herring, sardines and cod liver oil), seaweed, chia seeds, hemp seeds, flaxseed and walnuts
- **Folate** – is an essential B-vitamin found in dark leafy greens such as broccoli, kale and Brussel sprouts, as well as in asparagus, legumes, beets, citrus fruits, nuts, and some fortified grains.
- **Seafood** – in the form of oysters, lobster and crab are high in necessary minerals.
- **Fish** – in particular oily fish.
- **Poultry** – such as chicken or turkey.
- **Fruits and vegetables** – in smoothies, with porridge or yogurt, in salads, soups, stews, stir-fries and curries.
- **Nuts** – research shows that eating a daily portion (75 grams) of walnuts improves sperm motility, vitality and health. Scientists also found that eating about two handfuls of mixed almonds, hazelnuts and walnuts daily for 14 weeks improved sperm's health and count.
- **Whole grains** – swapping your 'whites' for your 'browns' is a game changer for your gut-health and overall well-being. Swap to wholemeal pasta, brown rice and wholegrain bakery goods.

Reading this list of foods and nutrients, it is no surprise that a Mediterranean style diet could improve male fertility. It is full of fresh fruit and vegetables, healthy fats, whole grains, fish and seafood, with some poultry and dairy products, and only limited quantities of red meat.

- **Consider supplements** – the jury is still out when it comes to nutritional supplements for men who are trying to conceive, as there is currently no medical consensus on the type, dose or effectiveness of vitamins, minerals & other nutrients that may be needed to improve male fertility. However, the evidence does suggest the use of antioxidant supplements for men undergoing infertility treatment.

When looking at improving fertility, it would be best to look for products designed for men who are trying to conceive and start taking these at least 3 months before trying to conceive, so new sperm being produced can benefit from them.



what to change or avoid

Stop smoking – The quantity, swimming ability or size and shape of the sperm of smokers does not seem to be very different to that of non-smokers at first glance through a microscope. However, when looked at in more detail, it becomes evident that the DNA in the sperm of smokers is much less healthy than that of non-smokers. In smokers, the DNA carried in the sperm can be damaged. This can not only increase the risk of miscarriage, but also lower the chances of conception, as the sperm isn't working as it should. Men are advised to give up smoking a minimum of 3 months before they start trying to conceive to allow the body to rid itself of toxins and produce new sperm.

If you want to stop smoking the NHS can provide you with information and a support plan to do this.

Enjoy a drink, in moderation – As long as men drink within the recommended guidelines - which advise not exceeding 14 units per week* - and spread their alcohol intake through the week, alcohol is unlikely to affect sperm production or quality. It is binge drinking and/or regularly exceeding the recommended guidelines which can cause problems to arise, potentially affecting sperm quality, sex drive and performance.

Drinking socially say, a glass of wine or a beer every night with dinner or in the pub – will not only not affect a man's sperm production but may even help relax him and increase his desire for more regular sex.

*14 units is equivalent to 6 pints of average-strength beer or 10 small glasses of low-strength wine

Drugs – such as cocaine, cannabis and heroin can affect a man's testosterone levels, sperm quality and sex drive.

It is known that regular exposure to cannabis smoke can lead to problems with sperm production, where sperm are not the right size or shape. Anabolic steroids and some prescription drugs may also have serious effects on sperm production and motility, so it is worth reviewing this with a doctor before men start trying to conceive.

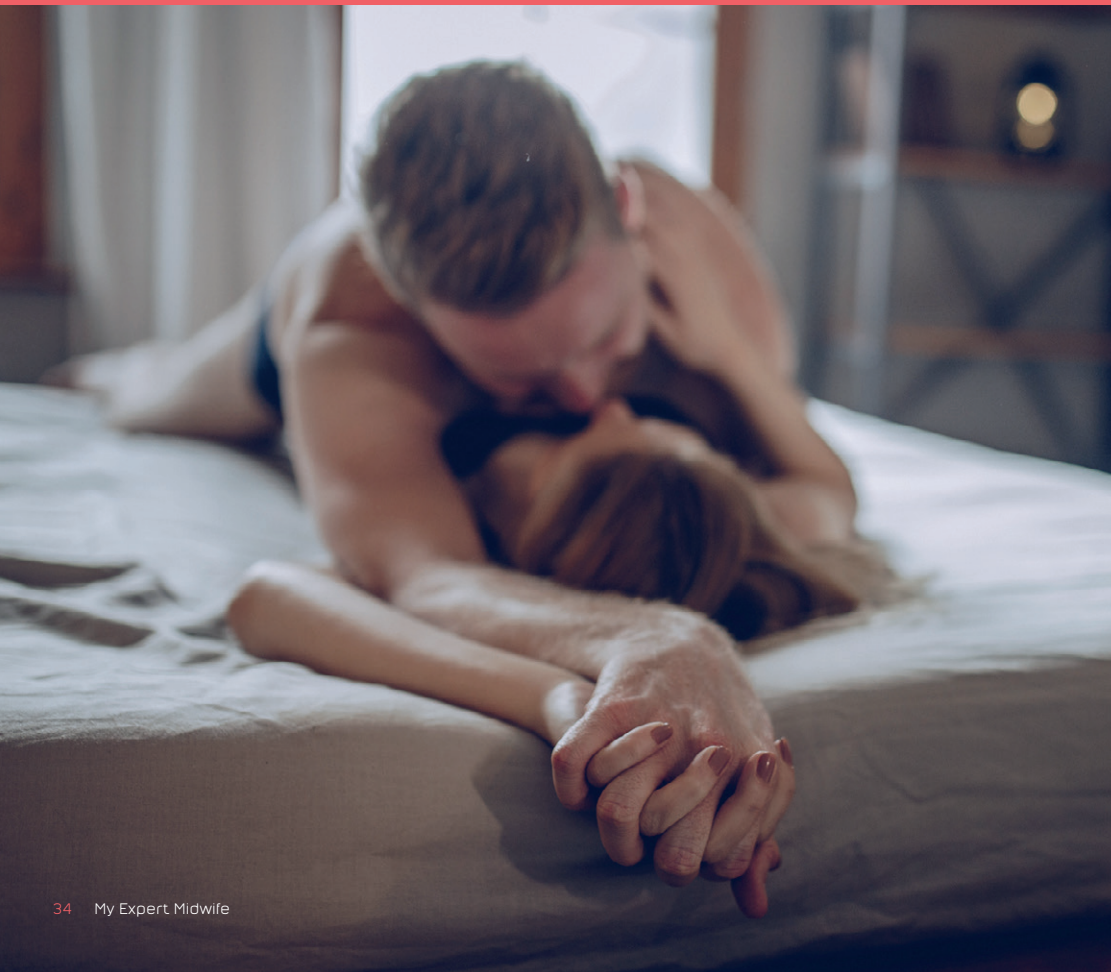
Environmental dangers – Men who are regularly exposed to chemicals such as glycol ethers, which are often used in paints, glues or printing inks, can produce fewer swimming sperm than men in other jobs. Wearing appropriate masks with filters may help diminish the effects of these chemicals. Heating or cooling food in plastic containers can release harmful chemicals like BPA bisphenol, which are known to damage sperm, into the food. Glass, ceramic or metal containers are safer options.

in summary,

a man's sexual performance and his ability to produce good numbers of quality sperm are closely related to their diet and lifestyle choices. Just as important as it is for women to prepare their bodies for becoming pregnant, it is the same for men to prepare theirs to improve their fertility.

#3

having sex for pregnancy



having sex for pregnancy

Planning to get pregnant should be fun and not a chore but, if you have been trying without it happening for a while, both of you may start to feel the stress creeping in.

This part of the guide aims to help you make sure you have everything in place, so you both know when the optimal time and conditions to have sex are and, also, how to manage your stress and anxiety when it all feels overwhelming.



How to know when to have sex

Every woman and every menstrual cycle are unique and this, together with other hormonal changes that can occur daily and for different reasons, means that there is a chance you could get pregnant at any time throughout your cycle, even during your period.

However, in most cases, there are a few days within your cycle in which you are most likely to conceive. This fertile window usually occurs a few days before ovulation and is usually evident by a significant change to your vaginal discharge (cervical mucus) which becomes copious, slippery and stretchy, very similar to raw egg white.

As we've already mentioned, nature is wise and this slippery discharge is very sperm-friendly, helping sperm travel more easily through the woman's reproductive system to meet the egg that has been released from her ovary.

Women may also notice that they feel more sexual during these days, as their bodies' baby-making instincts nudge them towards reproduction! Needless to say, this is when women are at their most fertile and having sex during this time is more likely to be fruitful.



Just how often is enough?

The evidence is fairly clear on this: couples that are having regular sex, 2-3 times a week, significantly boost their chances of conceiving. When a woman releases an egg from one of her ovaries (ovulation), the egg only has 12-24 hours to be fertilised. But, because sperm can survive inside her reproductive system for up to 5 days, having regular sex will mean that, in theory, there will always be a few (million) live sperm around to fertilise her egg when it is released.

Because of this, if you have sex, on average, three times a week

you will significantly boost your chances of becoming pregnant. There is no need to plan or schedule sex for a specific day or time of day, however! This can be detrimental to your relationship and to love-making itself, creating stress and anxiety within the couple and, potentially, causing performance problems for the man.

fact...

✓ **The more you have sex, the greater your chances are of conceiving.**

When the pressure is on – tips for managing stress and anxiety when trying to conceive (for him and her)

The best thing you and your partner can do is relax, have fun and enjoy your relationship without worrying or fixating on becoming pregnant. Feeling stressed and anxious can lead to the release of hormones which are not helpful and which suppress those hormones that are needed to conceive a baby.

Knowing what sperm-friendly cervical mucus looks and feels like, tracking her basal body temperature (BBT) daily and using ovulation sticks can all help determine when a woman is in her most fertile period, but there is no need to make haste and force an amorous encounter. Relaxed sex that takes place naturally after being seduced is probably the best way to make a baby.

If you experience pain during sex (dyspareunia), bleeding after sex (postcoital bleeding) or inter-menstrual bleeding (bleeding between periods) seek advice from your doctor as these are signs that could warrant further investigations.

This is easier said than done, though. So, here are some tips to help you manage:

- Try planning in some relaxation time for both you and your partner on a regular basis. This may look different for different people, so spend some time thinking about what works for you both. It may be as simple as a daily, silent walk in the woods, as easy as a regular movie night or as lush as a late-night swim at your local gym.
- Make your relaxation time a daily ritual, if possible. If not, make sure you schedule time at least 2 or 3 times a week where you do whatever works to de-stress your body and mind.
- For some couples it can work for the woman not to disclose when she believes ovulation is most likely! This is because some men can become anxious and either lose their erection partially or entirely, or may be unable to ejaculate due to this. Focusing on the importance of having sex at certain times in the month can magnify these feelings, so try to reduce this by not honing in on the importance of exact timings.
- Some activities to help release and manage stress and anxiety include: meditation, yoga, Pilates, walking in the forest/nature, running, using the gym, an evening out together or with friends, a massage, a spa day, visiting friends or family, or spending time around animals and/or with pets.

#3 steps to pregnancy

To improve chances of pregnancy

Step 1

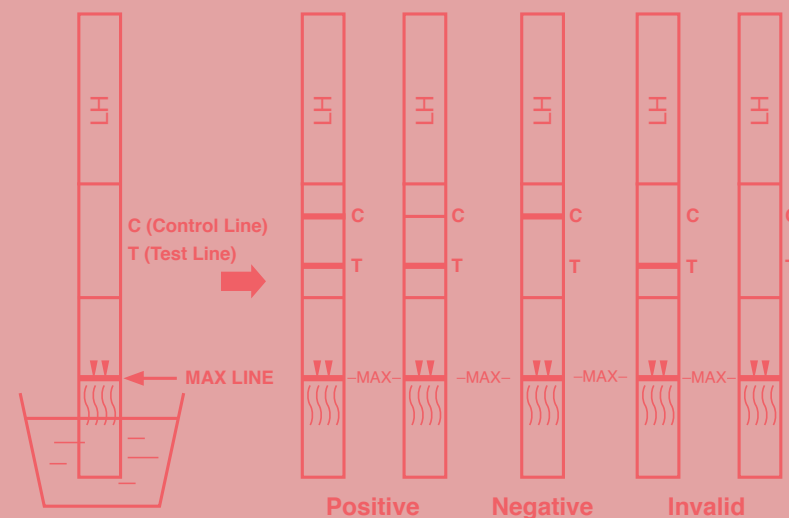
Regular sex

This can seem obvious but track on your chart when you have sex to help you understand how this coincides with other factors such as temperature and discharge. Regular sex is the key, every 2-3 days, especially around mid-cycle and ensuring that ejaculation is in the vagina.

Step 2

Charting

This involves daily recording of your vaginal discharge, basal body temperature (BBT), changes to your cervix and any other symptoms. By keeping track for a couple of months, you will start to know your pattern and be able to more accurately determine when you ovulate and which days are your most fertile.



Step 3

Ovulation sticks

These use your urine to measure the level of a hormone called luteinizing hormone (LH) which is at its highest when your body is close to ovulation. Our kit includes 12 sticks, so you can compare levels throughout a few days. It is best to use your afternoon wee for more accurate results, and to start using the sticks when you are almost half-way through your cycle.

Wearable fertility gadgets

You can now buy fertility watches and fertility tracker bracelets which measure and analyse things like your sweat, temperature, breathing rate and/or resting pulse, picking up changes that occur as you approach ovulation and alerting you when are at your most fertile. Some of these gadgets will also connect to your smart phone.

Do you always ovulate?

Illness, stress, excessive weight gain or weight loss and other lifestyle habits can interfere with ovulation, resulting in about 15% of women who have periods not releasing an egg every month.

Once you have been trying to conceive without success for over a year if you are under 36 years old, or 6 months if you are over 36 years old, do speak to your GP for further help.

#4

when to seek help when TTC



When pregnancy doesn't happen, it can be a worrying and stressful time for you but if you have tried for several months without success you may want to consider assessment from a specialist in fertility.

The final part of our guide is designed to help you understand the most likely pathway to expect in the UK when seeking help for fertility issues. When seeking medical assessment, you may come across the terms 'primary infertility', which refers to couples who have not had a previous pregnancy, and 'secondary infertility', which refers to couples who have had one or more previous pregnancies which have ended in miscarriage, abortion or ectopic pregnancy.

Length of time to wait

To gain perspective on fertility, pregnancy would usually occur in 80% of women having unprotected regular sex for 12 months. After this time, half of the women who have not yet fallen pregnant will go on to become pregnant in the following 12 months.

The probable causes of infertility are:

30%
male infertility - [erectile or ejaculation dysfunction, prostate problems, blocked tubes and production and quality of sperm]

30%
female infertility- ovulation problems, blocked fallopian tubes, uterine problems, endometriosis

20%
combination of male and female

20%
unknown

Age in relation to seeking help

Once you have tried the methods in part 3 of this guide and are confident that you have maximised your chances of becoming pregnant, contacting your GP is the next step on your journey. Generally, throughout the UK your GP will expect you to have been trying to become pregnant for 12 months before seeking assessment if you are under 36 years old and for six months if you are older than 36. You can also visit your GP sooner if you already know there could be medical factors that could cause fertility issues, or you have been trying for six months via donor or partner insemination at home.

what happens next? explaining the next pathways

Investigations

The investigations will begin to try and establish a cause for why a pregnancy is not occurring.

- semen analysis to have closer look at the health and motility of sperm produced
- screen for sexually transmitted diseases such as chlamydia
- assessing ovulation
- looking for uterine abnormality or damage to oviducts/fallopian tubes

Diagnosis

Once you have a diagnosis of where the problem lies, your treatment options will fall into 3 probable categories:

- treatment to restore your fertility, for example prescribing drugs to help ovulation if that is where the problem lies
- surgery to restore your fertility. This could be needed, for example, in some cases of endometriosis
- assisted reproduction techniques to help you conceive via other means. These can include IVF (in vitro fertilisation), where the egg is fertilised by the sperm in a laboratory and then placed into the uterus; or IUI (intra-uterine insemination), where sperm is

inserted directly into the uterus around the time of ovulation

What to expect on first contact GP/Nurse/Specialist in fertility

On your first visit, you will be seen by a doctor or Advanced Nurse Practitioner (ANP) who will gather your background history and organise the necessary baselines tests. Ideally couples who are having difficulty in conceiving should be seen together prior to the referral (this may not be possible if registered at different practices).

The man will be advised to have semen analysis and provide a urine sample for chlamydia and gonorrhoea.



During your appointment, your doctor/ANP will discuss both of your health histories, including any urogenital (male) or gynaecological (female) problems, such as previous sexually transmitted infections (STIs) or abnormal vaginal bleeding.

Women will be offered an abdominal examination and an internal examination using a speculum. An intra-vaginal ultrasound scan (performed with a probe that goes into the vagina) may be offered if there is a history or suspicion of polycystic

ovary syndrome (PCOS), fibroids, endometriosis, ovarian cysts or issues with the fallopian tubes, among other things. The ovarian (egg) reserves may also be assessed via ultrasound.

A variety of blood tests are also offered to detect the presence of normal/abnormal body functions, hormone levels and antibodies for rubella.

Women with a body mass index (BMI) greater than 30, or less than 18.5 will be offered a referral to their community dietician.



introducing our trying to conceive kit

Exclusively available at myexpertmidwife.com

What's included:

- 1** 12 x luteinising hormone (LH) strips (ovulation strips) & instruction leaflet

These strips test your urine to detect levels of luteinising hormone (LH) during your cycle. LH is present in low levels throughout your cycle and rises sharply around 24-36 hours before ovulation occurs. When plotted on your chart it will help you to see when ovulation is most likely to occur during your menstrual cycle.



x12

- 2** 3 x pregnancy test strips & instruction leaflet

These pregnancy testing strips can accurately indicate whether you are pregnant by detecting human chorionic gonadotropin (hCG), a hormone your body starts to produce around 6 days after fertilisation. For more accuracy wait until the first day after your period was due.



x3

- 3** 1 x digital thermometer

The thermometer will enable you to track and chart your basal body temperature (BBT) each day when you wake. Tracking your BBT can help you identify when ovulation is occurring.



- 4** 1 x testing chart

This specially designed chart is for you to track your personal cycle. By using several indicators on the chart for ovulation, you can understand when it is more likely to occur.



- 5** 1 x guidebook

The guidebook is key to learning more about female and male fertility as well as helping you to navigate your TTC journey.



#5 steps when trying to conceive

Step 1

Read the guide so you can gain a better understanding of how fertility works and what can help and hinder the process of getting pregnant.

Step 2

Start to make any adjustments to your lifestyle that you and your partner think would be beneficial to helping you when trying to conceive.

Step 3

Begin tracking your basal body temperature (BBT) and discharge. This will help guide you as to when it is most likely that you are ovulating.

Step 4

Have regular sex around the time you suspect ovulation is occurring.

Step 5

Start using the LH strips in your cycle on the days before you think ovulation is most likely to occur. In an average 28 day cycle ovulation is most likely 14 days before the start your next period, but some cycles are longer or shorter so this can vary. There is an LH surge around 24-36 hours before ovulation occurs. Use the other observations on your chart for guidance.

Build your observations and checks on your menstrual cycle into your daily routine by using the chart provided.

Planning and preparing to become pregnant is associated with better outcomes and improved health for women, children and families. At My Expert Midwife we want to reach out to as many people as possible who would like more information when they are trying to conceive. This is why our not-for-profit Trying to Conceive Kit was developed by midwives to help support those who need more information on their journey when trying to conceive. Whether you want to know more about your fertility before you start trying for a baby, or you have already started trying

to become pregnant, the Trying to Conceive Kit and guide can help your understanding of this subject and support you throughout this time.



abbreviations

AF	Aunt Flow (period)	HCG	Human Chorionic Gonadotropin
BBT	Basal Body Temperature	HPT	Home Pregnancy Test
BFP	Big Fat Positive	IUI	Intrauterine Insemination
BFN	Big Fat Negative	IVF	In-Vitro Fertilisation
BCP	Birth Control Pill	M/C	Miscarriage
BD	Baby Dancing	O	Ovulation
CD	Cycle Day	OPK	Ovulation Predictor Kit
CP	Cervical Position	+ G	Obstetrics + Gynaecology
DH	Dear Husband/Hubby	POAS	Pee On A Stick
DPO	Days Past Ovulation	PCOS	Polycystic Ovary Syndrome
EWCM	Egg White Cervical Mucus	UPT	Urine Pregnancy Test
Endo	Endometriosis	TTC	Trying To Conceive
FSH	Follicle Stimulating Hormone	2WW	2 Weeks Wait
HSG	Hysterosalpingogram		
LH	Luteinising Hormone		



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