

Women and stroke

Anyone can have a stroke at any age, but there are some risk factors that are specific to women. This guide explains the risk factors for stroke and lists further sources of information and support.

Your risk of a stroke

When doctors talk about your risk of stroke, they mean the chances of you having a stroke. Risk factors can be anything about you and your lifestyle that changes your risk of stroke, for example your age or whether you drink or smoke. There are some risk factors that mainly affect women.

Stroke facts

Women tend to have strokes later in life than men. But overall, more women die of stroke than men. This is mainly because women live longer than men and tend to have their strokes when they are older. This guide looks at the things that can make women more likely to have a stroke, and ways to reduce your risk of a stroke at any age.

What is a stroke?

A stroke is a brain attack. It happens when the blood supply to part of the brain is cut off, killing brain cells. Damage to the brain can affect how the body works. It can also affect how you think and feel.

There are two main types of stroke. Ischaemic stroke is due to a blocked blood vessel in the brain. It is often referred to as a clot, and around 85% of stroke are ischaemic. A haemorrhagic stroke is due to bleeding in or around the brain, and is often called a bleed. About 15% of strokes are haemorrhagic.

Risk factors that affect all of us

The main risk factors for stroke affecting men and women are:

Age

As you get older, your arteries naturally become harder, making them more likely to become blocked.

Health problems

Some health problems raise your risk of a stroke. These include:

- high blood pressure
- atrial fibrillation (irregular heartbeat)
- diabetes and pre-diabetes
- high cholesterol.

Other health problems that can raise the risk of a stroke include sickle cell disease, and stress, anxiety and depression.

Obstructive sleep apnoea is a sleep disorder that interrupts your breathing during sleep and may increase your risk of a stroke.

Lifestyle

Stroke risk can be increased by things we do in everyday life, including:

- smoking
- being overweight
- drinking too much alcohol
- not getting much exercise
- eating unhealthy food
- using illegal drugs like cocaine.

Family history

Strokes can run in families, so speak to your GP if you have a family history of stroke.

Ethnicity

Strokes happen more often to people from African or Caribbean families, as well as people from South Asian countries such as India, Pakistan and Bangladesh.

How to get your health checked

If any of these risk factors apply to you, even if you feel in good health, get a regular health check. In England people aged 40–74 can have the NHS Health Check, which looks for early signs of health problems including stroke risk. If you are worried about your

health, go to your nurse or GP. A local pharmacist can also give advice and do some health checks.

Women's risk factors

Although generally the risk of stroke in women is lower the younger you are, it's never too early to start looking after your health. You also need to be aware of some risk factors linked to stroke in younger women. The main female-specific risk factors are:

- taking hormone contraceptives
- using hormone replacement therapy (HRT)
- having health problems more common in women, including migraines and lupus.

Taking hormone contraceptives

Overall, the risk of stroke from using contraception is very low. Some types of hormone-based contraception do carry an increased risk of stroke. However, your risk of stroke should be carefully checked before you are given any of these treatments by the doctor. So if you are worried, don't stop any treatment until you can talk to your GP or nurse. Ask them about your own risk, and the best contraception for you.

Types of hormone contraceptive and stroke risk

The combined oral contraceptive pill and the contraceptive patch: these contain both oestrogen and progestogen. Treatments including oestrogen can slightly increase your risk of serious problems such as heart attacks, stroke and deep vein thrombosis. This is because they can increase the risk of blood

clots forming. So if you have any of the risk factors connected to stroke such as high blood pressure, smoking or obesity, you may not be able to use these types of contraceptive. If you do not have any other risk factors for stroke then the increased risk associated with using the combined oral contraceptive pill or contraceptive patch is very small.

You may not be able to use these contraceptives if you have any of the risks listed below:

- you are a smoker, or you stopped smoking less than one year ago, and are aged 35 or above
- you are very overweight
- you take some medications including some antibiotics, St John's Wort, or some treatments for epilepsy, TB and HIV
- you have high blood pressure
- you have had a blood clot or stroke
- you have a heart abnormality or heart disease
- you have diabetes with complications, or have had diabetes for 20 years or more
- you have had liver or gallbladder disease, or breast cancer
- you have severe migraines, especially with aura.

If you have any of the above health problems and you are taking the combined oral contraceptive pill or contraceptive patch then you should speak to your GP.

Other methods of contraception containing hormones

The progestogen-only contraceptive pill: does not contain oestrogen, the hormone in the combined pill that can raise stroke risk. Progestogen-only treatments are unlikely to raise your stroke risk, but may not be suitable if you have had a stroke or heart disease before.

Contraceptive injection and contraceptive implant: these also use progestogens only and, like the pill, are unlikely to raise your risk of stroke. But you may not be able to have these if you have already had a blood clot, diabetes with complications, a stroke or heart disease before.

The intrauterine system (IUS): a plastic T-shaped device that is placed in your womb and releases a small amount of progestogen into the uterus. It may not be suitable if you have a history of serious heart disease or stroke.

Your GP or your local sexual health clinic can advise you on the different contraceptive options that are available, and what is suitable for you.

Hormone replacement therapy

During the menopause, the ovaries produce less of the hormones oestrogen and progesterone. Hormone replacement therapy (HRT) is a treatment that tops up your levels of the hormones, and helps to control some of the symptoms of the menopause, such as hot flushes, vaginal dryness and mood swings.

There are different types of HRT which can use oestrogen and progestogen in different combinations or alone. HRT tablets containing

oestrogen cause a small increase in your risk of stroke. However if you use a patch or a gel form of HRT with oestrogen, this does not increase your risk of clots or stroke. If you have a family history of blood clots, you may need some extra checks before receiving HRT.

Like the combined contraceptive pill, the increase in risk from taking HRT tablets is very small, particularly if you are under 60. So provided you are in a low-risk group, or your risk factors are well managed, your overall risk is still very small.

To find out more about your stroke risk and taking HRT, speak to your GP.

Fertility drugs and IVF treatment (in vitro fertilisation)

The hormones used to increase fertility or to prepare for IVF treatment can have rare complications that may increase the risk of blood clots and stroke.

Ovarian hyperstimulation syndrome

Ovarian hyperstimulation syndrome (OHSS), when the ovaries swell, happens in around a third of IVF cycles. Most cases are mild. A very small percentage may lead to serious complications such as pain, breathing difficulties and blood clots in the veins. If you are having IVF it's important to get help with any symptoms of OHSS as soon as possible.

If you are having or considering having IVF treatment, you can ask your doctor about the effect on your risk of stroke, and what you can do to manage any risk factors you may have.

Stroke and pregnancy

Although the overall risk of stroke in a younger woman is low, pregnancy does increase your risk of a stroke. One reason for this is the increased levels of female hormones in the body which cause changes in the blood vessels and the make-up of the blood. It becomes more likely that a blood clot forms in a vein or artery, with the highest risk being just after you have had your baby. During pregnancy your blood pressure can rise, causing a higher risk of stroke.

Pre-eclampsia can affect any pregnancy, and one of the main signs is high blood pressure. You can also have protein in your urine. All pregnant women should have their blood pressure checked regularly to help spot the early signs of pre-eclampsia.

Signs of pre-eclampsia include headaches, abdominal pain just below the ribs, visual disturbances, nausea and vomiting, and swollen hands and feet.

If you are pregnant and have existing high blood pressure or other risk factors for stroke and heart disease, you should be closely monitored during your pregnancy.

If you have the signs of pre-eclampsia you need to get medical help straight away. If the symptoms are mild, you may be able to return home and have your blood pressure closely monitored. You can have medication to treat the high blood pressure. If you are diagnosed with pre-eclampsia, you'll be monitored carefully until it's possible to deliver the baby.

Diabetes during pregnancy

Some pregnant women develop gestational diabetes, which stops after they give birth. Having gestational diabetes makes you more likely to develop pre-eclampsia, so it's linked to a slightly increased stroke risk. However if you follow any treatment and advice you are given, you can lower the chances of any problems.

Migraine

Migraine is a complex condition with a variety of symptoms, and it affects more women than men. For most people the main symptom is a severe, throbbing headache affecting the front or one side of your head. This is usually accompanied by other symptoms such as nausea, vomiting, or a sensitivity to light, sound or smell.

There are two types of migraine: migraine with aura and migraine without aura. The aura usually happens at the start of a migraine attack, before the headache. It often includes visual changes such as seeing flashing lights or dark patches.

It is thought that female hormones are closely linked to migraine in women. Many women report having a migraine attack around the time of their period, known as a 'menstrual migraine'.

Some women also find that their migraines may get worse as they approach the menopause, but may improve after the menopause.

Studies show that people with migraine, particularly with aura, have roughly twice the risk of an ischaemic stroke (a stroke caused by a blockage). Because of this link, women who have migraine with aura are advised not

to take the combined contraceptive pill (see *Taking hormone contraceptives* earlier in this guide).

It is important to remember that the risk is still very small, particularly if you don't have many other risk factors for stroke.

For further information about migraine, please see our guide F28, *Migraine and stroke*.

Lupus

Lupus is an autoimmune condition that mainly affects women. It tends to appear more often among people of African, Caribbean and Chinese descent. Some forms of lupus mainly affect the skin, but it can also cause fatigue and joint pain with irregular flare-ups. The severe form is called systemic lupus erythematosus (SLE). This can cause kidney damage leading to high blood pressure, which makes a stroke more likely.

There is no cure for lupus itself, but you can treat the symptoms such as pain and high blood pressure. If you have SLE, your kidneys should be monitored, and kidney problems can be treated with immunosuppressants. You can also take steps to reduce your risk of a stroke by making healthy lifestyle choices like eating healthily, not smoking and taking plenty of exercise.

Reducing your risk of a stroke

In this section we give some ideas for improving your overall health with healthy lifestyle choices. You can find more information and ideas in our guide L14, *How to reduce your risk of a stroke*. Visit stroke.org.uk to read it online or order a printed copy.

Healthy lifestyle choices

You can help to reduce your risk of a stroke by making some healthy lifestyle choices.

Stop smoking

Smoking doubles your risk of dying from a stroke. The nicotine in tobacco is highly addictive so giving up is not always easy, but there is a lot of support available to help you. You should be able to find an NHS service that can give you advice on the best way to quit. Speak to your GP or call the NHS Smokefree helpline to find your nearest service. You can find helpline numbers at the end of this guide.

Cut down on alcohol

If you do drink alcohol, keep within the safe limits recommended by the government. The guidelines say that men and women should drink no more than 14 units per week. Drinking a lot in a single session is particularly risky, as it can cause your blood pressure to rise very quickly. To reduce your risk, you can spread out your drinking over the week and try having several dry days in a week.

For more information see our guide F13, *Alcohol and stroke*.

Reduce your waist size

If you carry extra weight around your waist you are more likely to develop diabetes, high blood pressure or other health problems. There are some great weight-loss resources online such as NHS One You, and the NHS Weight Loss Plan on www.nhs.uk/livewell/loseweight. Ask your GP or pharmacist what help is available in your local area.

Eat healthily

Eating a healthy, balanced diet can help to lower your blood pressure and the amount of cholesterol in your blood. It can also help to control diabetes. All of this can help to reduce your risk of having a stroke.

- **Eat more fruit and vegetables**

Fruit and vegetables are an important source of vitamins and minerals and you should aim to have five portions of fruit and vegetables every day.

- **Eat more fibre**

A third of your daily diet should be made up of starchy foods such as bread, cereals, rice and potatoes. Foods that are high in fibre help to reduce the amount of cholesterol in your blood, so when choosing starchy foods, go for wholegrain cereals, brown rice and other whole grains.

- **Eat healthy protein**

You should aim to have two portions of protein every day. Fatty cuts of red meat are high in saturated fat, which can raise your cholesterol, so limit the amount you eat. You could try adding beans or lentils to your stews and curries to replace some of the meat you use.

It's a good idea to eat two portions of fish every week, especially oily fish like mackerel, sardines or salmon. Vegetarian or vegan sources of protein include tofu, mycoprotein such as Quorn, textured vegetable protein and tempeh.

- **Cut down on fat**

We all need small amounts of healthy fat in our diets, but too much can lead to weight problems. Some types of hard fat like butter, lard and palm oil can increase your blood cholesterol. Try to replace hard fats like butter and coconut oil with small amounts of vegetable oil, nut and olive oils, as these are higher in unsaturated fats which can help to reduce cholesterol.

- **Reduce sugar**

Having too much sugar can make you gain weight, so you should aim for no more than seven sugar cubes worth of sugar a day (about 30g). Try to avoid foods with hidden sugar like ready-made pasta sauces, sweetened breakfast cereals and fizzy drinks like cola. Sweet treats and drinks like ginger beer contain a lot of sugar, so try not to have them every day.

- **Try new ways of cooking**

How you prepare your food is just as important as what you eat. Steaming, boiling and grilling are all healthier than frying, which adds extra fat.

- **Keep salt low**

Too much salt can increase your blood pressure. We all need a small amount of salt in our diets but the most we should have in a day is 6g (or a teaspoon) of salt. Much of the salt we eat is hidden in processed foods such as ready meals, crisps, nuts and biscuits, as well as salt fish, corned beef, bacon, salt pork and processed meats. Keep these as an occasional treat and avoid adding salt to food when you're cooking or at the table. Using spices and lemon juice can add flavour to replace the taste of salt.

Take more exercise

Regular, moderate exercise can reduce your risk of stroke. You should aim to do at least 30 minutes of moderate physical activity five or more times a week. You don't have to do all 30 minutes at once, it can be broken up into smaller blocks of time throughout the day.

You can choose any form of exercise as long as the activity increases your heart rate and makes you feel warm and a little out of breath. If you haven't been active for some time, and especially if you're over 40 or have a medical condition, make sure you speak to your doctor before you start doing lots of physical activity.

Spotting the signs of a stroke

The FAST test can help you to recognise the signs of a stroke.

FAST test



Face

Can the person smile? Has their face fallen on one side?



Arms

Can the person raise both arms and keep them there?



Speech

Can the person speak clearly and understand what you say? Is their speech slurred?



Time

If you see any of these three signs, it's time to call **999**.

The FAST test helps to spot the three most common symptoms of stroke. But there are other signs that you should always take seriously. These include:

- sudden weakness or numbness on one side of the body, including legs, hands or feet
- difficulty finding words or speaking in clear sentences
- sudden blurred vision or loss of sight in one or both eyes
- sudden memory loss or confusion, and dizziness or a sudden fall
- a sudden, severe headache.

Stroke can happen to anyone, at any age. Every second counts. If you spot any of these signs of a stroke, don't wait. Call **999** straight away.

A TIA (transient ischaemic attack) is the same as a stroke except the symptoms last for a short amount of time. In a TIA, a blood vessel in the brain gets blocked, but the blockage clears by itself. A TIA is a major warning sign of a stroke. So it's essential to call **999** if you have any stroke symptoms.

Where to get help and information

From the Stroke Association

Talk to us

Our Stroke Helpline is for anyone affected by a stroke, including family, friends and carers. The Helpline can give you information and support on any aspect of stroke.

Call us on **0303 3033 100**, from a textphone **18001 0303 3033 100** or email info@stroke.org.uk.

Read our publications

We publish detailed information about a wide range of stroke topics including reducing your risk of a stroke and rehabilitation. Read online at stroke.org.uk or call the Helpline to ask for printed copies.

My Stroke Guide

My Stroke Guide is the stroke support tool and online community from the Stroke Association. Log on at mystrokeguide.com.

Our Enquiry Line can support you with using My Stroke Guide: call **0300 222 5707** or email mystrokeguide@stroke.org.uk.

Other sources of help and information

Action on Pre-eclampsia (APEC)

Tel: 020 8427 4217

Email: info@apec.org.uk

Website: www.apec.org.uk

Set up to raise awareness, and to ease physical or emotional suffering caused by this disorder. Runs a helpline, a telephone befriending service, an online support group, and publishes leaflets on pre-eclampsia.

Diabetes UK

Diabetes Careline: 0845 120 2960

Email: info@diabetes.org.uk

Website: www.diabetes.org.uk

Information and support for all people with diabetes.

Family Planning Association (FPA)

Helpline (Northern Ireland only):

0845 122 8687

Website: www.fpa.org.uk

Provides information on the different options for contraception.

Menopause Matters

Website: www.menopausematters.co.uk

An independent clinician-led website that aims to provide accessible, up-to-date information about the menopause, menopausal symptoms and treatment options.

Menopause Support

Website: www.menopausesupport.org.uk

Tel: 0800 29301 1390

Email: support@menopausesupport.org.uk

A support network that aims to help women deal with problems they might experience while going through the menopause. The website offers support, advice, products and workshops that may help.

Migraine Action

Tel: 08456 011 033

Email: info@migraine.org.uk

Website: www.migraine.org.uk

Membership organisation providing information and advice about all aspects of migraine.

The Migraine Trust

Helpline: 020 7631 6970

Email: info@migrainetrust.org

Website: www.migrainetrust.org

Leading patient support and research charity for migraine. Can provide details of specialist migraine clinics.

Women's Health Concern (WHC)

Website:

www.womens-health-concern.org

A charity aiming to provide unbiased, accurate health information. Runs a telephone helpline and email enquiry service provided by a team of nurses. Publishes a range of factsheets and leaflets on women's health issues.

About our information

We want to provide the best information for people affected by stroke. That's why we ask stroke survivors and their families, as well as medical experts, to help us put our publications together.

How did we do?

To tell us what you think of this guide, or to request a list of the sources we used to create it, email us at feedback@stroke.org.uk.

Accessible formats

Visit our website if you need this information in audio, large print or braille.

Always get individual advice

Please be aware that this information is not intended as a substitute for specialist professional advice tailored to your situation. We strive to ensure that the content we provide is accurate and up-to-date, but information can change over time. So far as is permitted by law, the Stroke Association does not accept any liability in relation to the use of the information in this publication, or any third-party information or websites included or referred to.

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Together we can conquer stroke.

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