

What Caused My Stroke?





With Thanks



All of our booklets are made together with our community of stroke survivors and their families.

Thank you to everyone who contributed their experiences, feedback and advice.



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Knowing the Cause of Your Stroke

Understanding what caused your stroke is very important. It helps you and your doctors know how to prevent another stroke and make the right choices for your health. Many people find it reassuring to understand why it happened and what steps can lower the risk in the future.



If you have left hospital or are unsure of the cause of your stroke, remember that it is your right to know. You should know what has been ruled out and what has not. You can ask your doctors to explain the tests that have been done and whether any further testing is needed.



If you still feel unsure, you should go to your GP and ask for further support. Your GP can help you understand what has happened why it may have happened and what steps you can take next.

It is normal to feel anxious or frustrated if the cause is unclear. Talking with others who have had a stroke can really help and counselling or other support services are also available.



Keep a record of your tests and results and bring questions to appointments. Understanding the cause and getting support can help you take the best steps to protect your health and reduce the risk of another stroke.



“Despite three separate week-long attempts to monitor my heart, I reached my one-year stroke anniversary, still with no cause. Then they repeated a bubble echo. After this test, the doctors believed there was a hole in my heart. In June 2024 I was in for my PFO closure. I was nervous as it was my first time having any form of surgery or anaesthetic. I felt in limbo after the surgery. There was so much build up to finding a cause and the operation, and then it was just done. I was relieved and grateful, but I can’t say I felt totally shiny and new. I still have physio, medication, follow up appointments, fatigue, and fixing the hole doesn’t change that. But I know I am better off for having it done.”

ALICIA, ISCHAEMIC STROKE AT 23



Tests and Scans

Sometimes, the cause is identified quickly. In other cases, more detailed tests are needed, and often, no clear reason is found.

After the initial emergency treatment, doctors look for underlying factors, such as heart conditions, blood vessel problems, or clotting issues, that may have led to your stroke.

These tests may include:



Brain Scan (CT or MRI)

Shows the type, size, and location of the stroke - whether caused by a blockage (ischaemic) or bleeding (haemorrhagic).



Carotid Ultrasound

Checks for blockages, narrowing or plaque build-up in the arteries supplying blood to the brain.



Electrocardiogram (ECG)

Looks for irregular heart rhythms (such as atrial fibrillation) that can lead to clots forming in the heart.



Blood Tests

Measure cholesterol, blood sugar, and clotting - all of which affect stroke risk.



Blood Pressure Monitoring

High blood pressure is the single biggest modifiable risk factor for stroke. It's often measured repeatedly over time.



Echocardiogram or Bubble Test

Looks for structural differences in the heart (like a small hole) that could allow clots to pass through.

Heart Related Causes

Problems with how the heart functions or how blood moves through it are among the most common causes of stroke.

Atrial Fibrillation (AF)

An irregular heartbeat that allows blood to pool and form clots, which can travel to the brain.

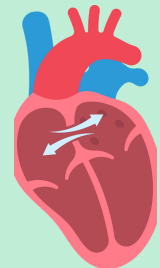
Around
22% of
strokes

PFO

Patent Foramen Ovale (PFO) is a small flap-like opening in the heart present in about **1 in 4 people**.

It is usually harmless, but in some people it allows small clots to travel from the heart to the brain.

If a PFO is suspected to have caused a stroke, a closure procedure may be offered. This is where a thin tube is inserted through a vein to place a device that seals the hole. Over time, heart tissue naturally grows over the device.



Around
10% of
strokes

Atrial Septal Defect (ASD)

An **Atrial Septal Defect (ASD)** is a larger, more defined hole between the heart's upper chambers.

Like PFOs, some ASDs can be repaired using a minimally invasive closure procedure.

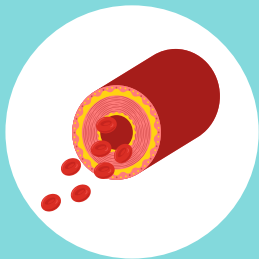
Around
1% of
strokes

Heart muscle and valve problems (e.g., cardiomyopathy, endocarditis, valve defects, recent heart attack or valve disease)

Some heart problems let clots form inside the heart and travel to the brain.

They are diagnosed with ECGs and heart scans, and treatment includes blood thinners, heart medicines, antibiotics for infection, or valve repair.

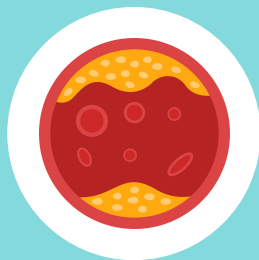
Blood Vessel and Circulation Causes



High Blood Pressure (Hypertension)

The most common cause of stroke. Over time, high pressure damages blood vessel walls, making them more likely to narrow, block, or burst.

Treatment: Blood pressure medications (e.g. ACE inhibitors, calcium-channel blockers and diuretics) as well as lifestyle changes and regular monitoring.



Atherosclerosis and Carotid Artery Disease

Fatty deposits build up in the arteries, reducing blood flow to the brain.

This can cause blockages or lead to clots that break off and cause a stroke.

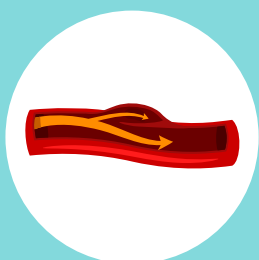
Treatment: Blood thinners, statins, blood-pressure control, and sometimes procedures like carotid endarterectomy (cleaning the artery) or carotid stenting.



Small Vessel Disease

Damage to tiny blood vessels deep in the brain, often linked to ageing, diabetes, and high blood pressure.

Treatment: Strict control of blood pressure, diabetes, and cholesterol; blood thinners if needed; smoking cessation and lifestyle changes.



Arterial Dissection

An Arterial Dissection is a small tear in an artery wall, more common in younger people, which can lead to clot formation.

Treatment: Blood thinners for several months, blood-pressure control, and monitoring with scans; rarely surgery or stenting if severe.



Structural blood-vessel Problems (e.g AVM, cavernoma, aneurysm, Moyamoya)

These are abnormal or weakened blood vessels in the brain that can bleed or allow clots to form. They are diagnosed with brain scans.

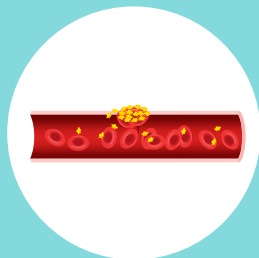
Treatment: May include monitoring, keyhole procedures, radiotherapy, or surgery depending on the risk.



Infections affecting the heart or blood vessels (e.g., endocarditis, shingles-related vasculopathy)

Some infections can damage the heart or vessels and send clots to the brain. They are diagnosed with blood tests and scans.

Treatment: Antibiotics or antivirals and stroke-prevention medicines.



Immune and inflammatory conditions (e.g., lupus, vasculitis, sarcoidosis)

These illnesses cause inflammation in the blood vessels or immune system, which can narrow arteries or trigger clots. They are diagnosed with blood tests and scans.

Treatment: Steroids, immune-calming medicines and blood thinners if needed.



Migraine with aura

Migraine with aura slightly increases stroke risk, especially in smokers or people on oestrogen contraception. Diagnosis is based on symptoms.

Treatment: Usually involves migraine control and removing risk factors like smoking or certain contraceptives.

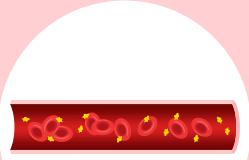


Drug-related causes (e.g., cocaine, amphetamines, MDMA)

Certain drugs can make blood vessels spasm or tear, which can block blood flow to the brain. Diagnosis is based on history, scans and blood tests.

Treatment: Includes supportive care, stroke management and stopping the drug.

Blood Clotting Causes



Blood-clotting conditions (e.g., antiphospholipid syndrome, Factor V Leiden)

These are conditions that make your blood clot more easily than normal. They are diagnosed with blood tests.

Treatment: Usually includes long-term blood thinners and regular monitoring.



Pregnancy and hormone-related causes (e.g., postpartum stroke, oestrogen pills)

Pregnancy, the weeks after birth, or some hormone medicines can make blood more likely to clot.

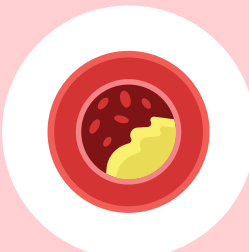
Treatment: Usually includes blood thinners and reviewing hormone medicines.



Diabetes

High blood sugar can damage blood vessels and increase the chance of a stroke.

Treatment: Includes medicines to lower sugar, diet advice and controlling blood pressure and cholesterol.



High cholesterol

Too much cholesterol can build up in arteries, making clots and strokes more likely.

Treatment: Includes statin medicines and lifestyle advice on diet and exercise.

Lifestyle factors (e.g., smoking, alcohol, obesity, lack of exercise)

Unhealthy habits can raise blood pressure, cholesterol and clot risk, leading to stroke. Diagnosis is based on history and physical checks and treatment focuses on stopping smoking, reducing alcohol, exercising and eating a healthy diet.

Cryptogenic Stroke

A **cryptogenic stroke** is a type of **ischaemic stroke** that occurs without a direct cause. It's estimated that **1 in 3** ischaemic strokes are cryptogenic.

It can be frustrating and distressing to be left without answers. Cryptogenic strokes are not uncommon, there many stroke survivors you can reach out to in our community who may share your experiences.



“Not having a clear cause was worrying and reassuring in equal measure. The unanswered ‘why’ left me suggesting causes, examining what ‘I had done wrong’, ‘why me’, ‘what could I have done to prevent it’. The truth was ‘I had done nothing wrong, why not me?, and I couldn’t have done anything to stop it’.

Time has been my best friend, as time has passed and no further strokes (26 years on) I have relaxed into being the best ‘Me’, trying to live without being anxious about something that was out of my hands, working on the things that I can control. Facing the rest of my life with the same chance of having a stroke as everyone else my age is reassuring; I just have to be aware of the same risk factors as everyone else.”

GENISE, CRYPTOGENIC STROKE AT 34





We're here for you. Get in touch.



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Let's stay social.

 **Different Strokes Charity**

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Different Strokes is a registered charity in England and Wales (1092168) and Scotland (SC044190).



This booklet was made possible thanks to funding from The National Lottery Community Fund.