

Seizures and epilepsy after stroke

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Read this online

This guide looks at seizures and epilepsy after stroke, and how they can be diagnosed and managed.

A stroke sometimes causes seizures, either soon after the stroke or some time later. This can have a big impact on your life, and it might feel like a lot to deal with on top of having a stroke.

How common are post-stroke seizures?

A seizure is most likely to happen within the first few days after a stroke, but can also happen months or years later. Around one in 20 people (about 5%) may have a seizure soon after a stroke. It's more common in older people.

Overall, your risk of having a seizure goes down over time. If you have one seizure after a stroke, it does not necessarily mean you have epilepsy, or will go on to develop it.

Some people have more than one seizure, and will be diagnosed with epilepsy.



Driving

If you have a seizure, you must stop driving and notify the DVLA (England, Scotland and Wales) or the DVA (Northern Ireland) immediately, as well as your insurance company.

Contact your local driving assessment centre for advice about driving after stroke and epilepsy. Find your local centre online drivingmobility.org.uk. For more information about driving and seizures visit epilepsy.org.uk/driving.

What is a seizure?

A seizure is a sudden abnormal burst of electrical activity in your brain. It happens when the electrical signals between brain cells get disrupted. This sends abnormal signals to the nerves in your body causing a seizure.

A stroke can trigger this burst of electrical activity by damaging the connections between some of your brain cells.

How does a seizure look and feel?

A seizure can have many different types of symptom, including changes to vision, smell and taste. It can lead to loss of consciousness, jerking movements and injury. For more information see 'Types of seizure' later in this guide.

Can you predict a post-stroke seizure?

It's not very easy to predict who will have a seizure, but the medical staff looking after you are aware of the risk of a seizure soon after a stroke. They will look out for signs of seizures and make sure you get the treatment you need.

A seizure is more likely if you had a severe stroke, or a stroke in the cerebral cortex, the large outer layer of the brain where vital functions like movement, thinking, vision and emotion take place.

What is epilepsy?

Epilepsy means a tendency to have repeated seizures. People can develop epilepsy at any age, and in around half of all cases there is no obvious reason for it to happen. Epilepsy can be due to a brain injury or other condition such as stroke, an infection or a growth in the brain. Overall, stroke is the cause in around 10% of adults newly diagnosed with epilepsy, but stroke may be the cause in a quarter of people with epilepsy over 65 years old.

How are seizures diagnosed?

Tests and scans for epilepsy include measuring the electrical activity in the brain, brain imaging and blood tests.

If you have already left hospital and think you have had a seizure, contact your GP. You should be referred to see a specialist within two weeks. The specialist is usually a neurologist, an expert in the brain and nervous system. While you are waiting for the appointment, it is best to avoid any activities that could put you, or others, in danger if you have another seizure. For example, don't go swimming, and have showers rather than a bath. You must not drive if you have had a seizure.

You may not be able to remember the seizure, so if someone else witnessed it, they should visit the specialist with you. They could write down what happened or share a video of the seizure.

Keep a seizure diary recording the date and time of your seizures, what happened and any possible triggers such as stress or drinking alcohol.

The specialist will ask you questions about what happened. This may be enough to make a diagnosis. Further tests may be needed, particularly if the seizure did not involve convulsions. These tests do not prove whether you have epilepsy, but they can give information about the possible cause, and the type of epilepsy you have.

Tests used in diagnosing epilepsy

Electroencephalogram (EEG)

A common test for epilepsy is an EEG. It is a painless test which involves placing electrodes on your scalp. These measure electrical activity in your brain, and can identify any unusual patterns. The test only shows what is happening in your brain at the time it is done, so a normal EEG does not necessarily mean that you do not have epilepsy. An EEG usually takes about one hour and can be done at an outpatient clinic.

Magnetic resonance imaging (MRI)

An MRI scan can find problems inside the brain which might cause epilepsy, including the damage left by a stroke.

Blood tests

You may be given blood tests or have other checks to look for health problems that can cause similar symptoms, such as diabetes, migraine and panic attacks.



How is epilepsy treated?

Treatments include:

- Anti-epileptic drugs (AEDs).
- Surgery.
- Vagus nerve stimulation therapy.
- Ketogenic diet.

This guide can only give general information. You should always get individual advice about your own health and any treatment you may need from a medical professional such as a GP or pharmacist.

Anti-epileptic drugs (AEDs)

Medication can often reduce or stop seizures. The treatment you have will depend on:

- What type of seizures you have.
- Your age and sex.
- How frequent your attacks are.
- Other effects of your stroke, like swallowing problems.
- Other medication you are taking.

AEDs work by changing the levels of chemicals in the brain. They are usually safe and reliable, and can help you get on with everyday life.

Your doctor might start you on a low dose and increase it gradually to find the dose that works for you.

They can have side effects such as drowsiness, dizziness and confusion. Everyone is different, and some people don't get any side effects at all. If you do have side effects you may be able to try a different type, or combination of medications.

If you have symptoms like feeling unsteady, having poor concentration or vomiting, your dose could be too high and you should contact your GP or specialist.

Free prescriptions

If you take anti-epileptic drugs (AEDs), you are entitled to get your AEDs and all other NHS prescriptions free of charge.

Surgery

Surgery may be an option if AEDs do not help you, and if your epilepsy is due to a physical cause in your brain, such as scarring or stroke damage. Whether you can have surgery depends partly on where the problem lies inside your brain, and whether a surgeon can reach it safely. You will need to explore the risks and possible benefits with your doctor before choosing to go ahead.

Vagus nerve stimulation therapy

This treatment aims to reduce the abnormal electrical activity in your brain. It works by stimulating the vagus nerve, which travels from your brain and reaches many parts of your body including your heart and lungs. A small device is implanted on the vagus nerve in the neck, and sends regular electric signals which regulate electrical activity in the brain.

Ketogenic diet

This treatment is used for children (and occasionally adults) who don't respond to AEDs, and involves a high-fat, low carbohydrate diet. This changes the way the brain uses energy, which may reduce seizures. It should only be used with the help of a specialist doctor and dietitian.

Epilepsy specialist nurses

You might have support from a specialist nurse, who can give you individual advice about managing your condition. They can carry out reviews, and change your medication. They can answer questions and help you find the support you need.

Types of seizure

Seizures can vary, ranging from tingling sensations or 'going blank' for a few seconds, to shaking and losing consciousness. Some people have only one type of seizure, and some have more than one type.

There are three main types of seizure.

Focal onset seizures

Some seizures only occur in part of the brain, known as focal onset seizures. There are two kinds of focal seizures: motor (physical signs like moving your arms or falling), and non-motor (affects senses, awareness and emotions).

Generalised onset seizures

A generalised seizure involves the whole brain and affects the whole body. Motor (physical) signs can include losing consciousness and muscle spasms. A non-motor seizure could be a brief period of absence or blankness, where the person stops moving, and looks as if they are staring into space.

Unknown onset seizure

If it's not possible to tell where the seizure began in the brain, doctors may describe your seizure as motor or non-motor. Motor (physical) signs might include losing consciousness and having jerking movements, and non-motor seizures can affect emotions and sensation.

Complications of epilepsy

A rare condition called sudden death in epilepsy (SUDEP) can lead to people dying unexpectedly during an epileptic seizure, often in their sleep. Following anti-epileptic treatments can reduce or prevent seizures, and greatly reduces the chance of SUDEP. Support and information is available from SUDEP Action sudep.org/support.

Status epilepticus is a serious complication of epilepsy which can keep someone having repeated seizures without returning to consciousness. It is a medical emergency and you need to get help straight away.



First aid for seizures

If you are looking after someone having an epileptic seizure:

- Protect the person from injury by removing any harmful objects nearby and cushioning their head.
- Loosen any tight clothing from around their neck.
- Look for any identity card or jewellery that might give you advice on what to do.
- Do not attempt to restrain the person or bring them round.
- Do not move them, unless they are in danger.
- Do not put anything into their mouth.
- After the seizure has finished, turn them on their side to help them breathe more easily.
- Do not give them anything to eat or drink.
- Be calm and reassuring, stay with them until they have completely recovered.
- Make a note of how long the seizure lasted.

Call **999** if:

- One seizure follows another without the person recovering in between.
- The seizure continues for more than five minutes.
- The person is injured or seems to need urgent medical attention.
- You think it is the person's first seizure.

Where to get help and information

From the Stroke Association

Helpline

Our Helpline offers information and support for anyone affected by a stroke. This includes friends and carers.

Call us on **0303 3033 100**, from a textphone **18001 0303 3033 100**
Email helpline@stroke.org.uk.

Read our information

Get more information about stroke online at stroke.org.uk, or call the Helpline to ask for printed copies of our guides.

My Stroke Guide

The Stroke Association's online tool My Stroke Guide gives you free access to trusted advice, information and support 24/7. My Stroke Guide connects you to our online community, to find out how others manage their recovery.

Log on to mystrokeguide.com today.

Other sources of help and information

Driver Vehicle Licensing Agency (DVLA) (England, Scotland, Wales)

Website: [gov.uk/dvla](https://www.gov.uk/dvla)

DVLA Medical Enquiries tel: **0300 790 6806**

Contact the DVLA by phone or online to tell them about a medical condition that affects your driving such as stroke and seizures.

Driver and Vehicle Agency (DVA) (Northern Ireland)

Website: nidirect.gov.uk/information-and-services/motoring

Tel: **0300 200 7861**

Email: dva.customerservices@infrastructure-ni.gov.uk

Contact the DVA by phone or by email to tell them about a medical condition that affects your driving such as stroke and seizures.

Epilepsy Action

Website: [epilepsy.org.uk](https://www.epilepsy.org.uk)

Helpline: **0808 800 5050**

Email helpline: helpline@epilepsy.org.uk

Provides advice and information about epilepsy, and seizure diaries. Has a local resource network which holds social events.

Epilepsy Society

Website: [epilepsysociety.org.uk](https://www.epilepsysociety.org.uk)

Helpline: **0149 4601 400**

Provides information about epilepsy and specialist residential care for people with severe epilepsy.

Epilepsy Scotland

Website: [epilepsyscotland.org.uk](https://www.epilepsyscotland.org.uk)

Helpline: **0808 800 2200**

Provides information, training for professionals and community support services to assist people to live independently.

Epilepsy Wales

Website: [epilepsy.wales](https://www.epilepsy.wales)

Helpline: **0800 228 9016**

Email: info@epilepsy.wales

Provides information, runs support groups and training, and works to raise awareness.

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

This guide contains general information about stroke. But if you have a problem, you should get individual advice from a professional such as a GP or pharmacist. Our Helpline can also help you find support. We work very hard to give you the latest facts, but some things change. We don't control the information provided by other organisations or websites.

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Every five minutes, stroke destroys lives. We need your support to help rebuild them. Donate or find out more at stroke.org.uk.

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