epilepsy action

Epileptic seizure types

epilepsy.org.uk
Epilepsy Action Helpline: 0808 800 5050

Epilepsy Action – together we can change lives

Together we can help more people gain the knowledge and confidence to live better with epilepsy. We can raise awareness, so that more people understand epilepsy.

Together we can:

- Provide expert information and advice, so everyone affected by epilepsy can get the support they need to live better with epilepsy
- Run local events and support groups, so that fewer people have to face epilepsy alone
- Campaign to help make sure health services and national policies take into account the needs of everyone living with epilepsy

It's only your support that can make this life-changing work possible.

Please donate today.

You can call the Epilepsy Action fundraising team on 0113 210 8851 or donate online at **epilepsy.org.uk/donate**
You can also stay up-to-date with all the latest epilepsy news and information by joining Epilepsy Action. Membership starts from just £1 a month - join today by calling 0113 210 8800 or sign up online at **epilepsy.org.uk/join**

Thank you.

Registered with FUNDRAISING REGULATOR

Contents

Introduction

Epilepsy is a condition that affects the brain and causes frequent seizures. Electrical activity is happening in our brains all the time, as networks of tiny brain cells send messages to each other. These messages control all our thoughts, movements, senses and body functions. A seizure happens when there is a sudden, intense burst of electrical activity in the brain. This causes the messages between cells to get mixed up. The result is an epileptic seizure.

How a seizure affects you depends on what area of the brain is involved in this intense electrical activity. You might lose consciousness, or you might stay aware of what's happening around you. You might have strange sensations, or movements you can't control. Or you might go stiff, fall to the floor and shake.

Some people only have one type of seizure, and some people have more than one type.

Here we explain some of the most common seizure types. If you would like to know how epileptic seizures are diagnosed and treated, visit epilepsy.org.uk or contact the Epilepsy Action Helpline.

Our short online first aid course shows you what different seizures can look like, and how to help when someone has one. Visit **epilepsy.org.uk/aid**

How do we describe different types of seizure?

The International League Against Epilepsy is a world-wide organisation of epilepsy professionals. In 2017 they published a paper describing different types of epileptic seizures (a classification system). They updated the words that medical professionals do and don't use when describing types of seizures. We use the same words here. Find out more at: **ilae.org/guidelines/definition-and-classification/ilae-classification-of-the-epilepsies-2017**

Seizure onset

The largest part of the brain is called the cerebrum, and this is divided into two halves, called hemispheres. Epileptic seizures can start in one side (hemisphere), or affect both sides of the brain from the start. Where a seizure starts is known as the seizure onset.

Focal seizures (also called focal onset seizures) start in one side of the brain. Sometimes, a focal seizure can start in one side and then spread to involve both sides of the brain.

Generalised seizures (also called generalised onset seizures) affect both sides of the brain from the start.

Some people experience an 'aura' before their seizure starts. This can act like a warning and could include particular thoughts, feelings or sensations. Auras can happen on their own or they can progress to a different type of seizure.

Focal seizures

When an epileptic seizure starts in one side of the brain, it's called a focal onset seizure or a focal seizure. Both terms mean the same thing. These used to be called partial seizures but we no longer use this term.

What are the different types of focal seizure?

There are many different types of focal seizure, but they can be split into two main types depending on whether you are aware of what is happening during your seizure.

Focal aware seizure
During a focal aware seizure, you stay fully aware of what's happening around you, even if you can't move or respond. This type of seizure used to be called a simple partial seizure.

Some people with epilepsy use the word 'aura' to describe the feeling they get that warns them they're about to have a tonic-clonic seizure. The aura is in fact the seizure starting in a single part of the brain as a focal aware seizure, before spreading to affect both sides of the brain. There is information about focal to bilateral tonic-clonic seizures on page 13.

Focal aware seizures can also happen on their own, without developing into another seizure type. Some people who have focal aware seizures on their own also call them auras.

Focal impaired awareness seizure
If your awareness of what's happening around you is affected at any time during your seizure, it's called a focal impaired

awareness seizure. This type of seizure used to be called a complex partial seizure.

Motor or non-motor

Doctors may also use the words motor or non-motor to describe focal seizures. Focal motor describes focal seizures where the main symptoms involve muscle activity, such as jerking, muscles becoming limp (loss of muscle tone) or repeated movements. Focal non-motor describes seizures where the main symptoms don't involve muscles. They can include things like changes in emotions, thinking and sensations.

What happens during a focal seizure?

What happens during a focal seizure depends on which area (lobe) of the brain is affected, and whether the seizure spreads to affect other areas. Some people just experience one symptom during a focal seizure, while others have several.

The lobes of the brain

- Frontal lobes
- Occipital lobes
- Parietal lobes
- Temporal lobes

Each hemisphere of the brain has four parts, called lobes, and each lobe is responsible for different functions.

Temporal lobes

Temporal sounds like this: tem-per-uhl or tem-pruhl

If you have been diagnosed with temporal lobe epilepsy it means you have seizures starting in one or other of the temporal lobes. The temporal lobe is responsible for things like memory, hearing and understanding language.

Seizures starting in the temporal lobes are usually, but not always, focal **impaired awareness** seizures. You might start the seizure being aware of what's happening, and then lose awareness as the seizures goes on.

Symptoms of seizures in the temporal lobes include:

- Feeling frightened
- Feeling like what's happening has happened before (deja vu)
- Hearing things that aren't there
- Experiencing an unpleasant taste or smell
- Having a rising sensation in your stomach
- Lip smacking, repeated swallowing or chewing
- Changes to your skin tone or heart rate
- Automatic behaviours such as fidgeting, undressing, running or walking

After a temporal lobe seizure you are likely to be confused or may find it hard to speak for a short time.

Frontal lobes

The frontal lobes are responsible for things like personality, emotions, concentration, problem solving and body movements. The symptoms of frontal lobe seizures can sometimes be mistaken for mental health problems or sleep disorders. Some people who have frontal lobe seizures only have them in their sleep. They don't usually last long, but often happen in clusters, with several happening in a short space of time. Your awareness may or may not be affected.

Symptoms of seizures in the frontal lobes can include:

- Pelvic thrusting, kicking, pedalling, thrashing or rocking movements
- Screaming, swearing or laughing
- Unintentionally passing urine (urinary incontinence)
- Your head or eyes turning to one side
- Having unusual body movements, such as stretching one arm while the other bends
- Twitching, jerking or stiffening of muscles in one area of your body. The movements may sometimes spread bit by bit to other areas

Parietal lobes

Parietal sounds like this: puh-rayh-i-tl

The parietal lobes are responsible for things like understanding space and distance (spatial perception), processing language, and interpreting the signals from our senses of touch, vision and hearing.

Seizures starting in the parietal lobe often spread to involve other lobes. Symptoms can include:

- Having feelings of numbness or tingling
- Prickling, crawling or electric-shock sensations, which may spread along the affected body part
- Sensations of burning, cold or pain
- Feeling like part or all of your body is moving or floating
- Feeling like a body part has shrunk, become bigger or is missing
- Sexual sensations
- Difficulty understanding language, reading, writing or doing simple maths
- Seeing things as bigger or smaller than they really are, or seeing things that aren't there

Occipital lobes

Occipital sounds like this: ok-sip-i-tl

The occipital lobes are responsible for processing what we see (visual information).

Seizures starting in the occipital lobe often spread to involve other lobes. Symptoms include:

- Seeing flashing lights, colours or simple patterns
- Seeing more complex images, such as pictures of people, animals or scenes
- Not being able to see as well as usual, or not being able to see at all
- Having eye movements you can't control, such as your

eyes closing, moving to one side or moving quickly from side-to-side

- Repeated blinking

How long do focal seizures last?

Most focal aware seizures are short, lasting between a few seconds and two minutes. Focal impaired awareness seizures usually last between one and two minutes, but may be shorter or longer for some people.

What happens after a focal seizure?

What happens after a focal seizure varies from person to person. You might feel fine and be able to get back to what you were doing straight away. Or you might feel confused or tired for some time afterwards. You might need to sleep.

Some people find they have temporary weakness or can't move part of their body after they've had a seizure. This is called Todd's Paralysis (or Todd's paresis). It can last from a few minutes up to 36 hours, before going away.

Tonic-clonic seizures

Tonic-clonic seizures are the type of epileptic seizure most people recognise. In the past they were called grand-mal seizures.

Tonic-clonic seizures can have a generalised onset, meaning they affect both sides of the brain from the start. When this happens, the seizure is called a generalised tonic-clonic or bilateral convulsive seizure.

Some seizures start in one side of the brain and then spread to affect both sides. When this happens it's called a focal to bilateral tonic-clonic seizure.

What happens during a tonic-clonic seizure?

There are two phases in a tonic-clonic seizure: the 'tonic' phase, followed by the 'clonic' phase.

During the tonic phase:

- You lose consciousness, so you won't be aware of what's happening
- All your muscles go stiff, and if you're standing you fall to the floor
- Air might push past your voice box, which can make a sound like you're crying out
- You may bite down on your tongue or inside your mouth

During the clonic phase:

- Your arms and legs jerk quickly and rhythmically
- You may lose control of your bladder and/or bowels
- You might have difficulty breathing, causing a blue tinge around your mouth

Focal to bilateral tonic-clonic seizures

If the seizure starts on one side of the brain and spreads to affect both sides, it's called a focal to bilateral tonic-clonic seizure. If you have this type of seizure, you might get the symptoms of a focal seizure just before you lose consciousness. Examples of these symptoms are: feeling frightened, having a rising sensation in your stomach or smelling something that's not there. This can act as a warning that you're about to have a tonic-clonic seizure. Some people call this warning an aura.

How long do tonic-clonic seizures last?

Most tonic-clonic seizures last between one and three minutes. If a tonic-clonic seizure lasts longer than five minutes, this is called **status epilepticus** and you may need emergency medical treatment.

See page 20 for more information about status epilepticus.

What happens after a tonic-clonic seizure?

After a tonic-clonic seizure, you might have a headache and feel sore, tired and very unwell. You might feel confused, or have memory problems. You might go into a deep sleep. When you wake up, minutes or hours later, you might still have a headache, feel sore and have aching muscles.

Some people might feel very confused and scared and can act in unusual ways. If you are affected in this way, it may be helpful to create a plan in advance to help others understand how to keep you safe during this phase.

The length of time it takes to recover after a tonic-clonic seizure is different for everyone. Some people feel better after an hour or two, but for some people it can take several days to feel 'back to normal'.

A very small number of people find they have temporary weakness or can't move part of their body after they've had a seizure. This is called Todd's Paralysis or Todd's paresis. It can last from a few minutes up to 36 hours, before going away.

Absence seizures

Absence seizures are a type of generalised onset seizure, meaning both sides of your brain are affected from the start. In the past, absence seizures were called petit-mal seizures.

The two most common types of absence seizure are **typical** and **atypical**.

What happens during an absence seizure?

Typical absences

If you are having a typical absence seizure, you will suddenly stop what you are doing for a few seconds, but will not fall. You might appear to be daydreaming or 'switching off'. People around you might not notice your absence seizure. Your eyelids might flutter and you might have slight jerking movements of your body or limbs. In longer absences, you might have some short, repeated actions. You won't know what is happening around you, and can't be brought out of it.

Some people have hundreds of absences a day. They often have them in clusters, one after another, and they are often worse when they are waking up or drifting off to sleep. Typical absence seizures almost always start in childhood or early adulthood.

Atypical absences

These absences are similar to typical absences, but they are not the same. They last longer, and they start and end more slowly. You might be able to move around, but your muscles might go limp or 'floppy', making you appear clumsy. You may be able to respond to someone during an atypical absence seizure.

People who have atypical absences usually have learning disabilities or other conditions that affect the brain. Atypical absences can happen at any age.

How long do absence seizures last?

One typical absence seizure usually lasts less than 10 seconds. But some people have clusters of absences one after another. Atypical absence seizures last longer, up to 30 seconds.

What happens after an absence seizure?

After an absence seizure, you're normally able to go straight back to what you were doing beforehand. If you've had a cluster of several absence seizures you might feel confused.

Myoclonic seizures

Myoclonic seizures can be generalised onset, meaning both sides of the brain are affected from the start, or they can be focal onset, meaning just one side is affected.

What happens during a myoclonic seizure?

Myoclonic seizures are sudden, short-lasting jerks that can affect some or all of your body. They are usually too short to affect your consciousness. The jerking can be very mild, like a twitch, or it can be very forceful. Sometimes if the jerk is very forceful it can make you throw something you're holding, or make you fall over.

How long do myoclonic seizures last?

Myoclonic seizures usually last for less than a second. However, some people have them in clusters of several seizures over a period of time.

What happens after a myoclonic seizure?

After a myoclonic seizure you're usually able to get back to what you were doing straight away.

Tonic seizures

Tonic seizures can be generalised onset, meaning they affect both sides of the brain from the start. Or they can be focal onset, meaning they start in just one side of the brain.

What happens during a tonic seizure?

If a tonic seizure starts in both sides of the brain, all your muscles tighten and your body goes stiff. If you're standing, you may fall to the floor. Your neck will extend, your eyes open wide and roll upwards. Your arms may raise upwards and your legs stretch or contract. You may cry out and stop breathing during the seizure.

If a tonic seizure starts in one side of the brain, your muscles tighten in just one area of the body.

How long do tonic seizures last?

Tonic seizures usually last between three seconds and two minutes.

What happens after a tonic seizure?

Once a tonic seizure has ended, your muscles relax. You might feel sleepy or confused afterwards.

Atonic seizures

Atonic seizures can be generalised onset, meaning they affect both sides of the brain from the start. Or they can be focal onset, meaning they start in just one side of the brain. Atonic seizures are sometimes called drop attacks.

What happens during an atonic seizure?

If you have atonic seizures, usually all your muscles go limp and you drop to the floor. This can result in injuries to your head or face. Sometimes you might not completely fall, but your head may drop forward or you might sag at the knees.

How long do atonic seizures last?

Atonic seizures are very short, usually lasting less than two seconds.

What happens after an atonic seizure?

Your muscle tone returns as soon as the seizure is over. If you've fallen, you can get up again straight away.

Status epilepticus

Most people with epilepsy have seizures that last a short time and stop by themselves. But sometimes a seizure can last too long and become status epilepticus. Status epilepticus happens when a seizure doesn't stop in the usual time, or when someone has seizures one after another without recovering in between.

Status epilepticus can happen with any type of seizure, but convulsive (tonic-clonic) status epilepticus is the most dangerous. Convulsive status epilepticus is when a tonic-clonic seizure lasts for five minutes or longer, or when one tonic-clonic seizure follows another without regaining consciousness in between. Convulsive status epilepticus is always a medical emergency.

Epilepsy Action has more information about status epilepticus and emergency treatment on our website at epilepsy.org.uk/status

About this publication

This booklet is written by Epilepsy Action's advice and information team, with guidance and input from people living with epilepsy, and medical experts. If you would like to know where our information is from, or there is anything else you would like to say about this booklet, please contact us.

Epilepsy Action is proud to be a member of PIF Tick, the quality mark for health information. Find out more at **piftick.org.uk**

Date: August 2022
Reprinted: April 2023
Due for review: August 2025
Code: B037.07

Our thanks

Epilepsy Action would like to thank Dr John Paul Leach, consultant neurologist at the Queen Elizabeth University Hospital, Glasgow, for their contribution to this information. Dr Leach has declared no conflict of interest.

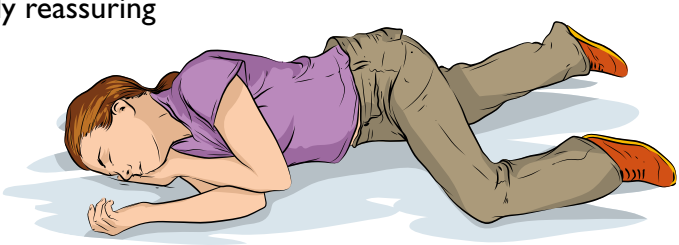
Disclaimer

First aid for tonic-clonic seizures

The person goes stiff, loses consciousness, falls to the floor and begins to jerk or convulse.

Do...

- Protect the person from injury (remove harmful objects from nearby)
- Cushion their head
- Aid breathing by gently placing the person on their side (in the recovery position) once the jerking has stopped (see picture)
- Stay with them until recovery is complete
- Be calmly reassuring



Don't...

- Restrain the person's movements
- Put anything in their mouth
- Try to move them unless they are in danger
- Give them anything to eat or drink until they are fully recovered
- Attempt to bring them round

Call 999 for an ambulance if...

- You know it is the person's first seizure **or**
- The seizure continues for more than five minutes **or**
- One seizure follows another without the person regaining consciousness between seizures **or**
- The person is seriously injured **or**
- They have trouble breathing after the seizure has stopped

First aid for focal (partial) seizures

The person is not aware of their surroundings or of what they are doing. They may pluck at their clothes, smack their lips, swallow repeatedly or wander around.

Do...

- Guide the person away from danger
- Stay with the person until recovery is complete
- Be calmly reassuring
- Explain anything that they may have missed

Don't...

- Restrain the person
- Act in a way that could frighten them, such as making abrupt movements or shouting at them
- Assume the person is aware of what is happening, or what has happened
- Give them anything to eat or drink until they are fully recovered
- Attempt to bring them round

Call 999 for an ambulance if...

- You know it is the person's first seizure **or**
- The seizure continues for more than five minutes **or**
- One seizure follows another without the person regaining awareness between seizures **or**
- The person is seriously injured

Epilepsy Action has information on what to do if someone has a seizure in a wheelchair.

Epilepsy Action's support services

helpline

Our friendly helpline team offer confidential advice and information to anyone affected by epilepsy:

Freephone 0808 800 5050
Staff are text relay trained and able to offer advice and information in 150 languages, via an interpreting service.

Live chat
Visit epilepsy.org.uk to chat with a member of the helpline team. We usually reply to chat requests within 5 minutes.

Email helpline@epilepsy.org.uk
Send us your question about epilepsy. We aim to reply within 48 hours (on workdays).

To see our opening hours and find out more about the support we offer visit: epilepsy.org.uk/helpline

talk and support

Our Talk and Support groups offer an opportunity to connect with others affected by epilepsy. You can join a group which meets face-to-face or online.

befriending

Our befriending service links people who are affected by epilepsy to a volunteer befriender. Your befriender can listen if you are going through a difficult time and could also help you take steps towards positive change.

Continued on page 27

Epileptic seizures explained

We would like to know if you have found this booklet helpful.

As a result of reading the information, please let us know if you agree (tick yes) or disagree (tick no) with any of the following statements.

Yes	No	
		I feel more informed about issues to do with epilepsy
		I feel more confident about talking to my GP/epilepsy specialist/epilepsy nurse/other (cross out those that don't apply)
		I have talked to my employer/colleague/teacher/family/ other (cross out those that don't apply) and they have improved how well they support me
		I have used other Epilepsy Action services, such as the website, the Epilepsy Action Helpline or support groups

Please tell us how you think we can improve this information

Please return the completed form to:
FREEPOST RTGS-LEYK-XGCK, Epilepsy Services, Epilepsy Action, New Anstey House, Gate Way Drive, Yeadon, Leeds LS19 7XY

You can also give us feedback online. Visit epilepsy.org.uk/feedback

Thank you.

epilepsy action

FREEPOST RTGS-LEYK-XGCK,
Epilepsy Action
New Anstey House,
Gate Way Drive,
Yeadon,
Leeds LS19 7XY

Registered charity in England and Wales (No. 234343)

counselling

Our counselling service is available to adults living in Northern Ireland and Wales who are affected by epilepsy, caring for someone affected by epilepsy, or the parent of someone affected by epilepsy.

family support Northern Ireland

Our family support services offer support to families and carers of people affected by epilepsy in Northern Ireland and Wales.

To find out more about the services we offer, including ways to get in touch and how to apply, visit: epilepsy.org.uk/support-for-you.

Information about epilepsy

Epilepsy Action has a wide range of information on our website about many different aspects of epilepsy. You can also download our information as a factsheet.

If you would like our information printed in large text, you can order this by contacting the Epilepsy Action Helpline.

Epilepsy Action Helpline:

freephone 0808 800 5050
epilepsy.org.uk

Trusted Information Creator
Patient Information Forum

Epilepsy Action
New Anstey House, Gate Way Drive, Yeadon, Leeds LS19 7XY
tel 0113 210 8800 **email** epilepsy@epilepsy.org.uk

Registered charity in England and Wales (No. 234343)

Environmental statement
All Epilepsy Action booklets are printed on environmentally friendly, low-chlorine bleached paper. All paper used to make this booklet is from well-managed forests.