

1 What is epilepsy?

- Epilepsy is a common neurological condition that affects about 1 person in every 131.
- It is caused by recurring disruptions to the usual activity of the brain, which are generally short-lived.
- The outward signs of such disruptions in the brain are called seizures.
- There are many different types of seizures depending on which part of the brain is affected and how far the disruption spreads across the brain.
- Our brains are made up of billions of nerve cells which process information from our senses, thoughts, emotions, memories and actions. A seizure will disrupt any or all of these areas of activity.
- Such disruptions occur for a variety of reasons, not all of which can be identified.
- Most seizures are over in a few minutes or less and the person recovers quickly.

Seizure Types

There are 3 broad categories

PRIMARY GENERALISED SEIZURES

The whole brain is affected by the disruption to its usual activity and consciousness is lost. Seizures in this category include:

- **Absences**—the person looks blank for a few seconds and may not respond when spoken to or realise they have had a seizure. This type of seizure can happen repeatedly and can be mistaken for daydreaming.
- **Tonic-clonic**—the person stiffens, then jerks, loses consciousness, convulses and may fall. Incontinence may happen.
- **Tonic and Atonic** seizures, or drop attacks - the person briefly loses consciousness, may stiffen and fall heavily or lose muscle tone and crumple to the ground.
- **Myoclonic**—rhythmic muscle jerks that can affect part and/or the whole body and can be strong enough to throw the person to the ground.

PARTIAL (FOCAL) SEIZURES

Only part of the brain is affected and consciousness may be altered but not lost. Seizures in this category include:

- **Simple partial (focal)** —the person may experience unusual sensations and/or movement in one part of the body, e.g. tingling or twitching.
- **'Auras'** (or warnings as they are sometimes called) are simple partial seizures.
- **Complex partial (focal)** —awareness is disturbed or lost and the person may experience strange feelings. They may be unaware of their surroundings, be unable to respond when spoken to and their behaviour may appear unusual.

SECONDARY GENERALISED SEIZURES

A disruption starts in one part of the brain causing a partial (focal) seizure, then spreads to the whole brain to become a generalised seizure.

Some seizures are unclassified, i.e. they don't fit into any category. Others occur as part of a syndrome—a set of symptoms occurring together—particularly in childhood.

SERIAL SEIZURES, PROLONGED SEIZURES, STATUS EPILEPTICUS (CONVULSIVE/NON-CONVULSIVE)

(See Leaflet 4 'First Aid for Seizures').

These can occur with all types of seizures and require urgent medical attention.

Serial seizures: seizures occurring one after another without full recovery in between.

Prolonged seizures: seizures lasting over 5 minutes or 2 minutes longer than usual.

Convulsive Status Epilepticus: Convulsive seizure activity lasting for 30 minutes or more without a return to normal breathing or full consciousness. Do not wait 30 minutes to seek medical help.

Non-Convulsive Status Epilepticus: *Status epilepticus can occur in non-convulsive seizures, e.g. absences and partial (focal) seizures.*

Some causes of epilepsy

Some epilepsy is idiopathic, i.e. no cause can be identified, but the following factors can cause epilepsy:

- brain scarring or brain damage, e.g. due to birth injuries, accidents, physical assaults, excessive use of alcohol/drugs
- infections and fevers, e.g. meningitis, rubella, encephalitis
- benign and malignant tumours
- hormonal imbalance, e.g. puberty, menopause
- low convulsive threshold—some brains are more sensitive than others and are therefore more vulnerable to seizures occurring
- genetic factors, e.g. tuberous sclerosis.
- dementia and neuro degenerative disorders, e.g. stroke, alzheimers
- HIV/AIDS
- parasitic infections, e.g. malaria.

Onset of epilepsy

Epilepsy can affect anyone, of any age or race, either sex, from any walk of life and may:

- be present in the newborn
- develop at birth due to complications
- begin in childhood, e.g. febrile convulsions, childhood illnesses
- develop due to hormonal changes—puberty, pregnancy, menopause
- start in elderly people as a consequence of strokes, dementia
- occur in different generations of the same family.

Experiences of Epilepsy

The experience of epilepsy and having seizures is different for each person.

Some seizures

- may last a few seconds, some minutes, others longer
- only happen at night
- are so subtle they may go unnoticed by others
- can be mistaken for other conditions, e.g. alcohol/drug related behaviour
- follow a particular pattern
- occur at random
- can be triggered by a range of factors, e.g. lack of sleep, missed meals, response to stress/anxiety, fever
- may have after effects, e.g. sleepiness, headaches, not feeling right for a while, confusion
- are reflex seizures caused by flashing/ flickering lights, patterns, noises.

In the majority of cases epilepsy can be controlled effectively with medication, though sometimes surgery may be recommended and occasionally a special diet. Some people with frequent and/or severe seizures of any type may need constant supervision.

However, the majority of people with epilepsy respond well to treatment and can get on with their lives.

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Supporting people with epilepsy

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