

# SEIZURE CLASSIFICATION

FACT SHEET



# SEIZURE CLASSIFICATION

**The brain is made up of millions of nerve cells called neurons. These cells send electrical signals that help us think, feel, move, and respond to the world around us.**

A seizure happens when these electrical signals become disrupted - usually because many neurons start firing all at once. This sudden burst of activity can lead to changes in:

- Sensation (how things feel)
- Awareness (being aware, conscious, unresponsive or unconscious)
- Movement
- Behaviour

Some seizures may cause convulsions (rhythmic jerking), loss of consciousness, or other noticeable symptoms. What happens during a seizure depends on where in the brain it starts and how far it spreads.

There are many different types of seizures. See [Understanding Epilepsy](#)

## Focal Seizures

Focal seizures account for about 60 percent of all epileptic seizures.

Focal seizures can be subtle or unusual and often go unnoticed or be confused with other events. They start in one small area of the brain and can sometimes spread to other parts of the brain. If the seizure does spread, it can progress into a tonic clonic seizure.

Focal seizures may or may not affect someone's consciousness. They are divided into 3 groups:

1. Focal preserved consciousness seizure (FPC) where consciousness is preserved – the person is completely aware of what is happening.
2. Focal impaired consciousness seizure (FIC) where the person may have altered consciousness, confusion and not respond appropriately.
3. Focal-to-bilateral tonic-clonic seizure (FBTC) where the focal seizure progresses into a convulsive seizure

Focal seizures can vary greatly, depending on where they start and spread within the brain.

- The person may look vacant, frightened or confused.
- Consciousness or awareness can be changed, but not always, so they may or may not respond to you, or they may respond inappropriately.
- They may have symptoms such as blushing, racing heart-rate, nausea, fear, déjà vu, hallucinations (visual, sound, taste or smell).
- There may be unusual or repetitive behaviours such as chewing, fidgeting, walking around or mumbling.

**These are only a few examples of what you may see.**

Focal seizures can last from a few seconds to 2-3 minutes and there is often a short period of confusion after the seizure.

Both types of focal seizures (1 and 2) can spread to become a bilateral tonic clonic seizure (3).

# SEIZURE CLASSIFICATION

## Generalised seizures

Generalised seizures involve both hemispheres (sides) of the brain from the onset. Because of this, consciousness is lost at the start of the seizure.

Generalised seizures include:

1. Generalised tonic clonic seizures
2. Absence seizures
3. Myoclonic seizures
4. Tonic seizures
5. Atonic seizures

## Generalised tonic-clonic seizures

These are the most recognised of seizures. They begin with a sudden loss of consciousness and often the person will cry out. The body will stiffen (tonic) and this is followed by jerking of the muscles (clonic).

During the seizure, breathing is affected causing the lips and complexion to look grey/bluish. There is usually excess saliva, sometimes blood if the tongue or cheek has been bitten. There may be loss of bladder control.

This seizure type can last up to two minutes and is often followed by a period of confusion, and sleep. Headaches and soreness are also common afterwards. The persons colour and breathing should return to normal within a minute or two.

## Absence seizures

These seizures usually start in childhood (but can occur in adults) and can be mistaken for daydreaming and inattentiveness.

Absence seizures are very brief and start and end suddenly.

- The person will stare, lose facial expression, become unresponsive and stop what they are doing.
- Sometimes eye blinking or upward eye movements are seen.
- They typically last approximately 2 to 20 seconds
- Recovery is immediate with the person resuming their previous activity.

Absence seizures may occur many times a day, which can create gaps and disrupt learning if not managed. Many children outgrow this seizure type by puberty.

There are other types of less-commonly seen absence seizures seen in more complex epilepsies.



**Seizures may look different than you expect. Not all seizures involve jerking or convulsions.**

# SEIZURE CLASSIFICATION

## Generalised seizures

### Myoclonic seizures

A myoclonic seizure is a seizure where a single muscle jerk or series of single muscle jerks occur. They mostly affect the upper body, neck shoulders and arms.

A person having a myoclonic seizure usually has a sudden jerk on both sides of the body at the same time. They vary in severity but can cause someone to spill or drop what they are holding. If severe enough, a myoclonic seizure can also cause a fall. The seizures are sometimes mistaken for clumsiness before diagnosis.

We all experience myoclonus or sudden jerks upon falling asleep from time to time but these are normal and not seizures.

### Tonic seizures

A tonic seizure causes increased muscle tone of the body.

They are usually very brief, lasting a few seconds and if the person is standing, they will suddenly fall stiffly to the ground. Which is why they are often termed a “drop seizures”. Recovery is swift but injuries can be sustained.

Tonic seizures also occur during sleep and in clusters of varying intensity. The person and family are often unaware of these. Tonic seizures during sleep may cause the person to make an exhalation or loud sigh sound.

Tonic seizures often occur in people with intellectual impairment or more complex epilepsies.

### Atonic seizures

An atonic seizure is a type of seizure that involves the sudden loss of muscle tone.

If standing, this can cause the person to suddenly slump to the ground which is why they are also called “drop seizures”. If sitting, a simple head nod (as if the person is trying to fight off sleep) may be seen. These seizures are very brief, less than 2 seconds and may involve the head, body or limbs. Recovery is swift but injuries can be sustained.

Atonic seizures often occur in people with intellectual impairment or more complex epilepsies.

## Unknown or unclassified seizures

Some seizures are not able to be classified and may be put into categories:

1. Unknown whether focal or generalised is when the distinction cannot be made
2. Unclassified is a temporary class, when no further information is available about the seizure



**Recovery can take time - confusion, tiredness, or headache afterwards is common. Most people will have little memory, if any, about the seizure**

## POINTS TO REMEMBER ABOUT SEIZURES

- Seizures are due to sudden, temporary, abnormal electrical signals firing in the brain.
- Seizures may look different than you expect. Not all seizures involve jerking or convulsions.
- Seizures can lead to changes in behaviour, movement, consciousness and feelings.
- Seizures cannot be stopped or slowed by restraint. The brain almost always stops the seizures on its own.
- Most seizures last less than two minutes, although there is usually a period of confusion afterwards.
- Occasionally confusion after a seizure can be prolonged, lasting up to several hours, but it is usually over in a few minutes.
- Tiredness often follows a seizure, especially a tonic clonic seizure, and rest or sleep is needed.
- It is physically impossible to swallow the tongue so there is no need to insert anything into a person's mouth. Doing this is dangerous and fingers may be bitten, or teeth broken.
- After seizures, most people have little memory, if any about what has happened.
- In seizure emergencies, medications can be prescribed to stop prolonged seizures.
- Seizures can sometimes cause injury or be life threatening.
- Epilepsy is diagnosed when you have a tendency to have recurrent seizures.
- Seizure first aid is easy. Make sure you know what to do.
- Click here for [Seizure First Aid](#)
- To learn more about seizures & epilepsy, look at our [online Epilepsy Essentials course](#)

Contact us on:

Phone: 1300 37 45 37

Email: [epilepsy@epilepsy.org.au](mailto:epilepsy@epilepsy.org.au)

[Make a telehealth booking with an epilepsy nurse](#)

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