

## Module 2: Different epilepsy syndromes

By the end of this module the learner will:

- Understand the use of epilepsy as an umbrella term
- Explain different types of epilepsy and the associated symptoms
- Be able to explain what is meant by status epilepticus

Epilepsy is a condition where the person is prone to having recurrent seizures, also referred to as “fits”, “blackouts”, “convulsions” or “turns”. However, it is important to refer to them as seizures or convulsions, as the other words can cause confusion as they can refer to non-epileptic events. These seizures are caused by a build-up of electrical activity in the brain which bursts and disrupts the normal message pathways in the brain and messages become mixed up. As the brain is involved in everything the body does, anything can happen during a seizure. A seizure will therefore be very different depending on where it originated in the brain, how deep it was and how much of the brain it affected. Most seizures happen suddenly and without prior warning.

### Classification of seizures

There are different types of seizure, classified by which parts and how much of the brain are involved. It is important to classify seizures and to report the correct type to medical professionals because some treatments only work on specific types of seizures.

A seizure is usually brief, lasting a few seconds, but they can be for as long as several minutes.

### Partial seizures (also known as focal seizures)

These are confined to one part of the brain and there is no loss of consciousness. Partial seizures are further classified into temporal lobe, frontal lobe, parietal lobe or occipital lobe seizures, in accordance to where in the brain they start.

Symptoms of temporal lobe seizures include:

- Flushing, sweating, going very pale, having a churning feeling in your stomach
- Seeing things as smaller or bigger than they really are
- Seeing or hearing something that is not actually happening
- Smelling non-existent smells
- Tasting non-existent tastes
- Feeling frightened, panicky, sad or happy

- Feeling detached from what is going on around you
- Feeling sick
- Having vivid memory 'flashbacks'
- Having an intense feeling of 'deja vu', when you are convinced you have experienced something before – even when you haven't
- Being unable to recognise things that are very familiar to you - sometimes referred to as 'jamais vu'
- Chewing, smacking your lips, swallowing or scratching your head.

(Source: Epilepsy Action)

A partial seizure occurring in the frontal lobe can look dramatic and frighten onlookers.

Symptoms of frontal lobe epilepsy include:

- Turning the head to one side
- Arms or hands becoming stiff and drawing upwards
- Cycling movements of the legs
- Thrashing of the arms
- Carrying out strange and complicated body movements
- Having problems speaking or understanding
- Experiencing sexual feelings and showing sexual behaviour
- Screaming, swearing or crying out
- Losing control of your bladder and/or bowels.

(Source: Epilepsy Action)

Seizures occurring in the parietal lobes and occipital lobes are very uncommon. A parietal lobe seizure sends a tingling sensation down the body, while the occipital lobe seizure would disturb vision.

### **Complex partial seizures**

These seizures are like the partial seizures, except the person loses consciousness because the electrical activity spreads further. During these seizures the person can perform unusual actions, such as getting undressed, chewing or playing with clothes. They will have no memory of doing this once they come round.

## Secondary generalised seizures

This type of seizure spreads to both hemispheres of the brain. The person can be aware a seizure is about to take place as they might develop an aura (which is a partial seizure) or it could be a strange smell or taste, for example. Other people will get no warning and drop to the floor. This type of seizure is the stereotypical seizure, the body goes stiff (called the tonic phase), the patient loses consciousness and will fall to the floor, the arms and legs will convulse and foam can appear at the mouth. The person might bite their tongue and lose bowel and bladder control. Upon waking up, the person will be confused, disorientated and will most likely need to sleep. The period of time after a seizure is called the *postictal* phase. This type of seizure is referred to as a “tonic-clonic” seizure, but used to be called **grand mal**.

## Generalised seizures

In generalised seizures the electrical activity begins in both sides of the brain at once. There is never a warning, or aura, for these types of seizures and the patient loses consciousness immediately. The seizure can follow the tonic-clonic procedure described above, or can follow just the “tonic” stage or just the “clonic” stage. There are three additional types of seizure in this category: atonic, absence and myclonic jerks.

### Absence seizures

These are short periods of short blank spells, or “absences”. They are very common in children and are often mistaken for not paying attention. This type of seizure used to be called **petit mal**. These seizures are very brief and it is possible to not be aware they are taking place, by the patient or the observer. The patient simply loses consciousness for up to 30 seconds, occasionally longer. Many children have these seizures and their parents or teachers mistake the seizure for not paying attention or hearing difficulties.

### Myclonic jerks

During this type of seizure, one limb usually jerks, but occasionally the whole body. Myclonic jerks are usually secondary seizures, suffered by people who already suffer from a different type of seizure.

### Atonic seizures

This type of seizure is rare and results in a person suddenly dropping to the floor, however, they can get straight back up again and carry on as normal with no loss of consciousness or confusion. Atonic seizures are however considered one of the worst types of epilepsy, but it is not the seizure itself that is dangerous, but injuries caused when the seizure is happening, caused by “dropping” to the floor. Serious head injuries can occur, or brain damage can occur caused by continued drops. Atonic seizures can cause someone to hit their head on whatever is near them, including furniture, door handles and window ledges. The chin can also be knocked, resulting in biting the tongue or damaging teeth.

Other dangers of atonic seizures include:

- Going up and down stairs
- Riding bikes
- Standing near hard objects, such as tables, window ledges
- Going to the toilet – falling off and hitting the head, or hitting the head on nearby taps
- Concrete.

People who have regular atonic seizures might be advised to wear a protective helmet to minimize the impact of such injuries.



### Status epilepticus

Status epilepticus is a seizure lasting longer than 30 minutes, or where the person is having a series of seizures and not recovering consciousness in between. When this happens, it is sometimes referred to as “going into status”. Status epilepticus is a medical emergency as the body struggles to circulate oxygen to the brain, the result can be brain damage. Always call 999 if you suspect a person has gone into status epilepticus. Trained paramedics or health care staff will administer a drug to stop the seizure.

### Non epileptic seizures

Not all seizures are epileptic, they may look the same, but the cause is different as they will not originate in the brain. There are many conditions where the symptoms might mimic epilepsy. These include:

- Febrile convulsions – These commonly occur in children with a high temperature, especially if they have meningitis
- Heart rhythm conditions in which the person faints
- Hypnagogic jerks (jumping legs), especially when drifting into sleep. These are so common they are considered normal
- Tics and rituals – This can include twitching the facial muscles and blinking and can be caused by a host of other conditions, including muscle spasms, Tourettes and Asperger's

## Module 2 – Different epilepsy syndromes

### Activity 9

Name six different types of epileptic seizure.

1.

2.

3.

4.

5.

6.

### Activity 10

What is meant by an “umbrella” term?

### Activity 11

For each seizure type you named in activity 9, describe what might happen during the seizures.

1.

---

---

2.

---

---

3.

---

---

4.

---

---

5.

---

---

6.

---

---

---

SAMPLE