

## (2) Parents: Seizures explained

### What is a seizure?

A seizure is best explained as a temporary disruption to the brain's electrical activity. A child may act in an unusual way or lose consciousness (sometimes just for a split second). Afterwards, they may not remember what has happened or may be confused for a while until things return to normal.

### What does a seizure look like?

Not every 'blackout' is a seizure, and not every seizure looks the same. There are many different types of seizures and epilepsy syndromes. What they look like will depend on where the seizure starts in the brain. Sometimes a seizure can start in one part of the brain and spread to another part, or across the whole brain. How often seizures happen, how long they last and what happens before or after a seizure differs from child to child.

Some seizures are obvious: the child suddenly falls down and starts jerking. Others are less visible and only someone who knows a child really well may notice that something is not quite right. This could be a brief change in behaviour for no apparent reason. The child may make repetitive movements or stare into space, as if in a daydream. Sometimes, the seizure can be so subtle that not even a parent will notice it.

Your child's doctor, neurologist or epilepsy specialist nurse will tell you what type of seizure your child has. Children can have more than one type of seizure.

Most seizures are self-limiting and stop on their own.

A seizure can be focal or generalised. Focal seizures affect just one part of the brain, whereas generalised seizures affect the whole of the brain. The child will always lose consciousness (even just for a split second) with a generalised seizure.

## Focal (also called partial) seizures

Focal seizures start and remain in one part of the brain and can often be the result of brain injury from accidents, an infection, a tumour, or malformation of the brain. However, it is not always possible to identify a cause for this type of seizure.

A seizure can sometimes start in one part of the brain and then spread across the whole of the brain. This is called a 'focal to bilateral tonic-clonic seizure' (also known as 'secondary generalised seizure').

What a focal seizure looks like depends on the affected area of the brain. For example, a seizure starting in the frontal lobe can be very unusual and can look dramatic. The child may thrash their body, scream or cry out.

Focal seizures are either **with** or **with limited awareness** (also known as **simple** or **complex partial seizures**).

### **Focal aware seizure:**

The child may be aware of unusual sensations, movements (such as twitching in an arm), feelings or seeing things. They may also talk about feeling 'dreamy' or sick or show strong emotions such as anger or fear.

There is no loss of consciousness during this kind of seizure.

### **Seizure with limited awareness:**

The child may appear confused or lose sense of time. They are usually unaware of what is happening around them. The child may make repetitive movements or display unusual behaviour such as lip smacking, plucking at clothing, speaking strangely or moving aimlessly around a room.

There will be some loss of, or change in, consciousness.

## Generalised seizures

These seizures affect the whole of the brain:

**Tonic-clonic seizure:** This type of seizure can start with a cry. The child will suddenly go stiff (tonic phase), fall and become unresponsive. Legs and arms will start jerking (the clonic phase) and breathing may become noisy and shallow. Their lips may sometimes turn slightly blue. The child may also make grunting noises, bite their tongue or cheek, or lose control over their bladder. The jerking usually stops after a couple of minutes and the child will slowly come round. They may feel groggy and complain of a headache. Most children will want to sleep. These seizures used to be known as 'grand mal'.

**Absence seizure:** The child may stare blankly for a few seconds or simply blink and will be unresponsive to speech and touch. The child's posture may just change slightly. These seizures can occur many times a day and can sometimes affect the child's ability to concentrate and learn. Often, parents or teachers wrongly assume the child is merely daydreaming. Girls tend to be more affected by these seizures than boys. This type of seizure used to be known as 'petit mal'.

A doctor may sometimes refer to the child having typical or atypical absence seizures: A **typical absence seizure** usually means an abrupt stare which lasts for approximately 5-10 seconds. The child will recover immediately. An **atypical absence seizure** will not start and finish as abruptly. These seizures usually last longer, and there may be a change in muscle tone with a slight nodding of the head.

**Tonic seizure:** The child will suddenly go stiff and fall but there is no jerking. The child will be unresponsive. If standing, the child will usually fall backwards because of the muscles stiffening, which can result in an injury to the back of the head. Recovery from this type of seizure tends to be quick.

**Atonic seizure:** The child's body will suddenly go limp because of a sudden loss of muscle tone. The child will drop to the ground, usually forward. These seizures are often called 'drop attacks' and recovery is usually quick. Frequent drop attacks can result in injuries to head or face.

**Myoclonic seizure:** These seizures often look like an electric shock. The child will have abrupt, sudden muscle spasms or jerks of the arms, head and sometimes the whole body. These seizures are most common in the morning, just after waking, or when the child is tired. The child will very briefly lose consciousness, but this is hardly noticeable. These seizures can occur in clusters (see below), for example, around a stressful time such as exam times.

## Serial seizures

These are seizures occurring one after another without full recovery in between.

If a child has serial seizures lasting between five and 15 minutes (depending on the type of seizures) this can become a medical emergency. For more information, please see our factsheet 'No. 4 Medical emergencies'.

## Cluster seizures

These are a grouping of seizures which can happen in a certain time frame. This could be around stressful times, or when the child has difficulty sleeping. With cluster seizures, there is always full recovery in between the seizures.

## Prolonged seizures

A prolonged seizure is a seizure lasting two minutes longer than usual, or five minutes in total. If the child experiences prolonged seizures, they may have been prescribed emergency medication to stop the seizure.

Depending on the type of seizure, prolonged seizures can lead to a medical emergency called status epilepticus. For more information on this, as well as emergency medication, please see our factsheet 'No. 4 Medical emergencies'.