

## Partial (Focal) Seizures

Knowing what type of seizures you have is an important step in learning about your condition and how to manage it. Seizures can be either partial or generalised. Partial or focal seizures occur in a specific part of the brain, most commonly in the temporal or frontal lobe. They may also begin in the parietal or occipital lobe. While a generalised tonic-clonic seizure is probably the most easily identified type of seizure, in fact partial seizures are much more common and can occur at any age.

Partial seizures may be simple partial or complex partial. They may spread and become also secondary generalised seizures.

### **SIMPLE PARTIAL SEIZURES**

*(also called Auras)*

In simple partial seizures the person is awake and conscious of what is happening. Sometimes a simple partial seizure will occur just before a complex partial or generalized seizure, in which case it may serve as a useful warning. The nature of the seizure is determined by the part of the brain affected. This means that there are many different types of simple partial seizure, making diagnosis quite difficult. When the symptoms are subtle or vague, they may not be recognized as simple partial seizures.

*There are four types of **simple partial seizures**.*

Where the seizure activity is in the **motor** area of the brain, seizures which affect muscle activity will occur. The most common motor seizures involve neck stiffening, turning of the eyes in one

direction, or partial jerking movements on one side of the body. When a motor seizure has caused a weakness in a specific area of the body there may be other symptoms, for example a person may experience a deterioration in vocal quality if the vocal mechanism is affected.

**Sensory seizures** involve any of the senses – sight, touch, hearing, taste and smell – and there may be hallucinations or illusions.

Changes in heart rate and respiration, unusual sensations in the head, stomach or chest, sweating, or goosebumps, may be caused by **autonomic seizures**.

**Psychic seizures**, as the name suggests, impact on how the person thinks and feels. They may disrupt cognitive functioning or trigger emotions such as agitation, fear, anxiety, happiness, and depression. Psychic seizures may cause other symptoms, for example déjà vu or out of body experiences.

### **COMPLEX PARTIAL SEIZURES**

Earlier classification systems referred to these seizures as psychomotor or temporal lobe.

In this type of seizure, the person's consciousness is impaired but not lost.

The person is awake but not aware of their surroundings. They will not respond to stimuli in a normal fashion, and most of the time have no recollection of the seizure. Some people wrongly label these seizures as "absences" or "petit mal". Unlike complex partial seizures, absence seizures are shorter and end abruptly, usually without any after effects.

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Another common characteristic of complex partial seizures is repetitive, purposeless movement, otherwise referred to as automatisms. Again, the movements are determined by the area of the brain affected. Where the upper limbs are involved, for example, the person may pick at their clothes or fiddle with their hands. Lip smacking or swallowing are examples of automatisms in the oral area, whereas grunts and other strange noises may occur because the vocal apparatus is involved. The person may also demonstrate some automatisms which are more complex acts such as picking up objects and putting them in different places, or walking. Undressing, shouting, screaming and running are examples of less common automatisms.

If the temporal lobe has been involved in the seizure, memory may be affected for a while afterward. The person may be confused and tired. Complex partial seizures may last anywhere from 30 seconds to 3 minutes. Immediately before there may be a simple partial seizure (an aura).

It is important to distinguish between simple and complex partial seizures because some activities such as the ability to drive or operate dangerous machinery are restricted if complex partial seizures remain uncontrolled.

## **SECONDARY GENERALISED SEIZURES**

Partial seizures may become tonic-clonic seizures as they spread. These are termed Secondary Generalised Seizures.

## **STATUS EPILEPTICUS**

Both partial and generalized seizures may develop into Status Epilepticus.

This means a prolonged seizure (longer than half an hour), or one seizure after another without recovery of consciousness or behavior. Convulsive status epilepticus is regarded as a medical emergency, requiring prompt medical care.

Non convulsive status epilepticus does not involve tonic or clonic movements (stiffening or jerking). It occurs as prolonged

absence or complex partial seizures. The person is not aware of their surroundings and may appear very confused.

If you are not sure what type of seizures you have, ask your Neurologist or General Practitioner. If your seizures are new or changing, it is helpful for an observer of a seizure to write down what they see.

### References:

Buchanan, N (1994) Understanding Epilepsy. Simon & Schuster, Sydney

Devinsky, O (2002) Epilepsy: Patient & Family Guide 2nd Edition F.A. Davis, Philadelphia

Gummit, R (1998) Living Well With Epilepsy. New Zealand Epilepsy Association

For further information about this topic or others, please contact Epilepsy Queensland Inc.

## **First Aid for Complex Partial Seizures**

1. If the person wanders do not try to stop or restrain them.
2. Move harmful objects from the person's path. Do not intervene physically, unless it is absolutely necessary to prevent an accident.
3. Talk calmly. Do not agitate the person by shouting or shaking.
4. After the seizure the person may be confused and have no memory of what has happened. Stay with them until they are fully alert. Ask them how you can help.
5. Call an ambulance if the seizure lasts more than 5 minutes, or if the person is nonresponsive or another seizure quickly follows.

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