

WHAT IS EPILEPSY? Epilepsy is a tendency to have recurrent (**two or more**) seizures.

WHAT IS A SEIZURE? The brain is made up of billions of cells called neurons; these cells communicate by sending electrical messages to one another. A **seizure** occurs when groups of these cells send out bursts of electrochemical energy in an unco-ordinated manner. The type of seizure one has depends on which area of the brain is affected. These abnormal discharges may occur in one (partial seizures) or both hemispheres of the brain (generalised seizures). There are many different types of seizures and you may have more than one type. Seizures types and their management are further explained in the following pages (6, 7 and 8).

CLASSIFICATION OF SEIZURE TYPE

PARTIAL SEIZURES

Simple partial: consciousness not impaired

Complex Partial: consciousness altered or lost

(partial seizures may progress to become generalised seizures, these are called secondarily generalised seizures)

GENERALISED SEIZURES

Absence (old term petit mal)

Tonic clonic (old term grand mal)

Myoclonic • Tonic • Atonic

Consciousness is lost immediately in generalised seizures.

ARE THERE DIFFERENT 'TYPES OF EPILEPSY'? Yes there are! It is important for you and those around you to understand what **type of seizures** you are having, but seizures are only a symptom of your **type of epilepsy** or **epilepsy syndrome**.

Your medical specialist can identify an epilepsy **syndrome** or **type of epilepsy** by: the type of seizures you have, the identifying signs and symptoms and when you developed them and what the electroencephalograph (EEG) shows.

The medication, management and outlook differ for different types of epilepsy. For example a child may have Benign Rolandic Epilepsy as their '**type of epilepsy**' and can experience both simple partial and tonic-clonic '**seizure types**'. This type of epilepsy is outgrown at adolescence, and sometimes medication is not required.

People with Juvenile myoclonic epilepsy will have myoclonic seizures, with most commonly absence and tonic clonic seizures. Usually this type of epilepsy does not go away and needs to be treated for life.

However, only about 50 – 65% of people will be found to have a clear-cut epilepsy syndrome.

Another way of grouping epilepsy is by how much, if anything is known about what caused it. Here there are three different groups:

- In *idiopathic or primary epilepsy* no obvious cause can be found. We suspect that many idiopathic epilepsies may eventually be found to have a genetic basis.
- In *cryptogenic epilepsy* a cause is suspected but none can actually be found.
- In *symptomatic or secondary epilepsy* there is a known cause. For example, the epilepsy may have started after an infection involving the brain, e.g. meningitis or encephalitis, or after a head injury, or because the brain has never developed properly.

Ask your doctor or Epilepsy Association for more information about your type of epilepsy after a definite diagnosis has been made.

SIMPLE PARTIAL SEIZURES: Electrical activity occurs in only one part of the brain. The symptoms the person experiences will depend on which part of the brain is involved. They will be aware of everything that is going on, they will usually be able to talk and answer questions. The person may be unable to control various movements. They may experience twitching or numbness in one part of the body, or unusual feelings like butterflies in the stomach, nausea, an odd taste in their mouth and a powerful emotion or dizziness. Senses may be distorted causing the person to see, hear, or smell things that are not real. These can include flashes of light, buzzing in the ear and strange smells, feelings of 'déjà vu'.

Simple partial seizures sometimes develop into other sorts of seizures and they are then called an 'aura' or 'warning'. When people experience an aura, they can take precautions e.g. finding a safe place, laying down on floor, etc.

Duration Usually last for a few seconds (2 – 10), but may last longer.

First Aid

Comfort and reassure the person if they feel confused following the seizure.

COMPLEX PARTIAL SEIZURES: Occur in only part of the brain but can take many different forms. Altered levels of consciousness can occur, often there is a loss or distorted sense of surroundings. The person will not be totally aware of what he/she is doing and will often act in a confused way. They may speak, but what is said doesn't make any sense or they may vaguely respond to someone speaking to them but in a confused way.

The person may have inappropriate automatic behaviour (automatisms) e.g. tapping the desk, picking at one's clothes, making chewing movements, lip smacking, rubbing hands together, and wandering around. After the seizure, there is usually a period of confusion and they can be very tired.

These seizures can be misunderstood and should be explained to others.

Duration Usually last 2 to 5 minutes (sometimes longer).

First Aid

- Stay with the person.
- Protect them from injury (e.g. remove dangerous objects).
- Guide them gently away from danger.
- Do not restrain the person since s/he may become agitated or instinctively lash out (their unconscious reaction may be the same as someone who is drunk or high on drugs).
- Comfort the person during and after the seizure, talk calmly to reassure and re-orient them. Wait with them until they feel they can return to what they were doing.
- **Call an ambulance** if they have not begun to recover after 10-15 minutes.
- If a generalised tonic-clonic seizure develops, treat as for tonic clonic seizure.

PARTIAL SEIZURES WITH SECONDARILY GENERALISATION: Simple or complex partial seizures may spread to become generalised; the generalised seizure is usually a tonic-clonic seizure.