

Classification of epileptic seizures

Partial seizures

- Features of partial seizures (also called focal seizures).
- Seizure activity is localised in one focal point within a hemisphere or lobe.
 - Presentation of the seizure depends on the part of the brain affected by the seizure activity.
 - The individual remains fully or partially conscious.

Seizure	Simple partial (SPS)	Complex partial (CPS)	Secondarily generalised
Other Names	Aura/warning.	Aura/warning.	
Location of seizure activity	Seizure activity localised to one hemisphere or lobe from onset, involves a small area only.	Seizure activity localised to one hemisphere or lobe from onset, involves a larger area than SPS.	Seizure activity spreads from localised area to involve the whole of the cortex.
Consciousness	Fully conscious and aware of seizure.	Partially conscious so may appear confused.	Either fully or partially conscious at onset, consciousness is lost when seizure becomes generalised.
Onset	Sudden.	Sudden.	Simple or complex partial seizure.
Typical clinical manifestation	Features of temporal lobe SPS include epigastric rising sensation, déjà vu, a sudden sense of fear or elation or unusual tastes or smell. Features of frontal lobe SPS include stiffness or juddering of part of the body. Features of parietal lobe SPS include numbness or tingling sensations and occipital lobe SPS include distorted vision, flashing lights or formed hallucinations.	The individual often behaves in a confused manner. Features of temporal lobe CPS include semi-purposive automatisms (such as lip smacking, chewing, repeatedly picking up objects or fiddling with their clothes, wandering around). Features of frontal lobe CPS include crying, screaming, swearing, unusual leg movements such as cycling motion, stepping or kicking.	Seizure manifests as a simple partial or complex partial seizures, before activity spreads and develops into a generalised seizure (see generalised seizures). If onset is slow, individual may be aware of SPS/CPS features.
Subjective account	The individual may describe feeling fearful that the seizure will develop.	Afterwards the individual may describe feeling embarrassed, and can be more prone to depression.	
Recovery / post-ictal state	Recovery is usually quick.	The individual may remain confused for some time after the seizure.	Recovery depends on the type of generalised seizure that develops.
Common features	Individuals usually have other seizures types as well.	Usually arise from temporal and frontal lobes, rarely from parietal or occipital lobes.	Most commonly develops into a tonic-clonic seizure.

Generalised seizures

Features of generalised seizures.

- Seizure activity involves the whole of the cortex from the outset.
- The individual is unconscious during the seizure and so will have no memory of the seizure itself.

Seizure	Tonic-clonic	Tonic	Atonic	Myoclonic	Absence
Other Names	Grand mal.		Drop attack.	Jerks.	Petit mal.
Location of seizure activity	Seizure activity involves whole of cortex from onset.	Seizure activity involves whole of cortex from onset.	Seizure activity involves whole of cortex from onset.	Seizure activity involves whole of cortex from onset.	Seizure activity involves whole of cortex from onset.
Consciousness	Unconscious.	Unconscious.	Unconscious.	Unconscious.	Unconscious.
Onset	Sudden.	Sudden.	Sudden.	Sudden.	Sudden.
Typical clinical manifestation	Onset of the seizure may be a sudden cry and they may bite their tongue. The individual goes stiff and falls to the ground if standing. This is followed by rhythmical jerking/convulsions of the body often lasting a couple of minutes. Their breathing may be laboured and their colour may change (becoming pale or blue). They may be incontinent.	Brief increase in body muscle tone, usually causing the person to fall backwards if standing.	Brief loss of muscle tone, usually causing the person to fall forwards if standing.	Brief jerking or shock-like movements, usually of the arms and legs, but also of the head or trunk.	Typical absence - the person briefly goes blank/stares and is unresponsive. They may flutter their eyelids or their eyes may turn. Usually last 3-4 seconds. Atypical absence - usually associated with loss of muscle tone or movement, e.g. brief head nod. Usually lasts 10 -15 seconds.
Recovery / post-ictal state	Colour and breathing return to normal. Typically the individual is very tired, and confused. They may experience muscle aches and may wish to sleep.	Recovery is usually quick. Injuries are common to the back of the head.	Recovery is usually quick. Injuries are common to the face.	Recovery is usually quick. Between repeated clusters of seizures, the person may be confused.	Recovery is usually quick.
Common features	The most common generalised seizure.			Commonly occur in the morning and on waking, often in clusters. Usually occur with other seizure types, most often tonic-clonic.	Usually occurs in children and young adults, often remits.

Other seizures

Unclassifiable seizures – these are seizures that are unique to the person having them, or they contain elements of other seizure types. Classification may be possible after further details of the seizure are recorded.

Nocturnal seizures – these are sleep-related seizures that usually happen at night but may also happen during the day if the individual is sleeping. The term does not clarify the clinical symptoms of type of seizure occurring.

Prodromes

Prodromes occur in some individuals with epilepsy, and can occur up to several days before a seizure. Although the prodrome is often unnoticed by the individual themselves, it is more commonly noticed by those around them. Accounts often include the person “is not themselves” and seems very irritable. These features disappear after the seizure happens.

Triggers

Some seizures are caused or triggered by certain stimuli or situations. These can differ from person to person.

Common triggers include - tiredness/lack of sleep

stress

illness

excess alcohol

photosensitivity (certain frequencies of flashing or flickering lights or geometric patterns)

Subjective features following a seizure

Following a seizure, an individual may be upset or emotional, and may remain so for some time.

Seizure nomenclature taken from: Commission on Classification, International League Against Epilepsy (1981) **Proposed provisions of clinical and electroencephalographical classification of epileptic seizures.** Epilepsia 22, 489-501.

Seizure descriptions: Epilepsy Information Services, National Society for Epilepsy, 2006.

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