NEW CLASSIFICATION OF SEIZURE TYPES 2017

KATHRYN O'HARA, RN
VIRGINIA COMMONWEALTH UNIVERSITY
KATHRYN.OHARA@VCUHEALTH.ORG
804-828-3862
ILAE 2017 Classification of Seizure Types Expanded Version

**Focal Onset**
- Aware
- Impaired Awareness

**Motor Onset**
- automatisms
- atonic
- clonic
- epileptic spasms
- hyperkinetic
- myoclonic
- tonic

**Non-Motor Onset**
- autonomic
- behavior arrest
- cognitive
- emotional
- sensory

**Generalized Onset**
- Motor
  - tonic-clonic
  - clonic
  - tonic
  - myoclonic
  - myoclonic-tonic-clonic
  - myoclonic-tonic
  - atonic
  - epileptic spasms
- Non-Motor (absence)
  - typical
  - atypical
  - myoclonic
  - eyelid myoclonia

**Unknown Onset**
- Motor
  - tonic-clonic
  - epileptic spasms
- Non-Motor
  - behavior arrest

**Unclassified**

---

1. Definitions, other seizure types and descriptors are listed in the accompanying paper and glossary of terms
2. Degree of awareness usually is not specified
3. Due to inadequate information or inability to place in other categories
FOCAL AWARE SEIZURES

- Previously known as Simple Partial seizures
- Begins in one side of the brain
- No loss of awareness
FOCAL IMPAIRED AWARENESS SEIZURE

- Previously known as complex partial seizures
- Most common type of seizure
- Involves one portion of the brain
- Automatisms - involuntary movements
- Loss of awareness and blank stare
- Ability to respond is impaired
- Lasts 30 seconds to 3 minutes
Partial Seizures & Regions of the Brain

Seizures arising in this frontal lobe area may cause disruptive behavior: running, screaming, fear, anger, uncontrolled aggression, swearing (less common than other seizure types).

Seizure activity here produces illusions of sounds, such as ringing sounds or music.

Seizures here create visual distortions and images of people or things that are not actually there.

Seizures in this area produce changes in the sense of smell, odd odors, or a smell that is not there.

Seizure in this area block speech, produce typical automatic movements: chewing, picking at clothes, repetitive movements of the body.

Seizures in this area alter consciousness and mood. Person stares blankly, can't understand directions, is unresponsive and may appear afraid.

Partial seizures, simple or complex, are controlled by the function of the brain area in which they occur.
FOCAL TO BILATERAL TONIC-CLONIC SEIZURE

- Previously known as secondarily generalized seizure
- Start in one area of the brain and spreads to both sides
- Lasts 1-3 minutes but recovery is longer
- May begin with focal aware and/or focal impaired and then spread
- Tonic phase (stiffening of muscles) starts with loud cry or groan
- Clonic phase (jerking of extremities) rhythmic
- Loss of consciousness, falls, bite tongue, loss of bowel/bladder
- Medical emergency if longer than 5 minutes
**ABSENCE SEIZURES/ATYPICAL ABSENCE**

- Generalized onset seizure - both sides of brain involved at onset
- Blank stare
- Lasts less than 10 seconds with immediate recovery but no recollection
- Looks upward or eye fluttering
- EEG diagnosis
- Atypical
  - Lasts longer up to 20 seconds
  - Blinking, smacking of lips or chewing motions, rubbing fingers together
TONIC-CLONIC SEIZURE

- Starts in both sides of brain at onset
- Tonic phase
  - muscles stiffen, cries out, loss of consciousness, falls, bites tongue
- Clonic phase
  - extremities jerking rhythmically
- Lasts 1-3 minutes; sleepy, confused, irritable, muscle aches
- Longer than 5 minutes is a medical emergency
- Longer than 10 minutes or 3 seizures in a row is status epilepticus
**ATONIC SEIZURES**

- May start on one side (focal motor atonic) or both sides of the brain (generalized onset atonic seizure)
- Body becomes limp and falls to ground (sudden drop or loss of tone)
- Eyelids droop, head nods, drops things
- Lasts less than 15 seconds
- Frequent injuries from falls (need protective gear)
- Usually returns to normal activity quickly but may be confused
CLONIC SEIZURES

- Fast stiffening and relaxing of a muscle repeatedly; jerking is regular and sustained
- Rare but occur in babies
- Lasts seconds to 1 minute
- Starts in one area and affects one side of body or face: focal clonic seizure
- Affects both sides of brain at onset: generalized clonic seizure
TONIC SEIZURES

- Body, arms or legs suddenly stiffen
- Lasts less than 20 seconds
- Starts in one area of the brain: focal tonic seizure
- Starts on both sides of the brain: generalized tonic seizure
MYOCLONIC SEIZURES

- Brief shock like jerks or twitches of a muscle group
- Lasts 1-2 seconds
- Occurs in several syndromes: Lennox-Gastaut, Juvenile Myoclonic and Progressive Myoclonic epilepsy
GELASTIC AND DACRYSTIC SEIZURES

- Gelastic: uncontrolled laughing or giggling; smiling or smirking
- Dacrystic: uncontrolled crying or grimacing
- Come from the hypothalamus: lesion is a harmatoma
- Person is usually aware but cannot control the behavior
- Lasts 10-20 seconds
NONEPILEPTIC SEIZURES OR EVENTS

- Previously called psychogenic or pseudoseizures
- Not based in epilepsy; no abnormal brain activity
- May be associated with psychological or physical problems
- These events are very real to the person having them
- Can be diagnosed in the Epilepsy Monitoring Unit
- Treatment consists of cognitive behavioral therapy and counseling
OLD TERM VS NEW TERMS FOR EPILEPSY

- Absence – Generalized absence
- Atonic or drop attack – Focal or generalized atonic
- Grand mal – Generalized or unknown onset tonic clonic
- Infantile spasms – Focal, generalized, unknown onset epileptic spasms
- Myoclonic – Focal or generalized myoclonic
- Petit mal – Generalized absence
- Tonic-clonic – Generalized or unknown onset tonic-clonic
- Tonic or drop attack – Focal or generalized tonic
- Complex partial – Focal impaired awareness
- Focal motor – Focal motor aware or impaired awareness
- Focal sensory – Focal sensory aware or impaired awareness
- Limbic – Focal impaired awareness
- Psychomotor – Focal impaired awareness
- Simple partial – Focal aware
REFERENCES

- Epilepsy.com
- Epilepsyfoundation.org
- Aesnet.org (American Epilepsy Society)