

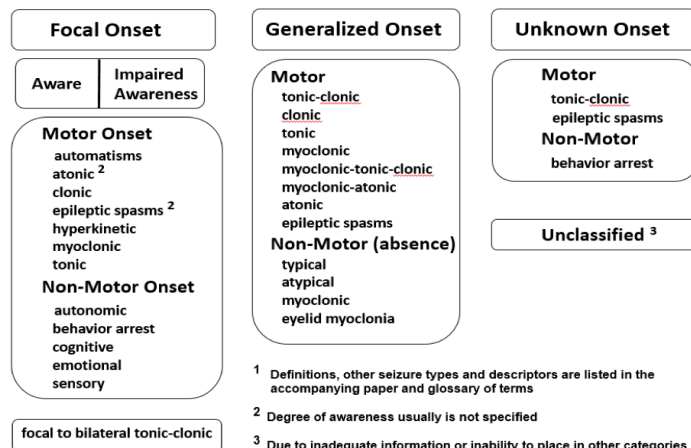
SEIZURES

What is it?

Seizures are abnormal electrical discharges that occur in the brain and can cause a loss of awareness and uncontrolled body movement. Seizures occur when brain cells abnormally misfire and cause an alteration or brief interruption of the brain's electrical activity. Seizures are the most common neurological disease in pediatrics and can be caused by infection, head trauma, metabolic/endocrine dysfunction, tumors, or even factors unknown. Seizures will present very differently based on the part of the brain that is affected. A new seizure classification was produced by the International League Against Epilepsy (ILAE) for the first time since 1981. The revision uses basic transparent terminology and is based on 3 key features: where the seizure begins in the brain; level of awareness during a seizure; and other significant features of the seizure including movement, change in sensation, and aura.

Triggers for seizure activity include missed medication, illness, brain disorders, stress, lack of sleep, poor eating habits, increased caffeine, change in hormones, and use of illegal drugs.

ILAE 2017 Classification of Seizure Types Expanded Version ¹



Focal

Formally known as partial, but better communicates that the type of seizure begins in one area (or one side) of the brain.

Generalized

Both sides of brain affected, at the same time; formally classified as atonic, absence, or tonic-clonic.

Unknown

The beginning of the seizure is not known or it is not witnessed by anyone.

What are the symptoms or characteristics?

- Headache
- Staring
- Jerking of arms or legs
- Falling for no reason
- Body stiffening
- Appearing confused
- Wandering
- Chewing
- Periods of rapid eye blinking or staring
- Loss of bowel and or bladder function
- Extreme tiredness
- Breathing problems

What is the treatment?

The main treatment of seizures is based on the type of seizure and use of anticonvulsant medications. Management therapies might also include the ketogenic diet or a vagus nerve stimulator (VNS) (See VNS factsheet). The ketogenic diet is a diet very high in fats and low in carbohydrates and must be monitored by a healthcare provider. A VNS device is implanted under the skin on the left chest and involves a stimulator that sends an electrical stimulation through the vagus nerve to the brain. The goals of VNS treatment are to reduce the number, length, and/or severity of seizures. Brain surgery is another option of controlling seizures when medications are not effective.



Kennedy Krieger Institute

The Specialized Health Needs Interagency Collaboration (SHNIC) program is a collaborative partnership between the Kennedy Krieger Institute and the Maryland State Department of Education.

Safety tips

- Stay with the student. Note seizure start time, characteristics, etc.
- Protect from hazards and remove nearby objects. Do not restrain.
- If in chair, ease to floor. Position to minimize harm.
- If in a wheelchair, do not remove. Apply brakes.
- Do not put anything in mouth,
- Can place padding under head for protection.
- Loosen tight clothing.
- Lay on side, ensuring open airway post seizure.

Suggested school accommodations

Problems in school performance have been identified in areas of attention, concentration, memory, and organizational skills. Emotional and behavioral issues are also more prevalent in students with epilepsy. Such difficulties can include depression, anxiety, ADHD, aggression and irritability. School performance is affected because learning is not occurring during or after a seizure when a child is fatigued and/or confused. Medications can also contribute to fatigue and memory problems. Effective seizure management fosters a supportive learning environment where a student can be most successful. When school staff is educated and prepared, they can respond appropriately and reduce fear. Supporting students with this condition in the school require educators and parents/guardian to work as a team. Some accommodations to consider for an 504/IEP could include:

- Safety concerns (ie. walking in hallway)
- Visual aids
- Executive function strategies
- Preferential seating to reduce distractions
- Chunking of instructional materials
- Extended time
- Plan for lost classroom instruction time
- Temperature controlled settings in classrooms and on bus
- Staff education/training as appropriate
- Emergency Evacuation Plan (EEP)

Specific health issues for Individualized Healthcare Plan

- Diagnosis including type of seizure, description of, typical length, characteristics, triggers, warning signs, how often seizures occur, and student's behavior following a seizure
- Current medication list including PRN medications
- Note if seizures are controlled
- Documentation/log of seizures
- Monitor for medication side effects
- Orders for hidden medical device (vagus nerve stimulator including how to use/manage device)
- Orders for ketogenic diet if applicable
- Safety precautions for ambulating, transitioning in hallways, wearing a helmet, etc.
- Rest period following seizure and return to class protocol
- Monitor for signs of anxiety and depression
- Communicate with school staff, parents/guardian, and provider any changes or concerns about the disease
- Emergency Care Plan(s) (ECP) related to medical needs in the school setting and staff education/training as appropriate for each

Resources & Manuals

Kennedy Krieger Institute: Epilepsy Clinic

<https://www.kennedykrieger.org/patient-care/centers-and-programs/epilepsy-at-kennedy-krieger>

Epilepsy Foundation

<http://www.epilepsy.com/>

Epilepsy Association: Be SMART about Epilepsy

<http://www.epilepsyinfo.org/besmart/download/BeSmart.pdf>

Centers for Disease Control and Prevention: Healthy Schools: Epilepsy

<https://www.cdc.gov/healthyschools/npao/epilepsy.htm>