

SEIZURE
TRAINING
for **SCHOOL**
PERSONNEL



EPILEPSY
FOUNDATION®

Not another moment lost to seizures

Objectives

- Recognize common seizure types and their possible impact on students
- Know appropriate first aid
- Recognize when a seizure is a medical emergency
- Provide social and academic support

What is a Seizure?

A brief, excessive discharge of electrical activity in the brain that alters one or more of the following:

- Movement
- Sensation
- Behavior
- Awareness

What is Epilepsy?

- Epilepsy is a chronic neurological disorder characterized by a tendency to have recurrent seizures
- Epilepsy is also known as a “seizure disorder”

Epilepsy is More Common Than You Think

- 2.7 million Americans
- 315,000 students in the United States
- More than 45,000 new cases are diagnosed annually in children
- 1 in 100 people will develop epilepsy
- 1 in 10 people will have a seizure in their lifetime
- Epilepsy is more common than Cerebral Palsy, Parkinson's Disease and Multiple Sclerosis combined

Did You Know That...

- Most seizures are NOT medical emergencies
- Students may NOT be aware they are having a seizure and may NOT remember what happened
- Epilepsy is NOT contagious
- Epilepsy is NOT a form of mental illness
- Students almost never die or have brain damage during a seizure
- A student can NOT swallow his/her tongue during a seizure

Common Causes of Epilepsy

- For seventy percent (70%) of people with epilepsy the cause is unknown
- For the remaining thirty percent (30%) common identifiable causes include:
 - Brain trauma
 - Brain lesions (e.g. tumors)
 - Poisoning (lead)
 - Infections of the brain (e.g. meningitis, encephalitis, measles)
 - Brain injury at birth
 - Abnormal brain development

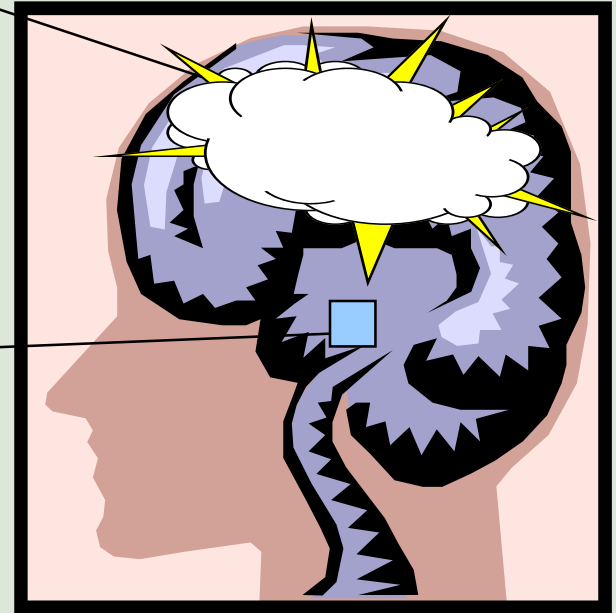
Seizure Types

- **Generalized Seizures**

- Involve the whole brain
- Common types include absence and tonic-clonic
- Symptoms may include convulsions, staring, muscle spasms and falls

- **Partial Seizures**

- Involve only part of the brain
- Common types include simple partial and complex partial
- Symptoms relate to the part of the brain affected



Absence Seizures

- Pause in activity with blank stare
- Brief lapse of awareness
- Possible chewing or blinking motion
- Usually lasts 1 to 10 seconds
- May occur many times a day
- May be confused with:
 - Daydreaming
 - Lack of attention
 - ADD

Generalized Tonic-Clonic

- A sudden, hoarse cry
- Loss of consciousness
- A fall
- Convulsions (stiffening of arms and legs followed by rhythmic jerking)
- Shallow breathing and drooling may occur
- Possible loss of bowel or bladder control
- Occasionally skin, nails, lips may turn blue
- Generally lasts 1 to 3 minutes
- Usually followed by confusion, headache, tiredness, soreness, speech difficulty

First Aid - Generalized Tonic-Clonic Seizure

- Stay calm and track time
- Check for epilepsy or seizure disorder I.D. (bracelet, necklace)
- Protect student from possible hazards (chairs, tables, sharp objects, etc.)
- Turn student on his/her side
- Cushion head
- After the seizure, remain with the student until awareness of surroundings is fully regained
- Provide emotional support
- Document seizure activity

Dangerous First Aid!!!

- DO NOT put anything in the student's mouth during a seizure
- DO NOT hold down or restrain
- DO NOT attempt to give oral medications, food or drink during a seizure

When is a Seizure an Emergency?

- First time seizure (no medical ID and no known history of seizures)
- Convulsive seizure lasting more than 5 minutes
- Repeated seizures without regaining consciousness
- More seizures than usual or change in type
- Student is injured, has diabetes or is pregnant
- Seizure occurs in water
- Normal breathing does not resume
- Parents request emergency evaluation

Follow seizure emergency definition and protocol as defined by the healthcare provider in the seizure action plan

Simple Partial Seizures

- Full awareness maintained
- Rhythmic movements (isolated twitching of arms, face, legs)
- Sensory symptoms (tingling, weakness, sounds, smells, tastes, feeling of upset stomach, visual distortions)
- Psychic symptoms (déjà vu, hallucinations, feeling of fear or anxiety, or a feeling they can't explain)
- Usually lasts less than one minute
- May be confused with: **acting out, mystical experience, psychosomatic illness**

Complex Partial Seizures

- Awareness impaired/inability to respond
- Often begins with blank dazed stare
- AUTOMATISMS (repetitive purposeless movements)
- Clumsy or disoriented movements, aimless walking, picking things up, nonsensical speech or lip smacking
- Often lasts one to three minutes
- Often followed by tiredness, headache or nausea
- May become combative if restrained
- May be confused with:
 - Drunkenness or drug abuse
 - Aggressive behavior

First Aid - Complex Partial Seizure

- Stay calm, reassure others
- Track time
- Check for medical I.D.
- Do not restrain
- Gently direct away from hazards
- Don't expect student to obey verbal instructions
- Stay with student until fully alert and aware
- If seizure lasts 5 minutes beyond what is routine for that student or another seizure begins before full consciousness is achieved, follow emergency protocol

Seizure Triggers or Precipitants

- **Flashing lights** and **hyperventilation** can trigger seizures in some students with epilepsy
- Factors that might increase the likelihood of a seizure in students with epilepsy include:
 - Missed or late medication (#1 reason)
 - Stress/anxiety
 - Lack of sleep/fatigue
 - Hormonal changes
 - Illness
 - Alcohol or drug use
 - Drug interactions (from prescribed or over the counter medicines)
 - Overheating/overexertion
 - Poor diet/missed meals

The Impact on Learning & Behavior

- Seizures may cause short-term memory problems
- After a seizure, coursework may have to be re-taught
- Seizure activity, without obvious physical symptoms, can still affect learning
- Medications may cause drowsiness, inattention, concentration difficulties and behavior changes
- Students with epilepsy are more likely to suffer from low self-esteem
- School difficulties are not always epilepsy-related

Tips for Supporting Students with Epilepsy

- Stay calm during seizure episodes
- Be supportive
- Have a copy of the child's seizure action plan
- Discuss seizure the action plan in the student's IEP
- Know child's medications and their possible side effects
- Encourage positive peer interaction

Continued

Tips for Supporting Students with Epilepsy

- Avoid overprotection and encourage independence
- Include the student in as many activities as possible
- Communicate with parents about child's seizure activity, behavior and learning problems

Contact Information

Epilepsy Foundation
Information and Referral
(800) 332-1000

www.epilepsyfoundation.org

Optional Topics

- Convulsive seizure in a wheelchair
- Convulsive seizure on a school bus
- Convulsive seizure in the water
- Ketogenic diet
- Diazepam rectal gel
- Vagus Nerve Stimulator

Convulsive Seizure in a Wheelchair

- Do not remove from wheelchair unless absolutely necessary
- Secure wheelchair to prevent movement
- Fasten seatbelt (loosely) to prevent student from falling from wheelchair
- Protect and support head
- Ensure breathing is unobstructed and allow secretions to flow from mouth
- Pad wheelchair to prevent injuries to limbs
- Follow relevant seizure first aid protocol

Convulsive Seizure on a School Bus

- Safely pull over and stop bus
- Place student on his/her side across the seat facing away from the seat back (or in aisle if necessary)
- Follow standard seizure first aid protocol until seizure abates and child regains consciousness
- Continue to destination or follow school policy

Convulsive Seizure in the Water

- Support head so that both the mouth and nose are always above the water
- Remove the student from the water as soon as it can be done safely
- If the student is not breathing, begin rescue breathing
- Always transport the student to the emergency room even if he/she appears fully recovered

Ketogenic Diet

- Based on a finding that burning fat for energy has an antiseizure effect
- Used primarily to treat severe childhood epilepsy that has not responded to standard antiseizure drugs
- Diet includes high fat content, no sugar and low carbohydrate and protein intake
- Requires strong family, school and caregiver commitment – no cheating allowed
- It is a medical treatment – not a fad diet

Vagus Nerve Stimulator

- Device implanted just under the skin in the chest with wires that attach to the vagus nerve in the neck
- Delivers intermittent electrical stimulation to the vagus nerve in the neck that relays impulses to widespread areas of the brain
- Used primarily to treat partial seizures when medication is not effective
- Use of special magnet to activate the device may help student prevent or reduce the severity of an oncoming seizure
- Student may still require antiseizure medication



Diazepam Rectal Gel

- Used in acute or emergency situations to stop a seizure that will not stop on its own
- Approved by FDA for use by parents and non-medical caregivers
- State/school district regulations often govern use in schools