

**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

- 3 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

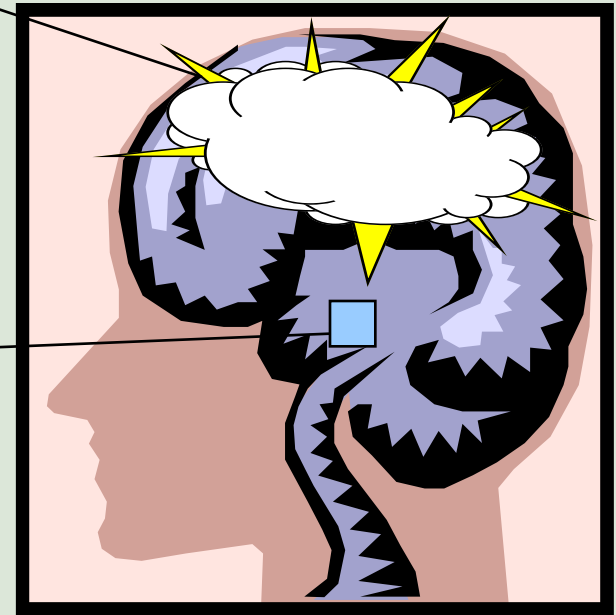
# Seizure Types

- **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



# Status Epilepticus

- Continuous state of seizure activity, or prolonged seizures that occur in a series
- Medical emergency
- Most common in the very young and very old

# 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

# Tips for Supporting a Bullied Student with Epilepsy

- Spend time with the student to get the facts, but be aware that too much support in public might do more harm than good.
- Praise the student for coming forward, and change the situation to one where he/she feels safe.
- Don't force a meeting between the student with epilepsy and the bully
- Involve the student's parents, as the bullying is most likely affecting their seizure activity or creating co-morbidities such as depression
- Continue to support the student until the bullying stops- addressing the incident initially doesn't solve the problem.

# Tips for Creating a Supportive School Environment

- Coordinate anti-bullying efforts at your school towards students with epilepsy and other conditions before it begins
- Increase adult supervision in bullying “hot spots”
- Provide an in-service training for school personnel on bullying

# Tips for Creating a Supportive School Environment

- Intervene consistently and appropriately if you see students with epilepsy or anyone else being bullied
- Assess your school's current climate so you can take appropriate steps to address bullying
- There is no "end date" to prevent bullying



# Contact Information

Epilepsy Foundation  
Information and Referral  
(800) 332-1000

[www.epilepsyfoundation.org](http://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