



EPILEPSY[®]
FOUNDATION

SEIZURE TRAINING FOR SCHOOL PERSONNEL

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OBJECTIVES

Recognize

3 common seizure types

Describe

3 seizure first aid steps to assist a student having a seizure

Recognize

3 key factors would make a seizure a medical emergency

Describe

3 ways to support students living with epilepsy





THE BRAIN, SEIZURES AND EPILEPSY

THE BRAIN & SEIZURES

- A seizure occurs when there is a temporary change or disruption in the way the brain sends electrical signals
- During a seizure, there is a “short circuit” in the way messages are sent between brain cells
- **Not everyone who has a seizure has epilepsy**
- Seizures can occur with other conditions (e.g. blood sugar problems, head injury, fever)

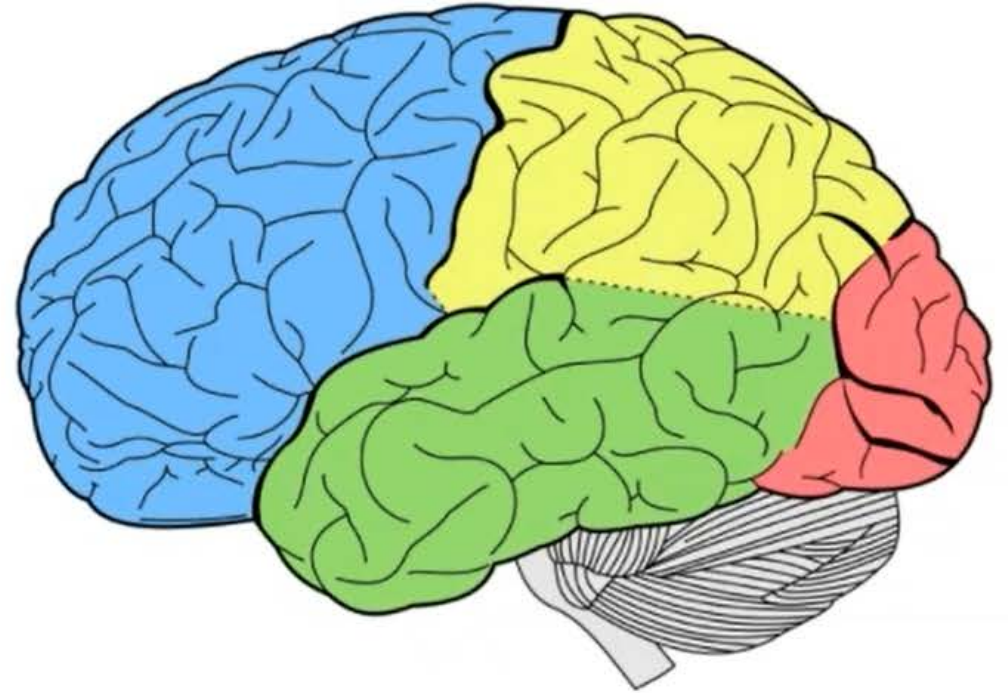


WHAT DO SEIZURES LOOK LIKE?

The way a seizure looks depends on the areas of brain involved

Seizures can result in a change in...

- Movement
- Sensation
- Behavior
- Speech
- Awareness



*Seizure symptoms and signs of seizures vary from person to person...
but they are usually consistent and predictable for each individual*

WHAT IS EPILEPSY?

Epilepsy is a chronic brain disease characterized by recurrent unprovoked seizures.

- Sometimes referred to as a “seizure disorder”
- Many different types of epilepsy
- Diagnosis does not indicate cause or outlook

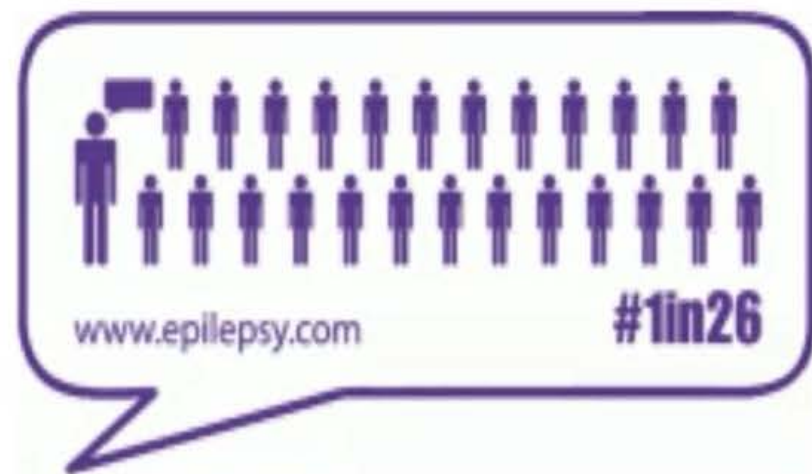
ANYONE can have epilepsy...

- Age
- Gender
- Race
- Socioeconomic status
- Geography



EPILEPSY BY THE NUMBERS

- 3.4 million in the U.S. with active epilepsy
 - ❖ 470,000 youth 17 years or younger
 - ❖ 1 in 3 people have uncontrolled epilepsy
- 1 in 26 people will be diagnosed with epilepsy during their lifetime
- 1 in 10 people worldwide will have a seizure during their lifetime





DID YOU KNOW...

- Most seizures are **NOT** medical emergencies
- Students may **NOT** be aware they are having a seizure
- Epilepsy is **NOT** contagious
- A student can **NOT** swallow their tongue during a seizure
- Epilepsy **IS** a medical disease like asthma or diabetes
- **EVERYONE** can learn seizure first aid



COMMON CAUSES OF EPILEPSY

- In over half of people with epilepsy the cause is unknown
- For others, *common causes* include:
 - Brain trauma
 - Brain lesions
 - Infections of the brain
 - Brain injury at birth
 - Abnormal brain development
 - Stroke

DIAGNOSING EPILEPSY

- No single test used to diagnose epilepsy
- Critical information: medical history and **description of seizures**
- Medical and neurological exam
- Blood tests
- Brain imaging (MRI, CT)
- Electroencephalogram (EEG)



TREATING EPILEPSY

- Anti-seizure medications
- Epilepsy surgery
- Neurostimulation with devices
- Dietary therapies
- Investigational medications (clinical trials)

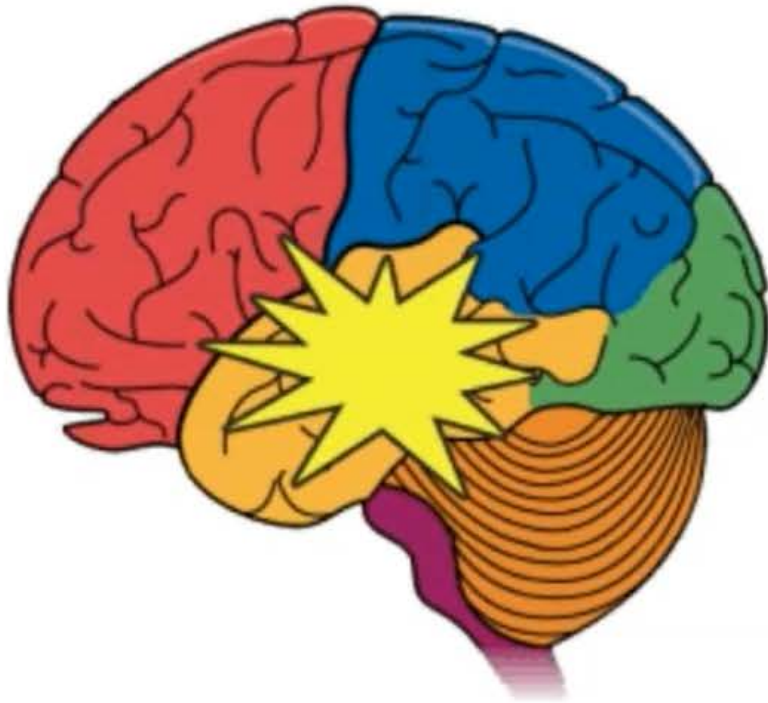




TYPES OF SEIZURES

SEIZURE TYPES

HOW ARE SEIZURES CLASSIFIED?



- 1 **WHERE** they start in the brain
- 2 Whether or not a person's **AWARENESS** is affected
- 3 Whether or not seizures involve **OTHER SYMPTOMS** such as movement

SEIZURE TYPES

Focal Onset Seizures

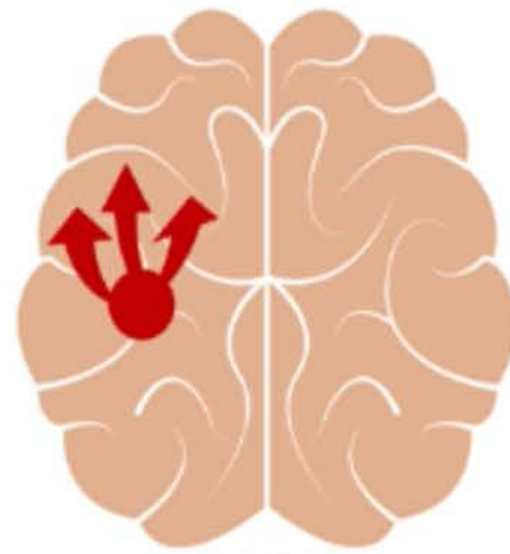
- Involve only part of the brain
- Common types - focal aware and focal impaired awareness

Generalized Onset Seizures

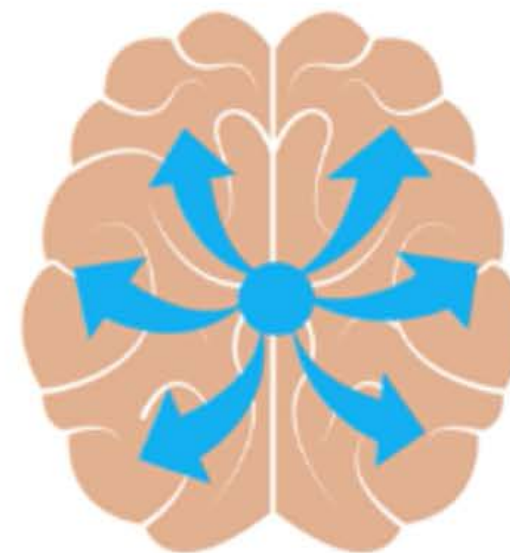
- Involve both sides of the brain
- Common types - absence and tonic-clonic

Unknown

- Where it starts is unknown



FOCAL



GENERALIZED

FOCAL AWARE SEIZURES

- Person is aware and alert
- Rhythmic movements of 1 side or part of body
- Sensory symptoms: tingling, sounds, smells, tastes, upset stomach, visual distortions
- Psychic symptoms: déjà vu, hallucinations, feeling of fear or anxiety, or a “funny” indescribable feeling

May be confused with:
acting out, psychosomatic illness,
mystical experience, illicit drug use



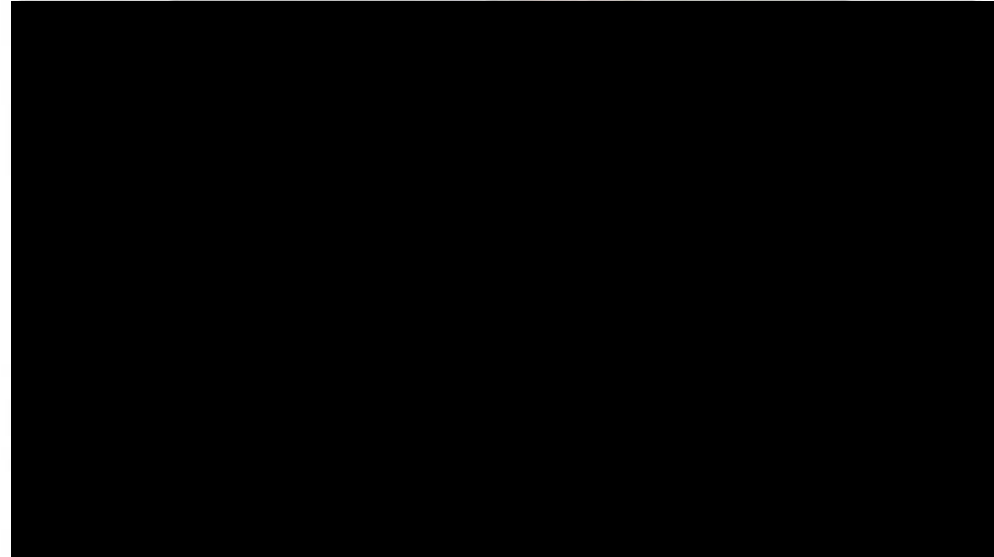
Length: Usually 1 to 3 minutes

FOCAL IMPAIRED AWARENESS SEIZURES

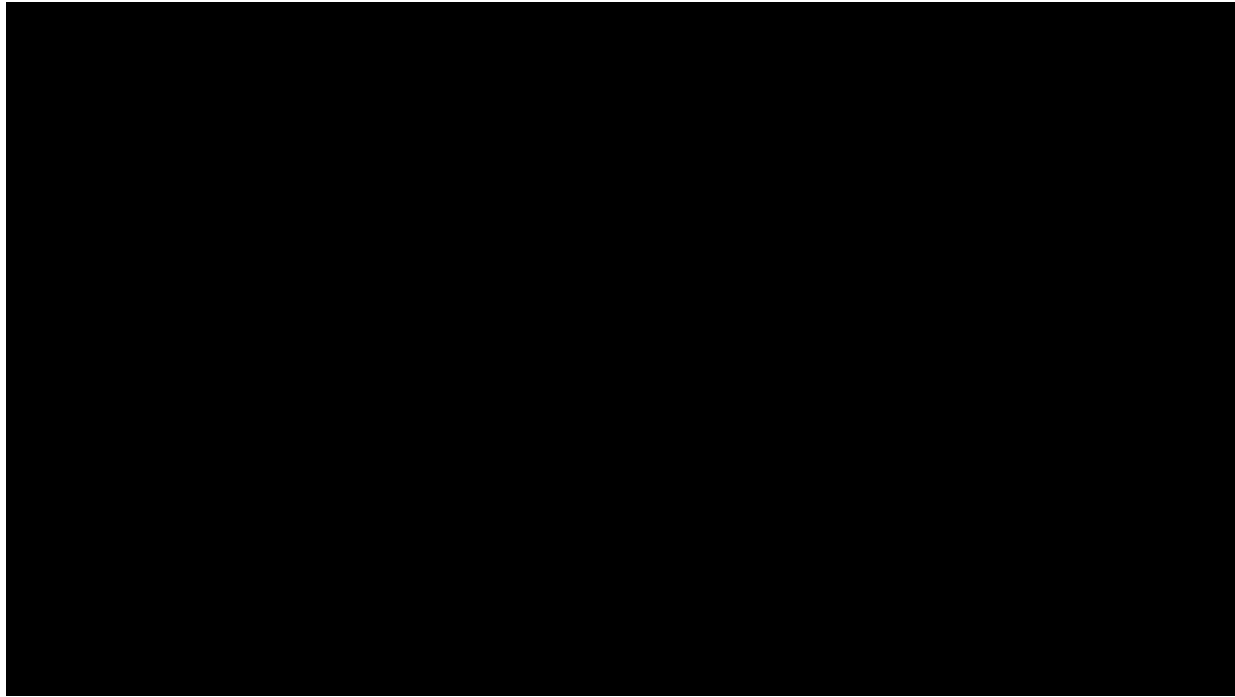
- Awareness impaired: may be confused, unable to respond
- May begins with blank dazed stare
- AUTOMATISMS (repetitive purposeless movements)
- Clumsy or disoriented movements, aimless walking
- May not be able to talk or words don't make sense
- May get combative if restrained
- After seizure, may be tired, headache or nausea

May be confused with:
substance abuse (alcohol, illicit drugs)
aggressive behavior

Length: Typically between 1 and 3 minutes



WOULD YOU RECOGNIZE THESE SEIZURES?



GENERALIZED ABSENCE SEIZURES

- Pause in activity with blank stare
- Brief lapse of awareness
- Possible chewing or blinking
- Returns to full awareness almost immediately
- May occur many times a day

Often this type of seizure is confused with:

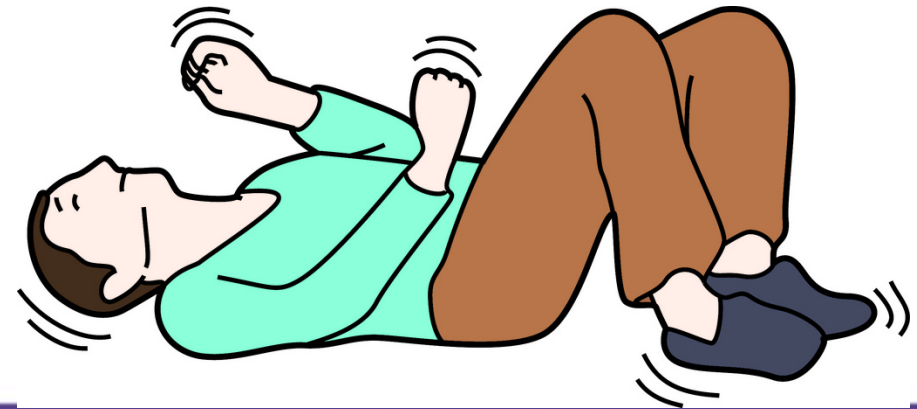
- Daydreaming
- Attention problems (ADHD)

Length: Usually less than 20 seconds

GENERALIZED TONIC CLONIC SEIZURES

- A sudden, hoarse cry
- Loss of consciousness, person may fall
- Stiffening of arms and legs, then rhythmic jerking
- Shallow breathing and drooling may occur
- Possible loss of bowel or bladder control
- Occasionally skin, nails, lips may turn blue
- Often followed by confusion, headache, tired, sore, difficulty talking

Length: Usually lasts 1 to 3 minutes





SEIZURE FIRST AID

SEIZURE ACTION PLANS

- Should be available for each student with epilepsy
- Teaches you about
 - Seizure first aid
 - Specific instructions for each student
 - When to give rescue therapy
 - When a seizure may be an emergency
 - Who to call
 - What NOT to do



This student is being treated for a seizure disorder. The information below should assist you if a seizure occurs during school hours.

Student's Name	Date of Birth	
Parent/Guardian	Phone	Cell
Other Emergency Contact	Phone	Cell
Treating Physician	Phone	

Significant Medical History

Seizure Information

Seizure Type	Length	Frequency	Description

Seizure triggers or warning signs:

Student's response after a seizure:

Basic First Aid: Care & Comfort

Please describe basic first aid procedures:

Does student need to leave the classroom after a seizure? Yes No

If YES, describe process for returning student to classroom:

Emergency Response

A "seizure emergency" for this student is defined as:

Seizure Emergency Protocol

(Check all that apply and clarify below)

- Contact school nurse at _____
- Call 911 for transport to _____
- Notify parent or emergency contact
- Administer emergency medications as indicated below
- Notify doctor
- Other _____

Basic Seizure First Aid

- Stay calm & track time
- Keep child safe
- Do not restrain
- Do not put anything in mouth
- Stay with child until fully conscious
- Record seizure in log

For tonic-clonic seizure:

- Protect head
- Keep airway open/watch breathing
- Turn child on side

A seizure is generally considered an emergency when:

- Convulsive (tonic-clonic) seizure lasts longer than 5 minutes
- Student has repeated seizures without regaining consciousness
- Student is injured or has diabetes
- Student has a first-time seizure
- Student has breathing difficulties
- Student has a seizure in water

Seizure First Aid

What to do in the event of a seizure

1

STAY with the person and start timing the seizure.
Remain *calm* and check for medical ID.



2

Keep the person **SAFE**.
Move or guide away from *harmful objects*.



3

Turn the person onto their **SIDE** if they are not awake and aware. *Don't block airway*, put something small and soft under the head, loosen tight clothes around neck.

4

Do **NOT** put *anything* in their mouth.
Don't give water, pills or food until the person is awake.



5

Do **NOT** *restrain*.



6

STAY with them until they are awake and alert after the seizure.
Most seizures end in a few minutes.



ANY SEIZURE

Setting: Wheelchair

- Keep student in wheelchair if possible
- Secure wheelchair
- Fasten seatbelt (loosely) to prevent student from falling
- Protect and support head
- Make sure breathing is not blocked and saliva can flow from mouth

Follow seizure action plan



SEIZURE WITH LOSS OF CONSCIOUSNESS

Setting: School Bus

- Safely pull over and stop bus
- Place student on their side across the seat facing away from the seat back (or in aisle)
- Remind students to stay in their seats
- Follow school policy regarding continuing on to destination

Follow seizure action plan



SEIZURE WITH LOSS OF CONSCIOUSNESS

Setting: Water

- Support head – keep both the mouth and nose 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



THE POSTICTAL (RECOVERY) PHASE

What is it ?

- *Postictal* refers to the time immediately after a seizure, before a person returns to their usual state of awareness and function
- How a person feels and functions will vary depending of the type of seizure they experienced

How to help?

- Help person to a safe place to rest
- Check if they are alert and aware
- Stay with them until another adult arrives

Follow seizure action plan



WHAT NOT TO DO



1

Do **NOT** restrain or forcibly hold the student down



2

Do **NOT** put anything in student's mouth



3

Do **NOT** give water or food until person is awake and able to swallow



Follow seizure action plan

SEIZURE EMERGENCIES

Status Epilepticus

Continuous state of seizure activity

Prolonged seizures or repeated seizures without coming to between seizures

Generalized seizure more than 5 minutes





WHEN TO CALL FOR EMERGENCY HELP

Generalized seizure lasts longer than 5 minutes

Repeated seizures

Difficulty breathing



Seizure occurs in water

Person is injured, pregnant or sick

Person does not return to their usual state

First time seizure

Always follow student's Seizure Action Plan for Instructions from Student's Health Care Provider

SEIZURE FIRST AID IN ACTION



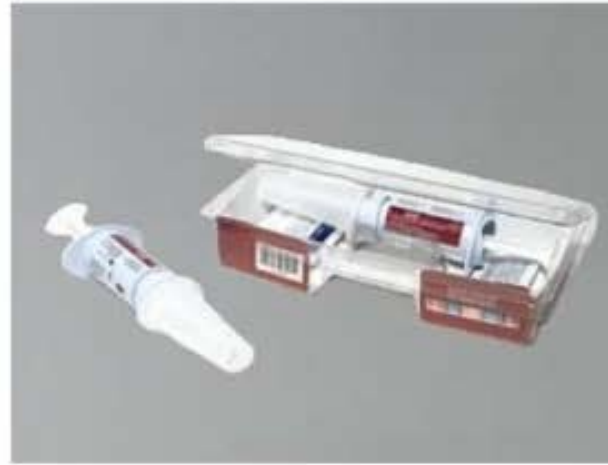
#ShareMySeizure

RESCUE THERAPIES AND SEIZURE ACTION PLANS



RESCUE THERAPIES: WHAT ARE THEY?

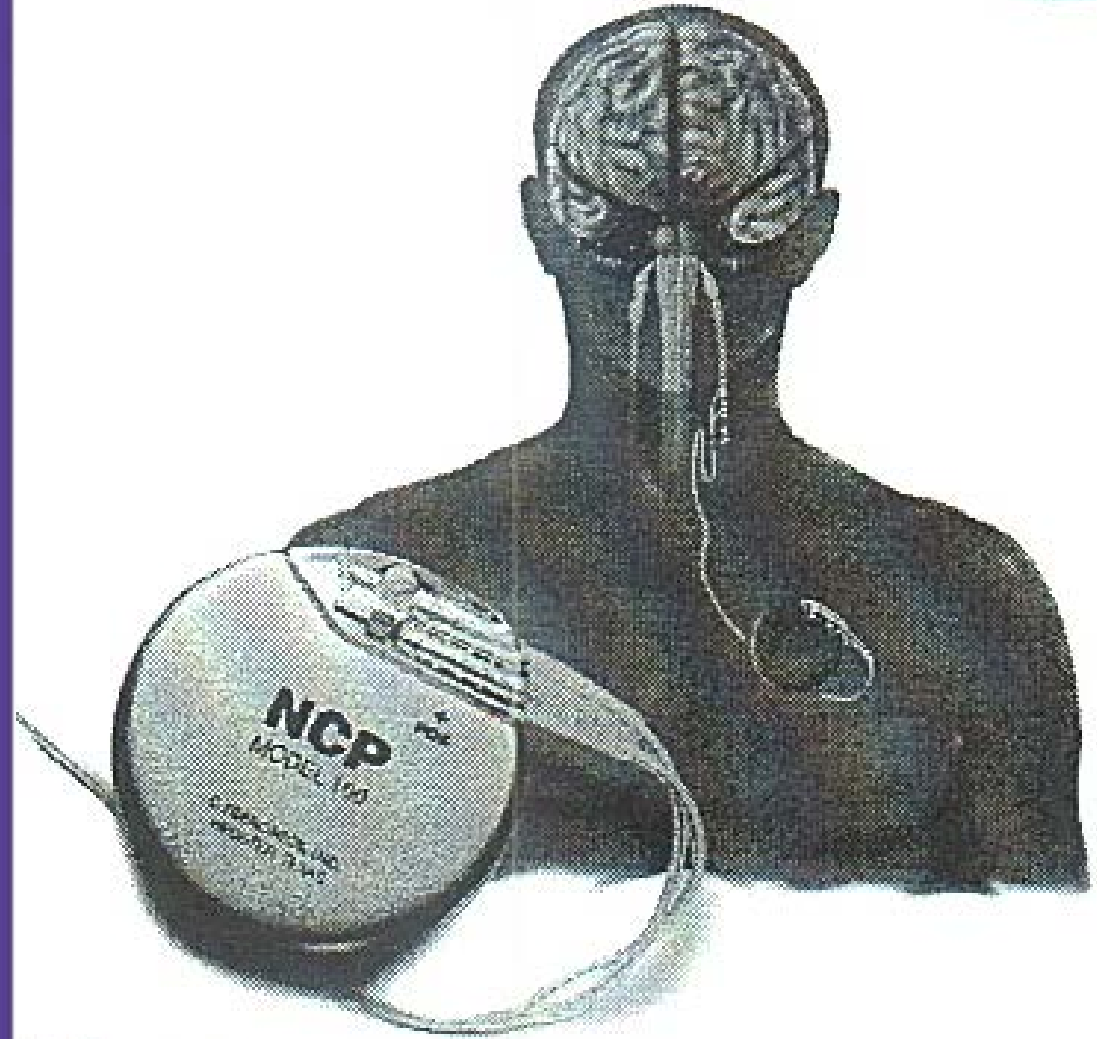
- A therapy used “as needed” to stop seizures that are different or longer than usual or happen in a different pattern
- Prescribed by health care provider, given by non-medical people outside of the hospital, and exactly as prescribed
- Do not take the place of usual seizure medicines



RESCUE THERAPIES

- ✓ 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

VAGUS NERVE STIMULATOR



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
- ▶ Requires individual training and skills checklist



DIASTAT VIDEO INSTRUCTION



RESCUE THERAPIES

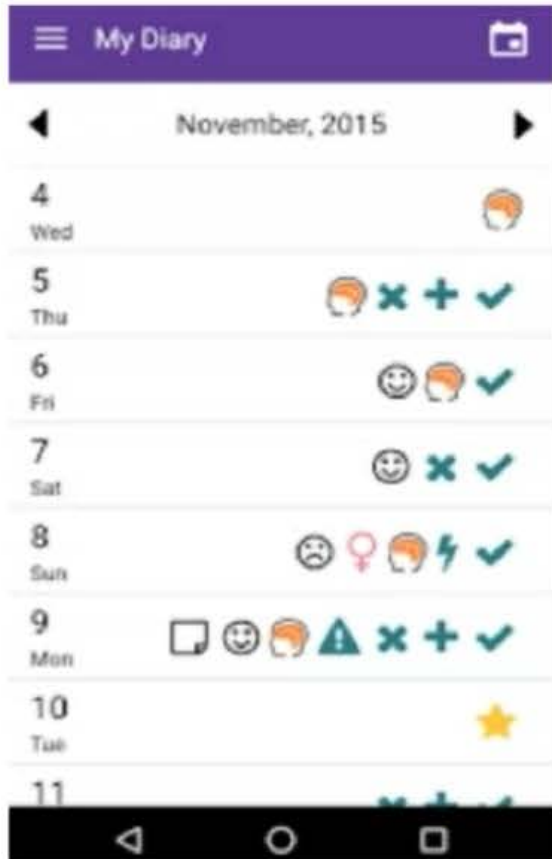
What School Personnel Should Know

- Know person's typical seizure type & pattern
- Recognize when a student's seizures are not typical for them
- Receive training from school nurse on...
 - Need for rescue therapy and who can give it
 - Your role – what and how to help
 - Need for EMS – when to call for help
 - How to follow a student's ***Seizure Action Plan***



WRITE DOWN WHAT HAPPENS

Share with Parents and Health Care Team



Seizure Observation Record

Student Name:		
Date & Time		
Seizure Length		
Pre-Seizure Observation (Briefly list behaviors, triggering events, activities)		
Convulsion (yes/no/unknown)		
Eyes? (Briefly describe)		
Motor/Torso/Body Movements	<ul style="list-style-type: none"> Right/Left arm/leg Clonus Ballism Head turning Head bobbing Head jerking Whole body jerking 	
Extremity Movements	<ul style="list-style-type: none"> (R) arm jerking (L) arm jerking (R) leg jerking (L) leg jerking Random movement 	
Color	<ul style="list-style-type: none"> Bluish Pale Flushed 	
Eyes	<ul style="list-style-type: none"> Fixed/staring Turned (R or L) Rolling up Blinking or blinking (clerkly) Closed 	
Mouth	<ul style="list-style-type: none"> Salivating Chewing Lip smacking 	
Verbal Sounds (gurgling, crying, throat clearing, etc.)		
Breathing (normal, abnormal, stopped, noisy, etc.)		
Incontinent (urine or feces)		
Post-ictal Observations	<ul style="list-style-type: none"> Confused Disoriented Headache Speech slurring Other 	
Length to Orientation		
Pupils (reactive?) (size of each)		
EMG (Cuff?) (cuff time & arrival time)		
Observer's Name		

Please use additional notes on back as necessary.

HELP STUDENTS IDENTIFY SEIZURE TRIGGERS

Factors that may **increase likelihood** of a seizure in students with epilepsy:

- **Missed or late medication (#1 reason)**
- Stress, anxiety
- Lack of sleep or poor sleep
- Hormonal changes
- Illness (examples: infection, fever)
- Some prescribed or over the counter medicines
- Overheating, overexertion
- Alcohol or drug use
- Flashing lights
- Hyperventilation



EPILEPSY: It's More Than Just Seizures

Impact on Learning and Behavior

- ~50% of children with epilepsy also have learning difficulties
- Some factors leading to learning problems
 - Attention and short-term memory problems
 - Fatigue, sleepiness
 - Irritability, worry, depression
 - Low self-esteem or confidence
 - Frequent absences

School difficulties are not always epilepsy-related!



STUDENTS WITH EPILEPSY

Providing Support

- Stay calm and reassuring - help others stay calm too
- After a seizure, coursework may need to be retaught
- Include seizure action plan in IEP or 504 Plan
- Facilitate positive peer interaction
- Encourage independence and inclusion
- Communicate *both* concerns and progress with parents



STUDENTS WITH EPILEPSY



Providing Support

- Talk with student
- No mimicking or posting of person during a seizure
- Intervene consistently
- Educate students, classrooms and school groups
- Encourage *peer support*
- **Involve student's parents**

EPILEPSY FOUNDATION SCHOOL RESOURCES

-
- *Seizure Training for School Personnel* Toolkit
 - [Take Charge Epilepsy Education Series](#)
 - [Seizure First Aid Videos](#)
 - Brochures, videos, pamphlets, fact sheets, posters
 - Available at
 - [Online Store at epilepsy.com](#)
 - Local Epilepsy Foundation office



Where can I learn more about epilepsy?



Visit www.epilepsy.com



Call the EF Helpline at 1-800-332-1000

Call your ***local Epilepsy Foundation office***

THANK YOU

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