Slide 1

Seizure Smart
School Personnel
Training

Slide 2

Myths & Misconceptions

• Epilepsy is not contagious.
• Epilepsy is not a mental illness.
• Epilepsy exists on a spectrum.
• People rarely die from having a seizure.

Slide 3

Epilepsy is...

• A neurological condition that causes people to have recurring seizures
• Also known as a seizure disorder
Seizure Triggers
- Missed or late medication
- Stress/anxiety
- Lack of sleep/fatigue
- Hormonal changes
- Alcohol or recreational drugs
- Drug interactions
- Overheating/dehydration
- Poor diet/missed meals
- Photosensitivity - flashing lights

Seizure Type & Classification

Understanding Focal Seizures
- Focal onset seizures: The term focal is used instead of partial to be more accurate when talking about where seizures begin. Focal seizures can start in one area or group of cells on one side of the brain.
  - Focal Onset Aware Seizures: When a person is aware during a seizure, it's called a focal aware seizure. This used to be called a simple partial seizure.
  - Focal Onset Impaired Awareness: When a person is confused or their awareness is affected in some way during a focal seizure, it's called a focal impaired awareness seizure. This used to be called a complex partial seizure.
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**Focal Seizures**

**Focal Aware Seizures**
- Formally known as "simple partial seizures"
- Uncontrollable shaking movements
- Sensory seizures
- No impairment of consciousness
- Reassurance and emotional support is key

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**Focal Seizures Continued**

**Focal Impaired Awareness Seizures**
- Formally known as "complex partial seizures"
- Most common seizure type
- Unaware of surroundings and unable to respond
- Repetitive, purposeless movement

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**Focal Impaired Awareness Seizure**
Focal Impaired Awareness: Response

- Always depends on individual and situation
- Stay calm
- Track time
- Do not restrain
- Gently direct away from hazards
- Remain until they have gained full awareness

Understanding Generalized Seizures

- Generalized seizures affect both cerebral hemispheres (sides of the brain) from the beginning of the seizure. They produce loss of consciousness, either briefly or for a longer period of time, and are sub-categorized into several major types:
  - Absence
  - Myoclonic
  - Clonic
  - Tonic
  - Tonic-clonic
  - Atonic

Absence Seizures

- Formerly known as "petit mal"
- Characterized by brief staring and/or rapid facial movements
- Starts and ends abruptly
- Quickly returns to complete awareness
- Appropriate response includes documentation
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Absence Seizure

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Generalized Tonic-Clonic
- Formerly known as “grand mal”
- NOT the most common seizure type
- Completely unconscious; loss of control
- There are typical progressions
- Typically lasts 5 minutes or less

Generalized Seizures Continued

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Disclaimer

You are about to see a clip of a child having a tonic-clonic seizure. This clip may be difficult for some to watch.
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Generalized Tonic-Clonic Seizure

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Generalized Tonic-Clonic: Response
1. Turn the individual on their side
2. Cushion the individual’s head
3. Remove any clothing or restraints that may get in the way of response
4. Time the seizure from the beginning of the seizure until the end
5. Stay with the person until they are fully aware. (Emotional support and/or proper documentation is key)

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Convulsive seizure in a wheelchair
- Don’t 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
  - Do not hold or grasp the head
**Slide 22**

**Convulsive seizure on a bus**

- Safely pull over and stop bus
- Place student on their side across the seat facing away from the seat back or in aisle
- Follow standard seizure response protocol
- Continue to destination or follow school policy

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**Convulsive Seizure in the Water**

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

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**When to Call 911**

- First time seizure
- Injury takes place
- Stops Breathing
- Longer than 5 minutes
- Takes place in water
- Other health condition
- Status Epilepticus
- You feel you can’t respond appropriately
Safety & Epilepsy

- Seizure response plans
- Safety in your environment
  - Fire safety
  - Safety proof
- Seizure alert monitors
- Driving

SUDEP

- Sudden unexpected death in epilepsy
- Risk factors
  - Higher in people with uncontrolled seizures
  - Higher in people with epilepsy beginning in childhood
  - Young adult age (20-40 years old)
  - Having epilepsy for a long time
  - Not taking medications regularly as prescribed
  - Not getting enough sleep
- SUDEP Institute
  - [https://www.epilepsy.com/living-epilepsy/our-programs/about-sudefp-institute](https://www.epilepsy.com/living-epilepsy/our-programs/about-sudefp-institute)

Treatment Options

- Medication
- Surgery
- Devices
- Diet
- New Therapies
- Social and psychological support
Medications

- Often the first line of treatment
- Approximately 70% of people achieve seizure control.
- There are over 30 anti-seizure medications.

Medications Continued...

- 47% of patients find control with their first medication.
- 13% of patients find control with their second medication.
- Only 1% of patients find control with their third medication.

Common Medication Side Effects

- Lethargy
- Weight gain and/or weight loss
- Cognitive, concentration, memory difficulties
- Hyperactivity
- Emotional and/or behavioral changes
- May go away after first several weeks
### Slide 31

**Tracking Side Effects**

- School vs. Home
- Observation Record
- Track any noticeable changes in student and relay to parent
- Attention, focus, mood or behavior

### Slide 32

**Rescue Medications**

- Used in emergency situations to stop a seizure that will not stop on its own
- State/school district regulations often govern use in school
- There are various emergency medications available
  - It can be administered a few different ways
    - Rectal
    - Buccal
    - Nasal

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**Brain Surgery Options**

- Considered after failing AED therapy
- Surgical evaluation includes inpatient video/EEG monitoring
- Other tests may include focal resection, temporal lobectomy, lesionectomy, hemispherectomy and corpus callosotomy
- Postsurgical seizure-free rates vary on seizure type, and location of origin, among other things.
- Patients usually go home after a short stay at the hospital and will likely miss several weeks or months of school
Special Diets

Dietary therapy:
• With medications
• Should be introduced with guidance of a physician
• Diets vary on restrictiveness and effects

Fats
Proteins
Carbs

8%
2%

Ketogenic Diet
Fats
Proteins
Carbs

25%
15%
60%

Standard American Diet
Fats
Proteins
Carbs

10%
30%
60%

Medical Device Options

RNS (NeuroPace)
- Responsive Neurostimulator System
- Need to know localization of epileptic brain tissue
- Surgery avoided
New Therapies

- **Seizure Assist Dogs**
  - Help people during and after a seizure
  - Trained for a variety of assistance tasks
  - May wear a backpack with helpful information

- **Medical Cannabis: Minnesota**
  - Patient registry process for monitoring and evaluating
  - Established a medical cannabis task force
  - On July 1, 2015, medical cannabis became available to registered patients.
  - MN statute 152.23 does not allow cannabis to be given on school grounds, buses, or vans.

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Social and Psychological Support

- Up to 50-60% of patients with epilepsy have various mood disorders, including depression and anxiety.
- Important to include treatment options that treat the whole person

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Tips for Supporting Students with Epilepsy

- Stay calm during seizure
- Be supportive
- Have a copy of the child's seizure action plan
- Discuss seizure action plan in the child's IEP
- Know child's medications and their possible side effects
- Encourage positive peer interaction
- Communicate with the parents
The Impact on Learning & Behavior

- Medication side effects may impact levels of cognition
- After a seizure, coursework may have to be re-taught
- Students with epilepsy are more likely to suffer from low self-esteem
- School difficulties are not always epilepsy related
We are ONE in 26
https://www.youtube.com/watch?v=pcJWnG_LszQ

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  https://www.epilepsy.com/learn/types-seizures
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