

# JCPS SEIZURE SELF STUDY

Requirement of HB 147

# HOUSE BILL 147 (SEIZURE BILL)

- Passed in 2018 legislative session
- Requires at least 1 hour of self-study review of seizure disorder materials by all principals, guidance counselors & teachers by July 1, 2019
- Requires all new staff in those positions to do this self-study
- This training is a one-time requirement- NOT annual

# OBJECTIVES

- Recognize 3 common seizure types
- Describe 3 seizure first aid steps to assist a student having a seizure
- Recognize 3 key factors that would make a seizure a medical emergency
- Describe 3 ways to support students living with epilepsy

# WHAT IS A EPILEPSY?

- Epilepsy is the fourth most common neurological disorder in the world.
- If one has epilepsy, surges of electrical activity in the brain can cause recurring seizures.
- Learning occurs as a result of the creation of connections between neurons.
- The surges of abnormal electrical activity in the brain that are characteristic of seizures can impact learning by disrupting connections between neurons.
- Approximately 50 percent of children with epilepsy have some form of learning difficulty.
- The functions most often influenced by epilepsy are speech and language, attention, memory, and executive functioning.
- Anticonvulsant medications can sometimes affect cognitive function but are generally very well tolerated.

# WHAT IS EPILEPSY?

[What Is Epilepsy? from  
epilepsy.com](#)

# HOW COMMON IS EPILEPSY?

- Epilepsy and seizures can develop in any person at any age. Seizures and epilepsy are more common in young children and older people.
- About 1 in 100 people in the U.S. has had a single [unprovoked seizure](#) or has been diagnosed with epilepsy.
- 1 in 26 people will develop epilepsy in their lifetime. People with certain conditions may be at greater risk. ([See "What causes epilepsy and seizures?"](#))
- Each year, about 48 of every 100,000 people will develop epilepsy. However, seizures may occur more often in different age groups (very young and older people), in different races, and in different areas of the world.

# POSSIBLE TRIGGERS FOR SEIZURES

- Missing medications
- Sleep deprivation
- Illness
- Significant excitement/stress/agitation
- Poor control & medications need adjusting
- Possibly strobing or flashing lights/patterns

# EPILEPSY AND MEDICATIONS

- Medications for epilepsy are brain medications. These medications can impact all brain activities: mood, behavior, sleep-wake cycle, and memory.
- They reduce seizure activity, but they do not stop the condition.



# EPILEPSY

- Most common neurological condition in children
- Costliest chronic condition
- A chronic condition that can adversely impact academic and health outcomes

# EPILEPSY AND LEARNING

- Epilepsy can impact memory, attention deficits, math and reading difficulties and processing speed abnormalities, even on medications
- 40%- 60% of affected children have an impairment in at least one academic area
- Information processing is slower in many students, making schoolwork a daily struggle, even with best efforts.

# EPILEPSY AND LEARNING

- Information processing is slower in many students, making schoolwork a daily struggle, even with best efforts.
- 30-40% of children with epilepsy have attention difficulties
- If a student with epilepsy does not have an IEP, please consider referral for evaluation for section 504 if there are academic concerns

# WHAT HAPPENS DURING A SEIZURE?

- [Seizures](#) can take on many different forms, and seizures affect different people in different ways. Anything that the brain does normally can also occur during a seizure when the brain is activated by seizure discharges. Some people call this activity “electrical storms” in the brain.
- Seizures have a beginning, middle, and end. Not all parts of a seizure may be visible or easy to separate from each other. Every person with seizures will not have every stage or symptom. The symptoms during a seizure usually are stereotypic (occur the same way or similar each time), episodic (come and go), and may be unpredictable.

# BEGINNING

- Some people are aware of the beginning of a seizure, possibly as much as hours or days before it happens. On the other hand, some people may not be aware of the beginning and therefore have no warning.
- **Prodrome:** Some people may experience feelings, sensations, or changes in behavior hours or days before a seizure. These feelings are generally not part of the seizure, but may warn a person that a seizure may come. Not everyone has these signs, but if they do, the signs can help a person change their activity, make sure to take their medication, use a rescue treatment, and take steps to prevent injury.

# BEGINNING

- **Aura:** An aura or warning is the first symptom of a seizure and is considered part of the seizure. Often the aura is an indescribable feeling. Other times it's easy to recognize and may be a change in feeling, sensation, thought, or behavior that is similar each time a seizure occurs. The aura can also occur alone and may be called a focal onset aware seizure, simple partial seizure or partial seizure without change in awareness.

An aura can occur before a change in awareness or consciousness.

Yet, many people have no aura or warning; the seizure starts with a loss of consciousness or awareness.

# COMMON SYMPTOMS BEFORE A SEIZURE

- Déjà vu (a feeling that a person, place or thing is familiar, but you've never experienced it before)
- Jamais vu (feeling that a person, place or thing is new or unfamiliar, but it's not)
- Smells
- Sounds
- Tastes
- Visual loss or blurring
- "Strange" feelings
- Fear/panic (often negative or scary feelings)
- Pleasant feelings
- Racing thoughts

# COMMON SYMPTOMS BEFORE A SEIZURE

- Physical Symptoms
  - Dizzy or lightheaded
  - Headache
  - Nausea or other stomach feelings (often a rising feeling from the stomach to the throat)
  - Numbness or tingling in part of the body



# MIDDLE

The middle of a seizure is often called the ictal phase. It's the period of time from the first symptoms (including an aura) to the end of the seizure activity. This correlates with the electrical seizure activity in the brain. Sometimes the visible symptoms last longer than the seizure activity on an EEG. This is because some of the visible symptoms may be aftereffects of a seizure or not related to seizure activity at all.

# COMMON SYMPTOMS DURING A SEIZURE

- Loss of awareness (often called "black out")
- Confused, feeling spacey
- Periods of forgetfulness or memory lapses
- Distracted, daydreaming
- Loss of consciousness, unconscious, or "pass out"
- Unable to hear
- Sounds may be strange or different
- Unusual smells (often bad smells like burning rubber)
- Unusual tastes

# COMMON SYMPTOMS DURING A SEIZURE

- Loss of vision or unable to see
- Blurry vision
- Flashing lights
- Formed visual hallucinations (objects or things are seen that aren't really there)
- Numbness, tingling, or electric shock like feeling in body, arm or leg

# COMMON SYMPTOMS DURING A SEIZURE

- Out of body sensations
- Feeling detached
- Déjà vu or jamais vu
- Body parts feels or looks different
- Feeling of panic, fear, impending doom (intense feeling that something bad is going to happen)
- Pleasant feelings

# COMMON SYMPTOMS DURING A SEIZURE

## Physical Changes

- Difficulty talking (may stop talking, make nonsense or garbled sounds, keep talking or speech may not make sense)
- Unable to swallow, drooling
- Repeated blinking of eyes, eyes may move to one side or look upward, or staring
- Lack of movement or muscle tone (unable to move, loss of tone in neck and head may drop forward, loss of muscle tone in body and person may slump or fall forward)

# COMMON SYMPTOMS DURING A SEIZURE

## Physical Changes

- Tremors, twitching or jerking movements (may occur on one or both sides of face, arms, legs or whole body; may start in one area then spread to other areas or stay in one place)
- Rigid or tense muscles (part of the body or whole body may feel very tight or tense and if standing, may fall "like a tree trunk")

# COMMON SYMPTOMS DURING A SEIZURE

## Physical Changes

- Repeated non-purposeful movements, called automatisms, involve the face, arms or legs, such as
  - lipsmacking or chewing movements
  - repeated movements of hands, like wringing, playing with buttons or objects in hands, waving
  - dressing or undressing
  - walking or running

# COMMON SYMPTOMS DURING A SEIZURE

## Physical Changes

- Repeated purposeful movements (person may continue activity that was going on before the seizure)
- Convulsion (person loses consciousness, body becomes rigid or tense, then fast jerking movements occur)
- Losing control of urine or stool unexpectedly
- Sweating
- Change in skin color (looks pale or flushed)



# COMMON SYMPTOMS DURING A SEIZURE

## Physical Changes

- Pupils may dilate or appear larger than normal
- Biting of tongue (from teeth clenching when muscles tighten)
- Difficulty breathing
- Heart racing

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# ENDING

- As the seizure ends, the postictal phase occurs - this is the recovery period after the seizure. Some people recover immediately while others may take minutes to hours to feel like their usual self. The type of seizure, as well as what part of the brain the seizure impacts, affects the recovery period - how long it may last and what may occur during it.

# COMMON SYMPTOMS AFTER A SEIZURE

- Slow to respond or not able to respond right away
- Sleepy
- Confused
- Memory loss
- Difficulty talking or writing
- Feeling fuzzy, light headed, or dizzy
- Feeling depressed, sad, upset
- Scared
- Anxious
- Frustrated, embarrassed, ashamed

# COMMON SYMPTOMS AFTER A SEIZURE

- May have injuries, such as bruising, cuts, broken bones, or head injury if fell during seizure
- May feel tired, exhausted, or sleep for minutes or hours
- Headache or other pain
- Nausea or upset stomach
- Thirsty
- General weakness or weak in one part or side of the body
- Urge to go to the bathroom or lose control of bowel or bladder

# TYPES OF SEIZURES

- Generalized onset seizures
- Focal onset seizures
- Unknown onset seizures

# GENERALIZED ONSET SEIZURES

- These seizures affect both sides of the brain or groups of cells on both sides of the brain at the same time. This term was used before and still includes seizures types like tonic-clonic, absence, or atonic to name a few.



# 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 in one side of the brain.

**Focal Onset Aware Seizures**: When a person is awake and 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.

# UNKNOWN ONSET SEIZURES

- When the beginning of a seizure is not known, it's called an unknown onset seizure. A seizure could also be called an unknown onset if it's not witnessed or seen by anyone, for example when seizures happen at night or in a person who lives alone.
- As more information is learned, an unknown onset seizure may later be diagnosed as a focal or generalized seizure.

# SYMPTOMS DURING A SEIZURE

- **Generalized onset**

- **Motor symptoms** may include **sustained rhythmical** jerking movements ([clonic](#)), muscles becoming weak or limp ([atonic](#)), muscles becoming tense or rigid ([tonic](#)), brief muscle twitching ([myoclonus](#)), or epileptic spasms (body flexes and extends repeatedly).
- **Non-motor symptoms** are usually called [absence seizures](#). These can be typical or [atypical](#) [absence seizures](#) (staring spells). Absence seizures can also have brief twitches ([myoclonus](#)) that can affect a specific part of the body or just the eyelids.

# SYMPTOMS DURING A SEIZURE

- **Focal onset seizures:**

- **Motor symptoms** may also include jerking ([clonic](#)), muscles becoming limp or weak ([atonic](#)), tense or rigid muscles ([tonic](#)), brief muscle twitching ([myoclonus](#)), or epileptic spasms. There may also be automatisms or repeated automatic movements, like clapping or rubbing of hands, lipsmacking or chewing, or running.
- **Non-motor symptoms:** Examples of symptoms that don't affect movement could be changes in sensation, emotions, thinking or cognition, autonomic functions (such as gastrointestinal sensations, waves of heat or cold, goosebumps, heart racing, etc.), or lack of movement (called behavior arrest).

# SYMPTOMS DURING A SEIZURE

- **Unknown onset seizures:**
  - **Motor seizures** are described as either [tonic-clonic](#) or epileptic spasms.
  - **Non-motor seizures** usually include a behavior arrest. This means that movement stops - the person may just stare and not make any other movements.

# FIRST AID STEPS

The most important thing is to keep the person safe and comfortable. For most seizures, giving basic seizure first aid is all you need to do.

The information listed is for all types of seizures. To learn more about what to do in specific situations, or for specific seizure types, look at the safety information for [different seizure types](#).

# FIRST AID STEPS

Always stay with the person until the seizure is over.

Pay attention to how long the seizure lasts.

Stay calm. Most seizures only last a few minutes.

Prevent injury by moving nearby objects out of the way.

Make the person as comfortable as possible.

Keep onlookers away.

Don't hold the person down.

Don't put anything in the person's mouth.

Don't give water, pills or food by mouth unless the person is fully alert.

Make sure their breathing is okay.

Know when to call for emergency medical help.

Be sensitive and supportive, and ask others to do the same.

# WHEN IS A SEIZURE A MEDICAL EMERGENCY?

**Call 911 for help if:**

- A seizure lasts 5 minutes or longer
- One seizure happens right after another without the person regaining consciousness ("coming to") between seizures
- Seizures happen closer together than usual for that person
- The person has trouble breathing
- The person appears to be choking
- The seizure happens in water, like a swimming pool or bathtub
- The person is injured during the seizure
- You believe this is the first seizure the person has had
- The person asks for medical help



# HOW TO SUPPORT A STUDENT WITH EPILEPSY

- Make sure to get a copy of the students Seizure Action Plan from the school nurse
- Ensure the condition is flagged in Infinite Campus. If it is not, please notify the school nurse
- Understand the laws related to disability, medical conditions and special education to ensure that children with epilepsy are able to access the free and appropriate education afforded to them under the law
- Monitor student behavior to prevent bullying of students with epilepsy

If you have questions about the training or student situations in your school, please discuss with your school nurse or call Health Services at 485-3387

# REFERENCES

Center for Disease Control and Prevention (October, 2022).

Epilepsy.

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

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