Teacher Awareness: Supporting Students with Epilepsy

Screen Text

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Welcome

Welcome to an interactive online course:

Teacher Awareness: Supporting Students with Epilepsy

Created by Epilepsy Ontario. Funded in part by the Government of Ontario

Start

Introduction

It is very likely that at some point in your career as an educator, you will encounter a student or colleague who lives with epilepsy.

It is also possible that you will witness a seizure.

It is common to feel apprehensive.

- Be informed and prepared
- Gain confidence
- Be supportive

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Many People Live With Epilepsy

1 out of 10 people will experience a seizure in their lifetime.

People can have seizures for many reasons. Having one seizure does not mean that a person has epilepsy.

Almost 1 out of 100 Canadians are living with epilepsy.

Each year about 18,000 Canadians will be diagnosed with epilepsy.

About 15,000 children and youth in Ontario live with epilepsy.

Rate Your Current Preparedness

Before we start, think about how prepared you are to support a student who lives with epilepsy.

Ask yourself:
• How well do I understand different types of seizures?
• What are the immediate actions I should take if a student has a seizure?
• Do I know when to call 911 for assistance?
• What types of things should I consider in helping a student with epilepsy in daily classroom life?
• Can epilepsy affect cognition and learning?

How would you rate your awareness? Select a number..

1 Little or no awareness
2
3
4
5 Substantial awareness

1-4 That’s a great starting point! As you work through the course, look for information to help make it a 5!

5-You clearly have a lot of experience supporting students with epilepsy! Look for tips and additional information in this course to add to your knowledge.

Goals For This Course

Our goal: help you increase your knowledge of epilepsy and preparedness to help students living with this condition. This course is divided into 3 sections:

1. Facts about epilepsy:
• The difference between having a seizure and being diagnosed with epilepsy,
• Identifying different types of seizures,
• Potential impacts of epilepsy, and
• The prevalence of epilepsy in our society.

2. Seizure preparedness and how to respond to a seizure event at school:
• Basic first aid for seizures,
• Responding to different types of seizures, and
• When to call 911.

3. Ongoing support of students with epilepsy:
• The potential impact of epilepsy on the life of a student, and
• Tips for supporting students with epilepsy to help them be successful in school and beyond.

Facts About Epilepsy

Section 1: Facts About Epilepsy

Seizures Can be Provoked or Unprovoked

Having a seizure does not mean that someone has epilepsy. However, to understand epilepsy it is helpful to understand some general information about seizures.

Transient episode caused by a disturbance in brain activity that can cause changes in attention, behavior, or perception.

Seizures can be provoked or unprovoked.

Provoked seizures can be caused by:
• Low blood sugar (hypoglycemia),
• Alcohol withdrawal,
• Changes to blood sodium or potassium levels,
• An infection, or
• A head trauma, either moments before or up to a week before the seizure.

MOST provoked seizures are NOT epilepsy.

Unprovoked Seizures and Epilepsy

Some seizures are unprovoked.

Unprovoked Seizure:
No Fever
No Infection
No blood sugar abnormalities
No electrolyte abnormalities
No recent brain trauma

A single, unprovoked seizure would generally not be diagnosed as due to epilepsy unless there is a high risk of seizure recurrence.

What Is Epilepsy?

If having one seizure, either provoked or unprovoked, does not mean that someone has epilepsy, what is epilepsy?

Epilepsy is a disorder of the brain characterized by an enduring predisposition to generate epileptic seizures and by the cognitive, psychological and social consequences of this condition.

Some key aspects of epilepsy:
1. Epilepsy is a brain disease.
2. A person has an increased risk of recurrent seizures.
3. The diagnosis is made by a health care professional.
4. Epilepsy can impact a person's life beyond just having seizures.

The diagnosis of epilepsy typically occurs after a person has had two or more unprovoked seizures.

Who can develop epilepsy?

Epilepsy can affect an individual of any...
Age
Socioeconomic Status
Religion
Race
Geographic location
Gender

Many People Live with Epilepsy

It is a misconception that if a person lives with epilepsy, there is less potential for high achievement.

People living with epilepsy reach a level of accomplishment so great that they become famous!

Your student is not limited in their potential/capacity.

Some of the accomplishments achieved by people who have lived with epilepsy at some point in their lives are...
Internationally renowned singers and songwriters
Olympic-level athletes
Members of Parliament
Judges, Nobel-laureates
National-level athletes in football, basketball, and hockey
TV personalities

What Causes Epilepsy?

Epilepsy can be caused by many different factors, but sometimes the cause is unknown.

Causes of epilepsy can include:
1 . Anything that can injure the brain, such as:
• Brain injury during birth
• Neurodegenerative disease
• Head injury
• Lack of oxygen
• Fetal alcohol syndrome
• Lead poisoning
• Carbon monoxide poisoning
• Stroke

2. A genetic mutation (inherited or a random mutation)
3. A developmental abnormality
4. A metabolic abnormality
5. An immune disorder
6. An infectious cause

Did you know... ?

If the cause is unknown, this is referred to as "idiopathic".

How Is Epilepsy Diagnosed & Treated?

A physician will rely on the person's recollection of what happened and eyewitness descriptions of the episodes.

A physician will determine whether the episode was a seizure.

A physician will determine whether it was provoked or unprovoked.

Diagnostic tests for epilepsy can include:
• Brain function (EEG)
• Brain imaging (MRI)

If a diagnosis of epilepsy is made, the most common treatment is antiseizure medication.

Other Treatment Options

Antiseizure drugs successfully control seizures for approximately 67% people with epilepsy who take them regularly and as prescribed.

When seizure freedom is not achieved with medication alone, other treatment options are available:
Brain surgery
Medically-managed diet therapy
Brain or nerve stimulators

Seizure Types

When you visualize someone having a seizure, what do you imagine the seizure will look like? Think about it, then click Learn More.

Learn More. ....
There are many types of seizures. The type is determined by what part of the brain is affected and for how long.

Each type can appear very different from other types.

Here are a few types:
• A person's body stiffens, he falls to the floor, and his body begins to jerk and convulse.
• A person appears to be staring blankly for 6-7 seconds and she quickly resumes activity.
• A person starts speaking incoherently and appears unsteady, but does not fall down.

Did you know.
It can be a challenge to identify a seizure correctly!
Being informed about seizure types creates more awareness and helps ensure that certain seizure activity is not wrongly interpreted as caused by alcohol- or drug-induced behavior or as unwillingness to pay attention. Your role is to know whether the seizure is in line with the information you have received regarding this particular student.

Terminology

Epilepsy terminology, especially the names used to describe seizures, have changed over the years and continue to evolve. Some terms, like Grand Mal and Petit Mal, are no longer used. Others have changed from one accepted term to another in recent years. Where there are multiple, recently used, terms for different seizures, we will make a note of both when we define a seizure.

Most important is to respect and understand the terminology an individual uses when explaining their seizures.

Seizure Types

Two Major Seizure Categories

Seizure Types: Focal and Generalized

Focal Seizures
Begin within one hemisphere of the brain; divided between seizures where the person remains aware or is unaware.

Generalized Seizures:
Widespread seizure activity in both hemispheres of the brain.
1. Tonic
2. Atonic
3. Tonic-clonic
4. Myoclonic
5. Absence

Generalized Seizures

Generalized seizures involve widespread seizure activity in both hemispheres of the brain.

Generalized seizures can cause changes in the muscles, which is how most of these seizure types are named.

There are four such types of generalized seizures that cause changes in the muscles:
1. Tonic — an increase in muscle tone;
2. Atonic — a loss of muscle tone;
3. Tonic-Clonic — an initial increase in muscle tone (tonic) followed by rhythmic jerking movements (clonic); and
4. Myoclonic— a sudden muscle jerk or jerks.

Absence seizures, while considered generalized, are different in that they are characterized by a brief lapse in consciousness.

Did you know....?

Tonic-Clonic seizures are often the type most people think of when they imagine a seizure occurring. They were formerly called Grand Mal seizures. Later we will discuss how important it is for you to become familiar with the modern language of epilepsy.

Generalized Seizures

Generalized Seizures:

What you may notice:
• A sudden sound, such as a cry, as the seizure starts.
• The person may fall to the floor.
• The person's whole body may shake.
• Shallow and irregular breathing or lips turning blue.
• The person may vomit as the seizure ends.
• The person may lose consciousness.
• The person may lose control of bowels or bladder.
• The seizure typically lasts from a few seconds up to 3 minutes.

Absence Seizures

Absence seizures are very brief (~2 to 20 seconds)
• Different, but still belong to the generalized seizure category
• Prior to 1989 these were called petit mal seizures
• Difficult seizures to identity/easy to miss

What you may see:
• The student has a blank or vacant stare.
• The seizure starts and ends abruptly.
• The student's eyes may blink or roll upwards.
• Some people may exhibit chewing movements.
• There is a loss of consciousness during the seizure, but it is very brief.

Absence Seizure Protocol:

Typically, first aid is not required. However, the student will need time to regroup and remember what he or she was saying or doing before the seizure. Bear in mind there can be several such seizures in one day.

Notice a student having multiple staring spell? Discuss concerns with their parent or guardian. One sign: a sudden drop in a student’s grades because they are missing information all day long.

Focal Seizures

In contrast to generalized seizures, focal seizures affect only part of the brain.

However, seizures can manifest in many different ways depending on which of the brain is affected.

There are two types of focal seizures:
Focal Aware Seizures (Simple Partial Seizures)

Partial Seizures

Manifestations of this type of seizure of seizures will depend on the region of the brain involved in the seizure activity and are differentiated by whether the person’s normal level of awareness is retained or not.

Two types:

Focal Aware Seizures (Simple Partial Seizures)
• Cause no change in awareness or language,
• Allow complete memory of the event afterwards
• Often called auras (sensations of heat, scents, etc.)

Focal Unaware Seizures (or Complex Partial Seizures)
• Cause a change in the person's level of awareness, language function, memory, or all three
• Appearance of seizures will depend on the part of the brain affected
• Sometimes a focal seizure can evolve into a generalized seizure

Did you know?

The terminology for Focal Seizures has changed recently. For instance, Complex Partial Seizures are increasingly referred to as Focal Unaware, Focal Dyscognitive, or Focal Onset Impaired Awareness, as it is a type of Focal Seizure with impaired awareness.

Additional Seizure Types

Other Types of Seizures

Other seizure types can be generalized, focal, of unknown origin, or can start in one side of the brain and then spread to the other.

Some other types of seizures include:

Atonic (Drop Attack): A sudden loss of muscle tone where a person collapses and falls to the floor. Recovery occurs after a few seconds.

Myoclonic: Brief uncontrolled movements of a body part or all the body which can occur as a single event or in series. Consciousness and memory are not impaired.

Seizure Types

Matching Activity:

Type the letter that creates a correct match between the definition and the seizure types listed.
You have an opportunity to reveal the correct answer and check your match.
Use the “Next Definition” button provided to advance through all four types.

A. Absence seizure

B. Tonic-Clonic

C. Focal Unaware (Complex Partial)

D. Focal Aware.

Definition 1
May cause a change in the person's level of awareness, language function, memory, or all three, and Appearance will depend on the part of the brain affected.

Correct Answer: C

Definition 2
NO change occurs in awareness or language. There is complete memory of the event afterwards. Such seizures are often called auras.

Correct Answer: D

Definition 3
• The person has a blank or vacant stare.
• Seizure starts and ends abruptly.
• The person's eyes may blink or roll upwards.
• Some people may exhibit chewing movements.
• The person has a complete loss of awareness.

Correct Answer: A

Definition 4
An initial increase in muscle tone, followed by rhythmic jerking movements

Correct Answer: B

Conclusion

Congratulations! You have now completed Section 1 or 3 of Supporting Students with Epilepsy. Created by Epilepsy Ontario. We encourage you to also take Sections 2 and 3. For further resources to support students with epilepsy visit our at http://epilepsyontario.org.