

Teacher Awareness: Supporting Students with Epilepsy

Audio Script

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Welcome

A PDF Version of the Script is available in the Resources Section.

Welcome to an interactive online course for elementary and secondary teachers: Supporting Students with Epilepsy, created by Epilepsy Ontario.

This course has been prepared to help Ontario teachers and school personnel better understand epilepsy and the different types of seizures experienced by students in Ontario schools; how to respond in the case of a seizure happening at the school; and tips for supporting students with epilepsy in the classroom. While the course is meant to help students and personnel in schools who support them, it should not be interpreted as authoritative guidance with respect to epilepsy treatment and care.

Additional tools and information are available in the Resources area for this course.

Introduction

Did you know, that at some point in your career as an educator, you are very likely to encounter a student or colleague who lives with the seizure disorder called epilepsy? It is much more common than most of us realize. It is also possible that you will witness a seizure. How does that make you feel? Some might say they feel apprehensive, and that is common. When you are informed and prepared, you have the opportunity to feel confident and be supportive.

Epilepsy Ontario, a registered health charity in Ontario since 1956 and the voice of epilepsy in the province, has designed this course to help you and others in education be prepared and confident in your ability to understand, offer assistance, and be supportive of those living with epilepsy.

Many People Live With Epilepsy

1 out of 10 people will experience a seizure in their lifetime. As you will learn, having one seizure does not necessarily mean that someone has epilepsy. But epilepsy is often more prevalent among our students than we realize.

Nearly 1 in 100 people in Canada have epilepsy. This common brain disorder can begin at any age from infants to seniors. Each year about 18,000 Canadians will be diagnosed with epilepsy. According to a 2015 report by the Institute for Clinical and Evaluative Sciences and the Ontario Brain Institute, there are over 15,000 young people in Ontario, under the age of 18, who are living with epilepsy.

Rate Your Current Preparedness

Before we get started with this course, take a moment to think about how prepared you feel in terms of your current knowledge and understanding of epilepsy to support a student who lives with this condition.

Ask yourself these questions:

- 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?

Then rate your overall readiness on a scale of 1 to 5, where 1 is “I have little to no awareness of how to support a student” and 5 is “I have substantial awareness of how to support a student.”

This is not a test, but simply a way for you to gauge your understanding as you start this course.

At the end of the course you will have a chance to think about this issue of readiness again and see how well we did in helping you to be prepared!

Goals for this course

The goal for this course is to help you increase your knowledge of epilepsy and preparedness to help students living with this condition.

This course is divided into three sections:

1. Facts about the condition of epilepsy and the various types of seizures experienced by those living with epilepsy, such as:

- Understanding the difference between having a seizure and being diagnosed with epilepsy,
- Identifying different types of seizures,
- Understanding the potential impacts of epilepsy, and
- Creating awareness of 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. Tips and key information for ongoing support of students with epilepsy:

- Understand the potential impact of epilepsy on the life of a student, and
- Tips for support students with epilepsy to help them be successful in school.

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Facts About Epilepsy

In this first section of the course, we are going to learn about facts that define the brain condition called 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.

Seizures are transient episodes caused by a disturbance in brain activity that can cause changes in attention, behaviour, or perception.

A seizure can be either provoked or unprovoked.

Provoked seizures are triggered by something specific, such as a fever, low blood sugar (also called “hypoglycemia”), alcohol withdrawal, changes in blood sodium or potassium levels, an infection, or, a head trauma which could have occurred up to a week before the seizure.

Most provoked seizures are not epilepsy.

Unprovoked Seizures and Epilepsy

Some seizures are unprovoked. Unprovoked seizures can be characterized by the absence of a fever, an infection, abnormalities in blood sugar levels or electrolytes, and recent brain trauma. Some people may experience a single, unprovoked seizure and never have another one.

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 defined by these key aspects:

- 1.Epilepsy is a brain disorder.
- 2.A person has an increased risk of recurrent seizures.
- 3.The diagnosis is made by a health care professional.

The diagnosis of epilepsy typically happens after a person has had two or more unprovoked seizures and typically involves a physical exam and neurological tests.

Who Can Develop Epilepsy?

Who could develop epilepsy?

Epilepsy does not affect any one particular type of person.

It can affect an individual of any race, age, gender, socioeconomic status, religion, or geographic location.

Many People Live with Epilepsy

Some may have a misconception that if a person lives with epilepsy, there is less potential for high achievement. It might even surprise you to know that people living with epilepsy reach a level of accomplishment so great that they become famous!

Your student is not limited in their potential. Just think of some of the accomplishments achieved by people who have lived with epilepsy at some point in their lives such as: internationally renowned singers and songwriters, Olympic-level athletes, Members of Parliament, Judges, Nobel laureates, National-level athletes in football, basketball, and hockey, and TV personalities.

What Causes Epilepsy?

Epilepsy can be caused by many different factors. Often, however, when someone is diagnosed with epilepsy it may not be possible to determine the cause of their seizure disorder.

Some of the factors include:

- Anything that can injure the brain.
- A genetic mutation (inherited or a random mutation)
- A developmental abnormality
- A metabolic abnormality
- An Immune disorder, or, there can be
- An infectious cause

In some cases the cause of a person's epilepsy can be unknown. In this case the epilepsy is defined as "idiopathic," or cause unknown.

How Is Epilepsy Diagnosed & Treated?

Many steps occur in diagnosing and treating epilepsy. First, a physician will rely on the person's recollection of what happened and eyewitness descriptions of the episodes. This information is particularly important.

Next, a physician will determine whether the episode was a seizure. The physician will also determine whether the seizure was provoked or unprovoked.

Diagnostic tests for epilepsy can include a test of brain function known as an electroencephalogram, or "EEG", and sometimes brain imaging, such as magnetic resonance imaging, or "MRI".

If a diagnosis of epilepsy is made, the most common treatment is antiseizure (also called "anticonvulsant" or "antiepileptic") medication.

Other Treatment Options

A number of medications are currently used in the treatment of epilepsy. These medications control different types of seizures, however they are not considered to be a “cure”.

Approximately 67% of people living with epilepsy achieve seizure control with the use of medication.

However, some people take medication but do not have full control of seizures. Other treatment options are available, such as brain surgery, medically managed diet therapy, and brain or nerve stimulators.

If medication is not effective in preventing seizures, or if it causes intolerable side effects, the person may be referred to a neurologist at an epilepsy treatment centre.

Different Types of Seizures

When you visualize someone having a seizure, what do you imagine the seizure will look like?

Think about it and then click “Learn More” to reveal a list of seizure descriptions.

There are many types of seizures. The type is determined by characteristics such as the manifestations observed, the duration of the seizure and the brain region involved. One seizure type can be very different from another.

Here are a few examples:

- The person’s body stiffens, he falls to the floor his body begins to jerk.
- The person appears to be staring blankly for 6 to 7 seconds and she quickly resumes activity.
- The person starts speaking incoherently and appears unsteady but does not fall down.

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.

Remember, though, that your role is not to determine IF the event is a seizure or not, but rather to determine if the event is congruent with the expectations that have been passed on to you by the student’s parents and healthcare professionals.

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.

Two Major Seizure Categories

There are two major categories of seizures: generalized and focal.

Focal seizures are seizures that begin within one hemisphere of the brain and are divided between seizures where the person remains aware or is unaware.

Generalized seizures are seizures that affect both hemispheres. There are five types of generalized seizures: tonic, atonic, tonic-clonic, myoclonic, and absence.

First, we are going to discuss types of generalized seizures and the various forms of first aid they require.

Generalized Seizures

A common feature of generalized seizures is widespread seizure activity in both hemispheres of the brain.

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

There are four such types of generalized seizures. They often include loss of consciousness.

- Tonic—an increase in muscle tone (stiffness of body);
- Atonic—a loss of muscle tone (limpness of body);
- Tonic-Clonic—an initial increase in muscle tone (tonic) followed by rhythmic jerking movements (clonic); and
- Myoclonic—a sudden muscle jerk or jerks of one or more muscle or muscle groups.

Absence seizures are also a type of generalized seizure. These seizures are characterized by a brief lapse in consciousness.

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

What you may notice:

- The person makes a sudden sound, such as a cry as the seizure starts.
- If standing, the person will fall to the floor.
- The person's whole body may shake.
- The person's breathing may be shallow and irregular during seizure; their lips may turn blue.
- The person may vomit as the seizure ends.
- The person may lose control of their bowels or bladder.
- The seizure typically lasts from under a minute to about 3 minutes.

Absence Seizures

Absence seizures are different, but still belong to the generalized seizure category. Prior to 1989, these were called petit mal seizures.

Absence seizures are very brief, lasting approximately 2 to 20 seconds. They are often difficult seizures to identify because of their brevity and the fact that the person does not fall down.

If you are not looking directly at a student during an absence seizure, it is easy to miss the seizure entirely. If you do notice anything, it might be:

- The student will have a blank or vacant stare.
- The seizure usually 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

Typically, first aid would not be required in this case.

The student may have these episodes repeatedly throughout the day and may miss pieces of information being taught. You can help your student by repeating information or by providing written instructions or notes in case they've missed the information. Teachers who are knowledgeable about absence seizures may be the first ones to detect that a student could be having seizures. If you notice a student having multiple staring spells discuss your concerns with their parent or guardian. One sign may be a sudden drop in a student's grades because they are missing bits and pieces of 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 part of the brain is affected.

There are two types of focal seizures: simple partial and complex partial seizures.

Partial Seizure

The manifestations of this type of seizure will depend on the region of the brain involved in the seizure activity.

Focal Aware Seizures (formerly Simple Partial Seizures) cause no change in awareness or language, allow complete memory of the event afterwards, and are often called auras. Auras can be experienced as a rush of heat through the body, the smell of a certain scent, and so forth.

Focal Unaware Seizures (formerly called Complex Partial Seizures) cause a change in the person's level of awareness, language function, memory, or all three, and can appear very different from other seizures, depending on the part of the brain affected. For instance, if the seizure is localized in the part of the brain dealing with vision, the person may experience blurred vision or even temporary blindness. Sometimes a focal seizure can evolve into a generalized seizure.

Did You Know?

Additional Seizure Types

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.

Myoclonic

- Brief, uncontrolled movements of a body part or all the body which can occur as a single event or in series.

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.

Conclusion

Congratulations. You have now completed Section 1 of 3 of the course “Supporting Students with Epilepsy”, created for educators by Epilepsy Ontario. Please continue to Modules 2 and 3.

For further resources to support students with epilepsy, visit our website at epilepsyontario.org