

**A GUIDE FOR TEACHERS**

# *Epilepsy*



**EPILEPSY EDUCATION SERIES**

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**This booklet is designed to provide general information about Epilepsy to the public. It does not include specific medical advice. People with epilepsy should not make changes based on this information. Always consult your physician prior to making any changes.**

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**Special thanks to our consulting team, which included epilepsy specialist neurologists & neuroscience nurses, hospital epilepsy clinic staff, educators, individuals with epilepsy, and their family members.**

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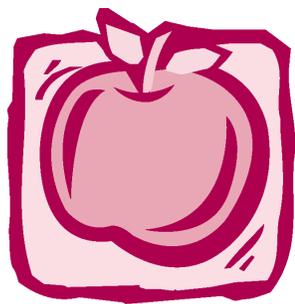
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## *Epilepsy: A Guide for Teachers*

Teachers play a vital role in the physical, emotional, and academic well-being of students with epilepsy. Teachers who know how to respond to seizures improve safety standards in the school and influence the reactions of fellow students and school staff. A teacher who reacts to seizures calmly and supportively will help others learn to do the same. In some cases, teachers are the first to notice and recognize the symptoms of seizures in a student. Teachers who understand, encourage, and inspire students with epilepsy facilitate learning, independence, and self-esteem.



# H How To Recognize Seizures

Seizures take many different forms. A seizure may last for a few seconds and involve a blank stare or a sudden fall. It may last for a few minutes and involve convulsions or random, purposeless movements such as chewing motions or pulling at clothing. Sometimes it is difficult to distinguish between a seizure and unusual behaviour. What is important to watch for are repeated, typical patterns of behaviour.

Signs that may indicate that a student is having a seizure include:

- a sudden loss of awareness that may look like daydreaming
- a brief lack of response
- memory gaps
- rhythmic head-nodding
- rapid eye blinking
- repeated movements that look unnatural
- repeated jerking movements of the body, arms, or legs
- sudden falls without an apparent cause
- sudden stomach pain followed by sleepiness and confusion
- frequent complaints that things taste, sound, smell, look, or feel strange
- sudden fear, panic, or anger without an apparent reason.

If you notice these symptoms, record your observations, discuss the observations with the school nurse and/or principal, and comply with the school policy regarding reporting to parents or caregivers.

# Why Seizures Happen

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The brain is made up of approximately 100 billion nerve cells, which communicate through electrical and chemical signals. When there is a sudden excessive electrical discharge that disrupts the normal activity of the nerve cells, a change in the person's behaviour or function may result. This abnormal activity in the brain is called a seizure.

Seizures have many causes. The causes of seizures include genetics, birth injury, developmental disorder, brain trauma (from car accidents, sports injuries, etc.), drug and alcohol abuse, infections such as meningitis, encephalitis, and AIDS, and brain tumour.

In many cases, the cause of the seizures remains unknown.

# What Having Epilepsy Means

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Epilepsy is a condition of the brain that is characterized by recurrent, unprovoked seizures. Approximately 1 in 10 Canadians will experience at least 1 seizure during a lifetime. This does not mean they have epilepsy. Epilepsy is a condition that is defined by multiple, unprovoked seizures. Approximately 1% of the population has epilepsy.

Epilepsy **is** a seizure disorder, **not** a psychological disorder nor a disease, and it is **not** contagious.

# Who is Affected by Epilepsy

Epilepsy is a condition that is more common than most people realize. In the general population, approximately 1 person in 100 has epilepsy, meaning that approximately 1 in every 100 students has epilepsy.

People of all ages have epilepsy. The condition may begin at any age, although its onset most often occurs during childhood and in the elderly. The frequency of seizures in childhood may be partly due to the low seizure threshold during brain maturation.

The seizure threshold generally rises as the brain matures. This may partly explain why children with epilepsy often outgrow the condition.

**Epilepsy is a condition that is more common than most people realize. In the general population, approximately 1 person in 100 has epilepsy.**

# H *How To Differentiate Seizure*

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## *Types*

There are many different types of seizures. The location in the brain of the abnormally discharging nerve cells determines the clinical presentation. A student can have more than one type of seizure.

The different types of seizures begin in different areas of the brain, and they are grouped into two categories: **focal onset** and **generalized onset**. If the sudden excessive electrical activity occurs in one part of the brain, it is called a **focal** seizure.

If the excessive electrical activity involves the whole brain, the seizure is called a **generalized** seizure. Sometimes seizures begin as focal and then spread and become generalized. These are referred to as **focal to bilateral tonic-clonic seizures**.

### *Focal Onset Seizures*

The two most common kinds of focal seizures are focal aware and focal impaired awareness seizure. These terms are related to the level of alertness of the person during the seizure.

A **focal aware** seizure usually begins gradually and lasts seconds to minutes.

The person may experience an unusual sensation, feeling, or movement called an **aura**. An aura may consist of sensory, motor, psychic, or autonomic symptoms. The student may see, hear, or smell things that aren't there, or exhibit sudden jerky movements of one area of the body. For example, the student may suddenly smell burning rubber, or one of his or her hands may twitch uncontrollably. One common presentation is a queasy feeling in the stomach, which rises up into the throat area.

An aura may also involve a sudden, overwhelming emotion such as joy, sadness, fear, or anger. They may experience autonomic symptoms such as stomach upset, dizziness, a shiver, a tingling or burning sensation, pallor, or flushing. Occasionally, they will experience a feeling of déjà vu or déjà ecoutée (the sensation of having seen or heard something before).

An aura is a focal aware seizure that may occur alone or may progress to a focal impaired awareness or a bilateral tonic-clonic seizure. The aura can sometimes be used as a warning signal to allow the person to take the necessary precautions to avoid injury.

During a **focal impaired awareness** seizure, a student may appear dazed and confused. A dreamlike experience may occur. The student may be unable to respond or may respond inappropriately. The student may stare into space and act involuntarily.

**Automatisms**, which are random, purposeless movements, often characterize the seizure. These may include chewing motions, lip-smacking, pulling at clothing, or random walking. Occasionally, the behaviours are more dramatic, such as screaming or undressing. There is a rare seizure type which results in a person giggling or laughing unnaturally at inappropriate times.

A focal impaired awareness seizure generally lasts between 1 and 2 minutes and is often followed by a period of disorientation and confusion.

## *Generalized Onset Seizures*

A generalized seizure is either convulsive (tonic-clonic) or non-convulsive (absence).

An **absence** seizure consists of a blank stare usually lasting less than 10 seconds. The seizure starts and ends abruptly, and awareness is impaired during the seizure. These seizures are sometimes misinterpreted as daydreaming or inattentiveness. The brief lapse of consciousness causes loss of attention. As a result, a student may miss short parts of the lesson or may suddenly stop talking, stare blankly

for a few seconds, and then continue talking without realizing that anything has occurred. Rapid blinking may accompany the seizure, and the eyes may roll upwards. Following the seizure, alertness is quickly regained.

A student may experience as many as several hundred absence seizures in a day. If absence seizures are not treated, they will interfere with learning. Teachers are often the first to notice these seizures.

**Generalized tonic-clonic** seizures usually last from 1 to 3 minutes.

The tonic phase typically involves a crying out or a groan, a loss of awareness, and a fall as consciousness is lost and muscles stiffen. The second phase, or the clonic phase involves a convulsion, and there is jerking and twitching of the muscles in all four limbs. Usually, the movements involve the whole body. Urinary or bowel control may be lost, and there may be shallow breathing, a bluish or grey skin colour, and drooling. The bluish colour is partly the result of the change in available oxygen caused by a difficulty in breathing as the chest muscles contract. The seizure may result in the student biting his or her tongue. Never put anything in the person's mouth during a seizure.

Awareness is regained slowly following the seizure, and the person often experiences a period of fatigue, confusion, nausea, or severe headache. The student may want to sleep.

Other types of generalized seizures include atonic and myoclonic seizures.

An **atonic** seizure is sometimes called a “drop attack” because it can result in a sudden fall without any warning. The student may drop an object that he or she is holding, or nod the head involuntarily. Typically, an atonic seizure lasts for a few seconds.

Injuries are common. A person may even have to wear a helmet for protection. These seizures usually begin in childhood and often are combined with other seizure types.

A **myoclonic** seizure results in a sudden jerk of part of the body, such as the arm or leg. The abrupt jerk of a muscle group may result in a foot suddenly kicking. They may fall to the ground as a result of severe muscle jerks.

Each seizure is very brief, although myoclonic seizures may occur singly or in clusters.

### *Sudden Unexplained Death in Epilepsy (SUDEP)*

The cause of SUDEP, where death occurs suddenly for no discernible reason, is unknown. SUDEP is rare.

## *H* How to Respond to Seizures

You cannot stop a seizure from occurring. Most seizures last for seconds or several minutes and end naturally. Once a seizure is over, the student will typically return to normal. As a teacher, it is important to ensure the student's safety during, and following the seizure, or to be aware of how to differentiate between a typical seizure or a medical emergency.

# H How Seizures Are Controlled

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**Anti-seizure medication** is the primary treatment for epilepsy. Medicine does not cure epilepsy, but it often reduces or even stops seizures from occurring by altering the activity of neurons in the brain. Up to 65% of people with epilepsy achieve seizure control with the proper medication.

It may be necessary for students to take medicine at various times during the day. Arrangements should be made based on the doctor's instructions and in conjunction with the parents' directions. Taking anti-seizure medication as prescribed is essential.

**Surgery** may also be an option. Students considered for surgery usually have seizures that are **medically refractory** or **intractable**.

This means that they do not respond to medical treatment.

In some cases, the quality of life while on a heavy anti-seizure medication is poor, and surgery may be an option.

Surgery may involve the removal of the part of the brain where the seizures originate. Surgery may also be used to disrupt communication within the brain, restricting the spread of a seizure.

Other less frequently used methods to treat epilepsy include the use of a device that is similar to a heart pacemaker called a **vagus nerve stimulator** and a special diet known as the **ketogenic diet** that inhibits seizures in some individuals.

In some cases, seizures remain uncontrolled despite treatment.

**Anti-seizure medication is the primary treatment for epilepsy. Medications don't cure epilepsy, but they often reduce or even stop seizures from occurring by altering the activity of neurons in the brain.**

# Why Epilepsy Affects Learning

**Children with epilepsy have the same range of intelligence as other children, and often epilepsy itself has no effect on intelligence or ability.** Some children with epilepsy have a higher rate of learning problems, difficulty in school, and a lower level of achievement. This may be influenced by many factors including:

- the side effects of the medication
- the student's anxiety
- absenteeism
- the underlying neurological cause of the epilepsy
- the seizures themselves
- the attitude of the teacher and the students.

## Anti-Seizure Medication

Anti-seizure medication can affect learning. Some medications have side effects that result in hyperactivity or interfere with concentration or memory. Anti-seizure medications can also result in drowsiness, loss of coordination, fatigue, headache, decreased appetite, behavioural changes, nausea, drooling, tremor, weight gain or loss, double or blurred vision, dizziness, and/or depression. Some side effects are cosmetic and include overgrowth of the gums, hair loss, or excessive hair growth.



The side effects tend to be more common when a drug has just been started, the dosage has been increased, or more than one drug has been prescribed.

Side effects can interfere with learning and with classroom behaviour.

*Teachers can be of great assistance by being alert to changes in learning, behaviour, and emotional well-being in students with epilepsy, and by providing information to the appropriate contacts.*

### Anxiety

The unpredictability of seizures could result in anxiety and insecurity in a student. This may affect his or her initiative and independence in the classroom.

*If a teacher is calm and effective in dealing with seizures and reassures the students, this may help alleviate anxiety.*

### Absenteeism

Seizures, medical tests, and treatment may result in a student missing more class time than is typical, which may influence achievement.

*Teachers should assist the student by ensuring that all missed classwork is available.*

### Neurological Causes

In some cases, the underlying neurologic problem causing epilepsy may also result in learning problems. Teachers may be faced with students who have these challenges in addition to epilepsy. Teachers should be prepared to address these challenges by adopting appropriate learning adaptations.



### Seizures

Seizures may affect learning. For example, students experiencing absence seizures throughout the day will have their learning experience continually disrupted. Memory can also be affected

following focal impaired awareness or generalized seizures. Nocturnal seizures may result in tiredness at school.

*Peer support relative to homework is acceptable, but answering questions and emotional support may be a lot to expect of a 'buddy'/ child.*

### Teachers' Attitudes

While effective teachers may employ strategies to accommodate and encourage a student with epilepsy, some teachers assume that a student with epilepsy has lower potential than other students.

*A negative attitude will not lead to a positive academic result for the student with epilepsy.*

## How Teachers Can Help

### *Communicate*

At the beginning of each school year, teachers should meet the student with epilepsy and his or her parents. Discuss the academic and social impact that epilepsy may have on the student and find out information regarding doctors, medications, seizure descriptions, allergies, other medical conditions, and first aid instructions. Assure that the school has a medical record on file with all relevant information.

Parents play a critical role in how a child adapts both intellectually and emotionally. There are many advantages to involving the parents as partners in the education of their child. Keeping the lines of communication open between the school and the parents through regular phone calls, meetings, or a daily journal will help to assure the well-being of the student. Teachers should report any seizure activity to the parents.

If the student's seizures are uncontrolled, a discussion with the family regarding confidentiality and/or how to share information with other

students is important. It may be beneficial for the education of all students and staff to arrange an in-service training through the local epilepsy association.

## *Offer support*

A diagnosis of epilepsy may result in a student experiencing a range of emotions, including low self-esteem, anxiety, anger, or a feeling of powerlessness. There is also an increased risk of depression in those with epilepsy. Depression may be a side effect of the medication, or it may occur just before, just after, or between seizures.



Even if seizures are being effectively controlled by medication, a student may be concerned about having a seizure in public. Children and teenagers are often afraid of being different. They may also be reluctant to take anti-seizure medication when they are with others. Depending on the reactions of others to their condition, students with epilepsy may feel isolated. Teenagers in particular tend to have difficulty accepting a diagnosis of epilepsy. This may result in poor compliance with medication. The teacher's attitude may be a key factor in helping the student feel accepted regardless of any medical diagnosis.

Teachers should, of course, keep the family and caregivers informed about any behavioural, emotional, and physical reactions they observe in their students. Behavioural changes may be a side effect of medication, but may also be affected by social factors.

Identifying what is causing the behavioural changes is an important first step in helping the student.

## *Educate Others*

Sometimes students face ridicule, teasing, or prejudice from schoolmates. Peers may not understand the condition, and children and young people can sometimes be unkind.

The public is not well-informed about epilepsy. There are many misconceptions which have resulted from this lack of awareness, perpetuated by inaccurate depictions of seizures on television, in movies, and on social media. In the time of Hippocrates, epilepsy was known as the “sacred disease” affecting people who were otherwise healthy. When such people suddenly had a seizure, people looked for divine explanations. Although many of the underlying causes of epilepsy have been explained, public awareness is still poor and social stigmas have been difficult to eliminate. This has created the misguided perception that those with epilepsy are mentally disabled or are more likely to be violent. In older students, unusual behaviour may be misinterpreted as alcohol or drug abuse. Sometimes the forms that seizures take can be mistaken to be deliberate acts. They are not. If a student does show aggressive behaviour, it could be influenced by factors including medication side effects, anxiety, or social attitudes (on the part of the teacher or other students). Open discussions with an informed authority should be encouraged.

Through public awareness and education, attitudes towards the condition are slowly changing. How the teacher responds is very important. A positive and calm approach can reassure other students that a person having a seizure typically poses no risk to himself or herself or to others. Stressing that epilepsy is not a disease and that a person cannot catch epilepsy from someone else is also important. Explaining that seizures are not painful and that most seizures end naturally may also alleviate some of the concerns of classmates.

Many epilepsy associations have trained staff members available who provide in-service training for interested schools.

Some epilepsy associations offer an educational puppet program called **The Kids on the Block (KOB)**, featuring large colourful puppets who demonstrate what to do when someone has a seizure. These presentations help educate parents, teachers, and other students about epilepsy. For more information on available services, contact your local epilepsy association or call 1-866-EPILEPSY (374-5377) toll-free to connect directly with the association in your area.

## Explaining Epilepsy To Classmates

Considering the fact that 1 in 10 people will have a seizure sometime during their lifetime, all teachers should have a general discussion with their students about seizures and epilepsy.

A discussion should include the following points:

- The brain is made up of approximately 100 billion nerve cells which send messages to each other. Nerve cells in different areas of the brain control different parts of the body and sometimes abnormal electrical activity occurs.
- Abnormal electrical activity in the brain may result in involuntary motor, sensory, and emotional behaviour.
- A person with epilepsy will behave normally most of the time. When he or she has a seizure, things are temporarily affected. Educating peers is important to prevent negative reactions.

## Explaining Epilepsy Continued

- There are many types of seizures. What kind of seizure a person has depends on which part of the brain is affected. A person may stare into space, blink his or her eyes quickly, feel afraid or dizzy, or fall down and convulse.
- Like a sneeze, a seizure cannot be stopped. It only lasts for a few seconds or minutes. Seizures are not painful but may cause drowsiness or a headache, especially after a major seizure involving a loss of awareness.
- Epilepsy is the name for a condition involving repeated, unprovoked seizures. Epilepsy is not contagious.
- Anti-seizure medication can usually stop the seizures from happening in 65% of people with epilepsy.
- Epilepsy is no different than any other condition or illness. There are children with allergies, diabetes, heart conditions, asthma, and there are children with epilepsy.
- There are some things that you can do to help a person who is having a seizure.

### **Some of the important things to do are:**

1. Stay calm.
2. Keep the person safe.
3. Do not restrain the person in any way.
4. Do not put anything in the person's mouth.
5. If the person falls to the ground, gently roll the person onto his or her side after the convulsions have stopped.
6. Send for an adult.
7. Stay with the person.

## *Create An Enriching Learning Experience*

The educational placement, the program, and a teacher's style of instruction influence a student's ability to adapt to the school environment. Just because a student has epilepsy does not mean that he or she needs special education. Integration in regular classes is generally the most appropriate choice. Just as students without epilepsy sometimes need a specialized program, some students with epilepsy may need extra support. While it is important to maintain expectations and encourage potential in a student with epilepsy, it is also important as with any student to have realistic expectations. Unrealistic expectations by teachers and/or parents can create stress or feelings of failure in a student. This could have a negative effect on a student's self-esteem and motivation.

Medication changes, class placement, or extra time for assignments are sometimes necessary when attention, memory, and learning are affected by seizures.

*Having epilepsy does not mean that a student can't get a job, continue in a job, or be excellent at what he or she chooses to do. Having epilepsy should have little or no impact on pursuing a rewarding career. There are understandable restrictions for certain careers, particularly when seizures are not controlled.*

# **D** Does Epilepsy Affect Cognitive Function and Development?



The link between epilepsy and cognition is complex. Cognitive function involves mental processes such as remembering, perceiving, and thinking. Although many people with epilepsy do not experience significant impairment in cognitive function, some do experience changes. Factors that may have a negative impact on cognition and development are:

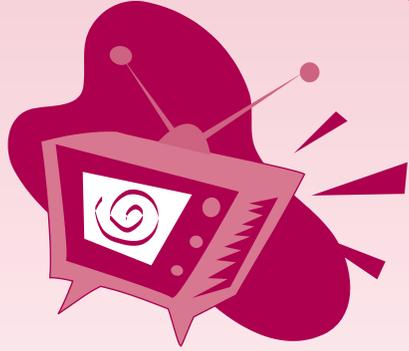
- Preexisting cognitive impairment as a result of birth trauma, head injury or previous illnesses (e.g., meningitis).
- Severity and frequency of seizures including a history of status epilepticus.
- High doses of 1 or more anti-seizure medications.

## *Create A Safe School Environment*

There is an increased risk of injury in people with epilepsy. Students with uncontrolled seizures should avoid activities involving heights or hot surfaces. Standing back from roadways at bus stops and crosswalks is important. Appropriate safety measures should be discussed with the school administration and with the parents of the student. Most epilepsy associations have detailed lists of safety tips available.

Monitoring seizure triggers is also important for students with epilepsy. Some of the common seizure triggers include forgetting to take prescribed anti-seizure medication, sleep deprivation, missed meals, stress or excitement, illness or fever, hormonal changes and menstrual cycles, medications other than prescribed anti-seizure medication, and excessive alcohol and drug use.

## *Photosensitive Epilepsy*



In one type of epilepsy known as **photosensitive epilepsy**, lights flickering at a certain speed and brightness (e.g., from televisions, computer screens, strobing lights, video games, and movies) can trigger a seizure. Sometimes natural light patterns such as sunlight reflecting off of water can trigger seizures. These seizures are most often tonic-clonic. Treatment includes avoiding the stimulation, special lenses (such as Z1 Blue glasses), or medication. Closing one eye reduces the intensity of the stimulation by 50%.

## *Allow Participation*

Children and teenagers with epilepsy should be encouraged to participate in social and recreational activities and sports. Socializing with others builds self-esteem. Recreational activities and sports enhance well-being and maintain health. There is some evidence that regular exercise may improve seizure control.

Many sports and recreational activities such as basketball, volleyball, track and field, and baseball are considered safe for those with epilepsy. Sports that pose some risk due to the possibility of head injury include hockey, football, soccer, and boxing. Activities such as scuba diving and rock climbing are considered too dangerous.

Some activities, such as swimming, require careful supervision. Instructors and coaches should be informed of the student's condition. Participation in sports and recreational activities should be in consultation with the caregiver.

Students with epilepsy should use the appropriate safety gear (e.g., helmets, flotation devices, etc.) and avoid becoming dehydrated or overtired as these are common seizure triggers.

Teachers should not exclude students from field trips or camps. Appropriate aide support could be requested so that students are able to participate in the activities that others enjoy. If necessary, teachers could also enlist the help of parents to support their request.

## *Record Seizures and Other Changes*

As doctors often have to rely on the description of seizures by those who are with a person when a seizure takes place, recording information about the seizure will benefit the student. Determining what type of seizure a person is having is important in the doctor's diagnosis as well as in the decision regarding the appropriate treatment.

Seizure records also provide valuable information regarding the frequency and duration of the seizures and may help to identify any consistent seizure triggers. Seizure record charts are available from most epilepsy associations. Often parents will provide teachers with an appropriate chart to use.

The seizure record should include:

- the time the seizure occurred
- the date the seizure occurred
- how long the seizure lasted
- information that describes the behaviour before, during, or after the seizure.



Parents of a child with epilepsy should be informed of seizures that occur at school.

## *Be Informed*

Local epilepsy associations can provide you with valuable information. Many associations have helpful resource materials on epilepsy and staff members who are committed to answering questions and providing information.

Often associations offer in-service training to schools in order to teach others about the condition. Associations may also be able to connect your student with support groups, trained professionals, or other students who are facing similar challenges.

### *An informed teacher may:*

- be the first to notice symptoms of seizures and alert others.
- handle seizures calmly and effectively.
- provide seizure records that will assist the doctor in making a diagnosis and planning treatment.
- help others to be positive, supportive, and to accept those with epilepsy.
- encourage student's potential.

# First Aid for Seizures

## What to Do if Someone has a Nonconvulsive Seizure

(staring blankly, confused, not responding, movements are purposeless)

- 1 **Stay with the person.** Let the seizure take its course. Speak calmly and explain to others what is happening.
- 2 **Move dangerous objects out of the way.**
- 3 **DO NOT restrain the person.**
- 4 **Gently guide the person away from danger or block access to hazards.**
- 5 **After the seizure, talk reassuringly to the person.**  
Stay with the person until the person wakes up.

## What to do if Someone has a Convulsive Seizure

(characterized by stiffening, falling, jerking)

- 1 **Stay calm.** Let the seizure take its course.
- 2 **Time the seizure.**
- 3 **Protect from injury.** If necessary, ease the person to the floor. Move hard or sharp objects out of the way. Place something soft under the head.
- 4 **Loosen anything tight around the neck.** Check for medical identification.
- 5 **DO NOT restrain the person.**
- 6 **DO NOT put anything in the mouth.**
- 7 **Gently roll the person onto his or her side when the convulsions have stopped, after making sure they are still breathing to allow saliva and other fluids to drain from the airway.**
- 8 **After the seizure, talk to the person reassuringly.** Do not leave until the person is reoriented. The person may need to rest or sleep.



## Status Epilepticus

A continuous seizure state, or status epilepticus, is a life-threatening condition. Seizures are prolonged or occur one after another without full recovery between seizures. **Immediate medical care is necessary.** The seizures may be convulsive or nonconvulsive.

## Calling An Ambulance

*In assessing the need to call an ambulance, a combination of factors has to be considered. For example, if cyanosis (blue or grey colour) or laboured breathing accompanies the seizure, then an ambulance may be called earlier. If a person is known to have epilepsy and the seizure pattern is uncomplicated and predictable, then ambulance help may not be necessary.*



### **CALL AN AMBULANCE:**

- If a convulsive seizure lasts longer than 5 minutes.
- If consciousness or regular breathing does not return after the seizure has ended.
- If seizure repeats without full recovery between seizures.
- If confusion after a seizure persists for more than 1 hour.
- If a seizure occurs in water and there is any chance that the person has inhaled water. Inhaling water can cause heart or lung complications.
- If it is a first-time seizure, or the person is injured, pregnant, or has diabetes. A person with diabetes may experience a seizure as a result of extremely high or low blood sugar levels.

# Epilepsy Education Series

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## A BRIEF GUIDE INTRODUCING THE NEW CLASSIFICATION OF EPILEPSY

Classification systems used for animals, plants and diseases have led to an improved understanding while allowing more effective communication among caregivers, researchers, patients, and other interested parties.

This also applies to the classification of seizures, epilepsy types, and epilepsy syndromes.

Hippocrates recognized that the cause of seizures was in the brain approximately 400 BCE. He understood that the seizures could result from severe brain trauma, and he observed that one-sided seizures resulted from trauma on the opposite side of the brain. He also reported the connection between seizures, alcohol, and genetic factors. Most seizures were considered to be idiopathic: an interaction between phlegm and black bile. Hippocrates wrote “On The Sacred Disease,” but also asked: Why are seizures divine and other diseases not?”

In the middle of the 19th century, the terms ‘Grand Mal’, and ‘Absence’ were being used in French hospitals, and the Western world followed.

The most recent classification with which most of us are familiar was drawn up 28 years ago by the Commission for Classification and Terminology of the International League Against Epilepsy (ILAE).

Early in 2017, ILAE published a position paper in which a revised terminology framework was proposed. The epilepsy types recognized include focal, generalized, combined generalized and focal, and unknown. Terms such as ‘complex partial seizures’ will be simplified to ‘focal onset, impaired awareness’, ‘simple partial seizures’ become ‘focal onset, aware’.

Robert S. Fisher, MD, PhD, who was the chairman of the Classification Committee, reported the ILAE approval of the new classification during the 70th Annual Meeting of the American Epilepsy Society.

Those interested in reading more about the new classification system may look up “The 2017 ILAE Classification of Seizures - Epilepsy Foundation” on the internet for a clear and concise review. Understandably, it will be a challenge for many to adjust to this new terminology after working with one system for 28 years.

To familiarize the reader with the essential changes in the proposed terminology a partial list of old and new terms is provided.

<b>OLD TERMINOLOGY</b>	<b>NEW TERMINOLOGY</b>
Tonic-Clonic Seizure, “Grand Mal”	Generalized Tonic-Clonic of Unknown Onset
Absence / “Petit Mal”	Generalized Absence (typical, atypical, myoclonic, or with eyelid myoclonia)
Simple Partial Seizure	Focal Aware Seizure
Complex Partial Seizure	Focal Impaired Awareness Seizure
Psychomotor Seizure	Focal Impaired Awareness Seizure
Atonic / “Drop Attack”	Focal or Generalized Atonic
Secondary Generalized Tonic-Clonic	Focal to Bilateral Tonic-Clonic (onset can be aware or impaired aware)
Infantile Spasms	Focal, Generalized, Unknown Onset Epileptic Spasms
Arrest, Freeze, Pause	Behaviour Arrest

# *Epilepsy Associations*

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If you have concerns, questions, or ideas to share regarding epilepsy, contact your local association. Epilepsy associations can provide you with, or direct you to, up-to-date medical and lifestyle information about epilepsy. New information, research, and medical technology are continually improving the understanding of treatment for epilepsy.

Consider becoming a member of your local epilepsy association. Epilepsy associations have much to offer including support groups, programmes, educational forums, public awareness, newsletters, resource libraries, referrals, special events, and advocacy. Becoming a member will give you the opportunity to learn more about epilepsy, to volunteer, to network with others in your community, and to share information.

By volunteering with your local epilepsy association, you can make a difference in helping others to better understand epilepsy and in improving the quality of life of those with epilepsy. Most epilepsy associations require volunteers to assist in areas such as peer-support programs, educational activities, administrative duties, and fundraising events. Volunteers are also needed to serve on committees and Boards of Directors.

Your local epilepsy association can be of assistance to you but you can also be of assistance to others living with epilepsy. By getting involved, you can help to make a difference in your community. Contact your local epilepsy association or call 1-866-EPILEPSY (374-5377) toll-free to connect directly with the association in your area.

## Tips for Professionals and Caregivers

- Accept your limitations and ask for help if you need it.
- Monitor your emotional and physical well-being. Caring for another can be draining. If you need support, talk to a friend, family member, or professional. By taking care of yourself you will be better able to take care of another.
- Watch for symptoms of stress such as sleep problems, headache, irritability, and withdrawal. Adequate sleep, exercise, and proper nutrition can all help to reduce stress.
- Take time out for yourself to do the activities you enjoy such as exercising, reading, or going out with friends.
- Be patient.
- Join a support group. Your local epilepsy association may be able to direct you to a group or put you in touch with others who are facing similar challenges.
- Learn about epilepsy. Information can be empowering.

## Epilepsy Education Series

The Epilepsy Educational Booklet Series Includes:

Epilepsy: An Overview

Living with Epilepsy

Epilepsy: A Guide for Parents

Let's Learn About Epilepsy: An Activity Book for Children

Teens and Epilepsy

Epilepsy: A Guide for Teachers

Women and Epilepsy

Seniors and Epilepsy

Epilepsy: A Guide for Health Care Providers

Epilepsy: Seizures and First Aid

Safety and Epilepsy

For more information, or to order copies of these booklets,  
contact your local Epilepsy Association  
at 1-866-EPILEPSY (374-5377).

All booklets are available as a free downloadable pdf from  
[www.edmontonepilepsy.org](http://www.edmontonepilepsy.org)

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## Partners in Improving the Quality of Life for Those Who Live With Epilepsy:

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Against Epilepsy



La Ligue  
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