

SENIORS AND

Epilepsy



EPILEPSY EDUCATION SERIES

This publication was produced by the



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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.

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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Seniors and Epilepsy

Whether you are a senior who has lived with epilepsy for many years or a newly diagnosed senior, you may have questions regarding the condition and how it may affect you.

This booklet is designed to address some of the issues regarding seniors and epilepsy and to offer helpful tips.

Most epilepsy associations have useful resource materials as well as a staff committed to answering your questions and providing information.

Associations may also be able to connect you with self-help and support groups, and with trained professionals.

Learning about epilepsy and sharing that information with others, finding the medical treatment best for you, using your network of family and friends who support and care about you, and pursuing what matters in your life, are all important steps.



Epilepsy

Epilepsy is a condition that is characterized by recurrent, unprovoked seizures. Approximately 1 in 10 Canadians will experience at least one seizure during a lifetime. A single seizure, however, is not epilepsy. Epilepsy is a condition that is defined by multiple, unprovoked seizures.

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

Epilepsy **is** a seizure disorder, **not** a psychological disorder or a disease, and it is **not** contagious.

Epilepsy in Seniors

While epilepsy has traditionally been considered a childhood condition, the incidence of epilepsy in those over 75 years of age has increased significantly in recent years. Currently, new diagnoses of epilepsy in seniors are just as common as in children under the age of 10.

The increased incidence of epilepsy in seniors is linked to several factors including:

- An older brain carries an increased risk for seizures.
- There is a higher proportion of seniors compared to the rest of the population.
- People live longer.

C *Causes*

Although epilepsy can present at any age, its onset is most often in the later years of life or childhood. The causes vary according to the age of onset.

In approximately 60% to 70% of people with epilepsy, no specific cause is identified.

The most common causes in seniors include:

- **Stroke**

The most frequent cause of seizures in seniors is stroke. If arteries narrow or become clogged, there is a reduction in blood flow and oxygen reaching the brain. This can result in seizures. Bleeding in the brain can also result in seizures due to damage to the brain.

- **Degenerative disorders**

Degenerative disorders that result in changes in the brain, such as Alzheimer's disease, are also a leading cause of seizures in seniors.

- **Brain tumours**

- **Metabolic changes**

Disorders that involve a metabolic change, including very low or high blood sugar, or very low sodium levels, can result in seizures.

- **Head injury**

Seniors are at greater risk of falling than the general population. If a person suffers a head injury, seizures may result.

- **Drug toxicity and withdrawal**

Seniors are at a greater risk of drug toxicity due to slower liver and kidney function, increased use of medications to treat other medical conditions, and difficulty in distinguishing toxic effects from other symptoms associated with aging. Toxicity and drug interactions could contribute to a person experiencing seizures.

- **Surgery**

Scarring from surgery may become a focus for seizure development.

In the general population, causes of seizures also include; genetic conditions, birth injury, developmental disorders (brain damage to the fetus), brain trauma (car accidents, sports injuries, etc.), drug and alcohol abuse, and infections (meningitis, encephalitis, and AIDS).

D Diagnosis

Diagnosing seniors is generally more challenging.

Seizures often appear similar to other disorders, which affect the elderly. Unusual behaviours, mental changes, forgetfulness, hallucinations, and dizziness are often ascribed to other conditions, whereas they may be seizures.

Seizures take many different forms and can include a blank stare, sudden strong emotion, hallucinations, random, purposeless movements, or convulsions.

A senior's living situation may also complicate diagnosis. If you live alone or with another elderly person, there may be challenges in accurate observation and seizure documentation of the seizure.

Seniors may also have other disorders that resemble seizures. These include medical conditions such as syncope (fainting), panic attacks, hyperventilation, and vertigo (extreme dizziness).

It is important to discuss any unusual behaviour or experiences with your doctor. This will assist your doctor in making a diagnosis.

Before diagnosing epilepsy, a doctor will often order laboratory tests to rule out other conditions. For example, metabolic disturbances caused by severe diarrhea or vomiting, or low blood sugar may result in seizures.

To establish a diagnosis of epilepsy, lab tests and a thorough physical exam and medical history will be required.

You will be asked to provide a family health history and a detailed description of the characteristics, onset, and frequency of your seizures. A complete history of medications is also important.

Diagnostic tests may include an electroencephalogram (EEG). An EEG is used to record the brain's electrical activity.

Neuroimaging studies allow a closer look at what is going on in the brain. Computed tomography (CT) and magnetic resonance imaging (MRI) scans provide pictures of the brain structures.



Other neuroimaging tests such as magnetic resonance spectroscopy (MRS) and positron emission tomography (PET) show how the brain functions and help evaluate possible surgical options.

Diagnostic tests may not show any abnormalities. For example, a person with epilepsy may have a normal EEG because abnormal activity is not present during the recording or the activity is located too deeply in the brain to be recorded.

Seizures

The brain is made up of approximately 100 billion nerve cells or neurons that 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 behaviour or function may result.

This abnormal activity in the brain is a seizure.

A seizure can take many different forms. For instance, a person having a seizure might stare blankly, jerk his or her arm uncontrollably, feel a burning sensation, or have a convulsion.

There are many different types of seizures, depending on where in the brain the excessive electrical activity occurs.

Some people have more than one seizure type.

Seizure frequency may vary from rarely to numerous times each day.

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 a seizure.

Seizures can also change with age. If you have lived with epilepsy for a number of years, you may experience a change in the duration, intensity, or frequency of your seizures as you get older.

Changes in seizures should always be discussed with your doctor.

Although seizures are typically painless, end naturally, and are not dangerous to others, there may be complications.

Some major seizures can cause additional stress on the heart and lungs. For seniors, stress on the heart poses the risk of angina or heart attack. The laboured breathing that may occur with major seizures can also stress the lungs and create complications for those with lung disorders.

Falls associated with seizures can also cause problems. If a person has osteoporosis (or thinning of the bones), falls could result in bone fractures.

S **Seizure Types**

There are many types of seizures. The different types begin in different areas of the brain and are grouped into two categories: **focal** and **generalized**.

If the sudden excessive electrical activity occurs in one part of the brain, it is called a **focal seizure**.

If the electrical activity involves the entire 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 Seizures

Focal seizures take two forms: focal aware and focal impaired awareness.

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

It involves symptoms such as an unusual sensation, feeling, or movement called an **aura**. There are different types of auras. An aura might be a distortion in sight, sound, or smell, sudden jerky movements of one area of the body, dizziness, or an overwhelming emotion.

An aura is a focal aware seizure that may occur alone, or progress to a focal impaired awareness or generalized seizure.

During a **focal impaired awareness** seizure, a person may appear dazed and confused. A dreamlike experience may occur. The seizure often begins with an aura that occurs just before awareness is altered.

Random, purposeless movements over which the individual has no control are called **automatisms**. These may include movements such as chewing motions, lip-smacking, pulling at clothing, or random walking.

Once the pattern has been established, the same set of actions often occurs with each seizure.

The seizure generally lasts between one and two minutes and is usually followed by a postictal period of disorientation and confusion.

Generalized Seizures

There are two types of generalized seizures: generalized absence (without convulsions) and generalized tonic-clonic (with convulsions).

An **absence** seizure results in a blank stare that usually lasts less than 10 seconds. The seizure starts and ends abruptly, and awareness is impaired during the seizure.

These seizures can be misinterpreted as daydreaming or a lack of attention. Following the seizure, alertness is immediately regained.

A **tonic-clonic** seizure usually lasts from 1-3 minutes.

The **tonic phase** of this seizure type typically involves a crying out or groan, a loss of awareness, and a fall as consciousness is lost and muscles stiffen. The second phase, or **clonic phase** of the seizure, typically involves a convulsion with jerking and twitching of the muscles in all four limbs. Usually, the movements involve the whole body.

Awareness is regained slowly, and the person often experiences a postictal period of fatigue, confusion, or a severe headache after the seizure.

Other types of generalized seizures include **atonic** and **myoclonic** seizures.

An **atonic** seizure involves a sudden loss of muscle control, often causing the person to fall or almost fall, drop objects, or nod involuntarily. Typically, these seizures last for a few seconds.

A **myoclonic** seizure results in a sudden jerk of part of the body, such as the arm or leg. The person may fall over. This seizure is very brief.

Sudden Unexplained Death in Epilepsy (SUDEP)

The cause of SUDEP is unknown. It appears that the seizure may be followed by loss of breathing and heartbeat. This is known as autonomic nervous system paralysis.

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 non-convulsive. Status epilepticus is more common in seniors and young children.

Keeping A Seizure Record

Keeping a record of your seizures is very useful. A description of the seizures will assist the doctor in making a diagnosis as well as in the decision regarding the appropriate treatment.

In addition to detailing the characteristics of the seizures, a record will also provide information regarding the frequency and duration of the seizures. It may also help to identify any consistent seizure triggers.



Asking those who were with you during the seizure for a description of what happened is helpful. Seizure record charts are available from most epilepsy associations or you could create your own chart.

In your seizure record, it is important to record information such as:

- When the seizure occurred (time and date)
- How long the seizure lasted
- Descriptions of your behaviour immediately before, during, and after the seizure.

Treatment

As a rule, the control of seizures in seniors is quite successful.

Anti-Seizure medication

Anti-seizure medication is the primary treatment for epilepsy. Drugs do not cure epilepsy, but they often reduce or even stop seizures from occurring by altering the communication between the nerve cells in the brain. The majority of people achieve seizure control with anti-seizure medication.

There are many different medications available for the treatment of epilepsy. **Monotherapy** (treatment with one drug) is preferable, but sometimes more than one drug, or **polytherapy**, is required.

In the senior years, the body metabolizes medication at a slower rate due to diminished liver and kidney function.

Monotherapy and lower doses are, therefore, often prescribed. Interactions with other medications may also lead to complications.

Assessing the toxic effects of medication(s) in seniors is complex. Aging involves changes in the brain's neurochemistry, and seniors are often on a variety of non-epilepsy medications.

Side Effects

Seniors are more sensitive to side effects such as tiredness, confusion, and memory disturbances as a result of the medication.

In general, side effects are more common when a drug has just been started, the dosage has been increased, or more than one drug has been prescribed.



In addition to cognitive impairment, side effects can also involve loss of coordination, decreased appetite, tremor, nausea, weight gain or loss, double or blurred vision, agitation, or dizziness. A skin rash may often be the first sign of an allergic reaction to a drug.

Seniors should consult their physician or pharmacist in case of side effects.

For more information on the possible adverse side effects of each drug, consult your doctor, pharmacist, or contact your local epilepsy association.

Discontinuing or Not Taking Medication as Prescribed

Discontinuing (or stopping) anti-seizure medication can cause serious complications and should only be done with a doctor's advice and supervision.

Sudden discontinuation of medication could result in withdrawal seizures or status epilepticus, a continuous seizure state that can be life-threatening. Some doctors will advise people with epilepsy to discontinue medication after two years without a seizure. Other doctors do so after four or five years of medication without a

seizure. Safe reduction of anti-seizure medication can only be done if a number of factors have been carefully considered.

Taking less than the prescribed dosage of anti-seizure medication can also result in problems.

Seniors may have problems remembering to take their medication(s), and some type of dosette or pill organizer becomes essential. Seniors who live on a fixed income may try to save money by lowering their own dosage of anti-seizure medication.

**NO DOSAGE
ADJUSTMENTS
SHOULD BE MADE
WITHOUT THE
ADVICE FROM A
DOCTOR.**

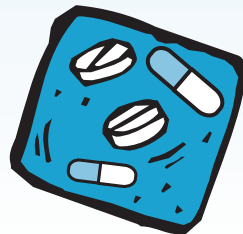
If you have difficulties or concerns regarding taking anti-seizure medication as prescribed, discuss these with your doctor.

There may be financial support available, or your doctor, pharmacist, or local epilepsy association may be able to provide you with a detailed list of tips to help you to remember to take your anti-seizure medicine at the appropriate time.

**If you have difficulties
or concerns regarding taking
anti-seizure medication as
prescribed, discuss these with
your doctor.**

Anti-seizure Medication Tips

- 1 Always take your anti-seizure medication as prescribed. Sudden discontinuation of medication can result in withdrawal seizures or status epilepticus.
- 2 Discuss the use of any other medications or vitamins with your doctor or pharmacist. There is a greater risk of interaction between medications in seniors due to the increased use of both prescription and non-prescription drugs and changes in kidney and liver function. Decongestants, acetylsalicylic acid products (ASA) such as Aspirin, herbal medications, and diet pills can all interact with anti-seizure medication. Even some therapeutic drugs such as antidepressants and antibiotics could interact with your anti-seizure medication.
- 3 Don't change from a brand name drug to a generic drug without first consulting your doctor. The use of different fillers, dyes, etc., can result in differences in processing by the body.
- 4 A timer, a weekly pillbox, and bubble-pack medications, available from some pharmacies, are helpful in reminding you to take anti-seizure medication on time.
- 5 Ask your doctor what you should do if you miss taking a dose of your anti-seizure medication.
- 6 Keep a current list of prescribed medications with you in case of emergency.
- 7 Establish a routine of taking your anti-seizure medication at the same time each day.
- 8 Inform your pharmacist and dentist that you are taking anti-seizure medication.
- 9 Keep a 1-2 week supply of your anti-seizure medication to assure that you don't run out.



Surgery

Typically, patients considered for surgery have seizures that are not controlled, or **intractable**. When someone has not responded to the standard treatments, surgery may become an option. Quality of life while on the anti-seizure medications may also be a factor.

In considering surgery, extensive medical testing and evaluations are necessary to determine where the seizures originate and if it is safe to operate on that area of the brain.

Surgery may involve the removal of the part of the brain where the seizures begin, or it may involve a surgical cut to prevent seizures from spreading from one side of the brain to the other by interrupting the nerve pathways.

Surgery is irreversible, and changes in personality or cognitive abilities, or disturbances in sensation, vision, or speech could result, although the risk of severe neurologic complication is low. As with any surgery, there is always the possibility of serious complications.

When successful, however, surgery can be very effective in improving seizure control. With recent technological advances, surgery has become safer and more widely used.

Minimally Invasive Epilepsy Surgery

The options discussed thus far all involve open brain surgery. There are other options, which are less invasive with fewer negative after-effects. MRI Guided Laser Surgery (Laser Interstitial Thermal Therapy) is a relatively new and innovative approach to the treatment for intractable epilepsy. A laser is guided into the brain adjacent to or within the epileptic focus. Only a very small cranial incision is required. Thanks to stereotactic MRI support, the localization of the wire can be very precise. By heating the wire within very strict parameters, the epileptic cells can be selectively targeted, again under MRI guidance. The non-invasiveness of this procedure allows the patient to go home after a minimal or no hospital stay. An advantage

of this procedure is that it may be repeated if necessary. There are no serious adverse effects associated with this technique.

Complementary Therapies

There are many complementary therapies that individuals have found helpful in seizure control. Although some of these methods may not have been scientifically proven, there are people with epilepsy who have found that they help in reducing seizures. A number of the methods were developed centuries ago before current treatments were available.

It is important to remember that all therapies should be discussed with a doctor. Complementary therapies are used to supplement, not to replace accepted treatments.

Advocates for some of these therapies believe that taking an active role will not only alleviate feelings of powerlessness, but may also be effective in reducing seizure frequency. Through persistence and careful observation, some individuals have developed the ability to use tools such as mental imagery, aromatherapy, or relaxation techniques to prevent or delay seizures.

Some individuals have found that yoga, massage therapy, or meditation is helpful.

Herbal remedies or vitamin therapy may be used. Cannabidiol (CBD), being one of the newer therapies, does not yet have any scientific support. Some people have had positive results with art, music, and pet therapy. Individuals have also found that techniques such as acupuncture and hypnosis may affect seizure control.

Reflexology and biofeedback are also techniques that have been used by people with epilepsy.

Choosing A Doctor

Establishing a **positive relationship with your doctor** is very important. It is helpful to have a doctor in whom you have confidence and with whom you can talk openly. It is useful to take a list of questions when visiting your doctor to ensure that you are prepared and your concerns are addressed.

Often your general practitioner will refer you to a neurologist. Neurologists specialize in the area of medicine relating to the nervous system and its disorders. In some centers, a patient may be referred to an epileptologist who is a neurologist with specialized training in epilepsy.

Occasionally people feel that they are not getting the treatment they would like, and in those cases, requesting a second opinion may be important.



Lifestyle

For some seniors with epilepsy, few changes in lifestyle are necessary. Many seniors with epilepsy live independent, active lifestyles.

For others with uncontrolled seizures, lifestyle changes may be necessary.

If you are living alone and have uncontrolled seizures, alternate living arrangements may have to be considered.

In either case, your family, friends, and neighbours may be concerned for your safety. By sharing information on epilepsy with the people who care about you, you will help them understand the condition and make them aware of the necessary first aid procedures if you have a seizure.

Misconceptions based on historical perceptions, lack of public awareness, and inaccurate television and movie portrayals result in incorrect assumptions about epilepsy. Often, people think that people with epilepsy are mentally ill and prone to violence. This is a myth. Generalized seizures which may involve convulsions are mistaken for deliberate actions. Also a myth. When a person comes out of a seizure, he or she may be quite confused and resistant to help. This is also not deliberate. Many focal seizures may not even be noticed or recognized by the people around you.

Attitudes towards epilepsy are slowly changing through public awareness and education. People with epilepsy have the same range of intelligence as the general public. As in any cross-section of the population, people with epilepsy have varying intellectual abilities.

E Emotional Well -Being

Being diagnosed with epilepsy will bring up many different emotions. You may feel depressed, angry, or frustrated. You may be asking yourself, “now what?” Or you may find that you are relieved that a diagnosis has been made.

Some people with epilepsy find that family or friends respond negatively to the condition out of fear or a lack of knowledge.

Depression is more common in individuals with epilepsy than it is in the general population. This could be due to psychosocial factors, the seizures themselves, and/or the anti-seizure medication. Seniors may be more sensitive to the depressive effects of some anti-seizure medications than others with epilepsy. Depression in seniors may also be compounded by major life events such as losing a partner, loneliness, and/or retirement.

If you are overly confused, depressed, fatigued, irritable, or forgetful, discuss this with your doctor. The doctor may make adjustments in your anti-seizure medication to determine whether these issues are related to your medication.

Remember that there are many treatment options for those with epilepsy, and if you have epilepsy, you can still have a rich and rewarding life.

T Transportation

There are restrictions to driving if your seizures are not controlled. If epilepsy has been diagnosed, driving is generally not allowed until you have been seizure-free for at least 6 to 12 months, and you are under a doctor’s care. A shorter period may be considered upon a

favourable recommendation from a neurologist. There are provincial and territorial differences in regulations. Drivers are required by law to report any health problems such as epilepsy that would interfere with driving.

If you are not allowed to drive, there are options such as public transportation. Some communities offer door-to-door transportation for individuals unable to use public transport. Some travel companies provide discounted transportation for an escort capable of providing the required assistance if it is medically necessary. Friends or family may also be able to help.

R *Recreational Activities* *and sports*

Many recreational activities and sports including tennis, golf, hiking, bowling, dancing, cross-country skiing, and jogging, are safe and beneficial for people with epilepsy. Exercise reduces the stress that sometimes triggers seizures and also maintains fitness and bone mass levels.



Some activities, such as downhill skiing, bike riding, and ice skating pose a greater risk. Swimming with a companion, preferably an experienced swimmer, is recommended for anyone who has seizures. If your seizures are uncontrolled, constant supervision is advised.

Certain activities such as scuba diving, rock climbing, and windsurfing are considered too dangerous.

It is also important to use the appropriate safety gear (e.g., helmets, flotation devices, etc.). Avoid conditions such as low blood sugar, dehydration, or overexertion, which could increase the risk of seizures.

Participation in activities should be discussed with your doctor.

Safety for Seniors

There is an increased risk of injury in people with epilepsy. If you experience sudden and frequent seizures that affect awareness, you will most likely be at risk.

Precaution in your home may be necessary. Using a microwave oven instead of a stove, using plastic rather than glass dishware, and carpeting the floors and padding the edges of tables are just a few precautions that can be taken.

Showers are safer than baths for those with epilepsy, but injuries can still occur. If

you experience falls during a seizure, a shower seat with a safety strap should be considered. There are also special taps which are available.

You should wear a medical



identification bracelet, necklace, Life Alert, fall device, or carry a pre-programmed cell phone.

Detailed lists of safety tips are available from most epilepsy associations.

G *General Health and Seizure Triggers*

Identifying seizure triggers is helpful. Common triggers include lack of sleep and stress. Eating regular meals and staying well-hydrated is important.

There are other non-anti-seizure medications that can trigger seizures. To learn more about medications associated with triggering seizures, ask your doctor, pharmacist, or local epilepsy association for detailed information.

Excessive alcohol consumption and subsequent withdrawal can trigger seizures. Excessive use of any drug may affect seizure control.

As hormonal changes are a seizure trigger in some people, seizures sometimes begin or change with menopause. Some women experience a recurrence of seizures that were previously controlled.

Only in rare cases, does sexual activity trigger seizures. Anti-seizure medication may, however, lessen a person's interest in sexual activity or affect sexual function. If seizures are uncontrolled, this could also affect sexual function.

If you have concerns over any of these issues, they should be discussed with your doctor. A change in medication or other treatments may help.

General Seizure Triggers

- Forgetting to take anti-seizure medication
- Lack of sleep
- Missing meals
- Stress, excitement, and emotional upset
- Hormonal changes
- Illness or fever
- Low anti-seizure medication blood levels
- Medications other than prescribed anti-seizure medications
- Excessive alcohol consumption and subsequent withdrawal
- Flickering lights or strobing lights
- Recreational drugs
- Other prescription drugs

A Abuse of Seniors

Seniors with a disability may be vulnerable to abuse and/or violence. Abuse can take different forms including physical, emotional, or sexual abuse. It can also involve neglect or control. It may involve forced confinement or deliberate humiliation, threats, pushing, slapping, or financial abuse where a person forces the senior to sell personal property or steals from a senior. In some cases, the abuser may be a relative or a caregiver or someone who has power over the senior. The senior may rely on the abuser for care, food, shelter, or friendship, or the abuser may be a person who the senior trusts.

A person with a disability may be at risk due to an increased dependency on others, a lack of knowledge about his or her rights, the negative attitude of others, or due to being more isolated.

A senior may not want to talk to others about the abuse because of embarrassment, of being afraid of institutionalization, or out of concern over being rejected by loved ones.

Becoming involved in your community, informing friends and neighbours of your seizures, being as independent as possible, and finding out about your rights are all ways to help prevent abuse.

If you are experiencing abuse, call your local crisis line or contact your local epilepsy association. Epilepsy associations can generally direct you to the appropriate agencies in your area.

Support and Financial Assistance

There are federal, provincial, and community programs available to seniors in need. Contacting each program directly for detailed information or connecting with the relevant government agency in your area is worthwhile.

Programs available include those offering assistance related to housing through the Canada Mortgage and Housing Corporation (CMHC).

Information on Canada Pension Plan and Old Age Security benefits is available through Human Resources Development Canada.

A federal disability tax credit is also available that offers tax assistance to individuals who have severe and prolonged disabilities and who need life-sustaining therapy on an ongoing basis.

Most provinces provide financial assistance to eligible lower-income seniors.

Health care and personal support are offered through various service providers.

Your local epilepsy association may provide you with more information or direct you to the appropriate agencies.

I Insurance

Applications for life and car insurance are increasingly being considered on an individual basis. Contacting various agencies before submitting an application and asking for information regarding policies and costs are very useful in finding an appropriate provider. By investigating the options first, you will be able to compare what various companies offer. An insurance agent who deals with more than one company may be helpful. If your application is rejected, consult a different insurer.

Additional health care coverage may be available for seniors with epilepsy through government programs. Contact the appropriate government agency in your area or your local epilepsy association for more information.

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.

E *Epilepsy Education Series*

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.

OLD TERMINOLOGY	NEW TERMINOLOGY
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

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 programmes, 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.

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

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

Canadian
epilepsy
Alliance

Alliance
canadienne de
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Canadian League
Against Epilepsy



La Ligue
Canadienne
Contre l'Épilepsie

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Driven by **science.**

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