

**SAFETY AND**

# *Epilepsy*



**EPILEPSY EDUCATION SERIES**

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**Edmonton Epilepsy Association | The Epilepsy Association of Northern Alberta**

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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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## *Safety and Epilepsy*

There is an increased risk of injury in people with epilepsy.

Seizures can present as a sudden fall, blank stare, confusion, uncontrolled movements, diminished awareness, odd sensations, a convulsion, or laboured breathing.

For some people with epilepsy, their seizures pose a minimal risk of injury. For others, their seizures may require extra precaution to avoid injury. For example, seizures that occur without warning, involve falls, loss of awareness, or confusion after the seizure could result in injury. Precautions may be necessary depending on the activity.

Assessing the risks associated with the type and frequency of the seizures may require implementing safety procedures.



# *P* Personal Choices

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- ✓ Maintain a healthy lifestyle. Get plenty of sleep, manage stress levels, eat a well-balanced and nutritious diet, and avoid excessive alcohol and recreational drug consumption.
- ✓ Always take anti-seizure medication as prescribed.
- ✓ Monitor or note what may trigger a seizure.
- ✓ Record seizures on a seizure record chart.
- ✓ Inform your pharmacist and dentist of your condition and of any anti-seizure medication you are taking.
- ✓ Wear a medical identification bracelet or necklace. Children should wear a medical identification bracelet, not a necklace due to chance of being strangled or choked by the necklace.
- ✓ Teach others appropriate first aid procedures and post the first aid procedures in an obvious place in your home.
- ✓ Learn and teach others first aid procedures.
- ✓ Provide contact, medical, and emergency phone numbers to those who may be with you when a seizure occurs.
- ✓ If you live alone, arrange for someone to check on you routinely (phone call or text message).
- ✓ Inform a colleague or friend at work about your seizure condition.

## Taking Anti-Seizure Medication

- 1 Anti-seizure medication should always be taken as prescribed. Sudden discontinuation of medication can result in withdrawal seizures or status epilepticus.
- 2 The use of any other medications or vitamins should be discussed with the doctor or pharmacist. Decongestants, Aspirin, herbal medications, diet pills, and birth control pills can all interact with anti-seizure medication. Some drugs such as antidepressants and antibiotics may also interact with anti-seizure medication.
- 3 Don't change from a brand name drug to a generic drug without first consulting your doctor or pharmacist. Don't even switch from one generic to another.
- 4 Keep a 1-2 week supply of your anti-seizure medication to ensure that you don't run out.
- 5 Always use a pill organizer or dosette even when the medication seems simple.



## Being Prepared

- ✓ Carrying a cell phone containing emergency numbers is useful in case you need help.
- ✓ If anti-seizure medication or seizures affect memory, using an alarm, schedule, and medication dispenser can be helpful.
- ✓ New safety aids are continually being developed. Contact your local Epilepsy Association for the most current adaptations available for your home.
- ✓ Seizure service dogs are successfully being used by some people with epilepsy. The dogs warn of an impending seizure and help to protect the person from harm during and after the seizure.

## Monitoring What May Trigger A Seizure

While some people are not able to identify specific events or circumstances that may cause seizures, others are able to recognize definite seizure triggers. It is useful to learn your seizure triggers so you can take timely precautions.

### Some common seizure triggers include:

- Forgetting to take prescribed anti-seizure medication
- Lack of sleep
- Missing meals
- Stress, excitement, emotional upset
- Menstrual cycle/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 drug use
- Other prescription drugs: cocaine, amphetamines, opioids

*For further information on seizure triggers, taking medication, and available safety devices, contact your local epilepsy association.*

# *Safety at Home*

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## *In General*

- ✓ Hot appliances (e.g., stoves, irons) and open flames (e.g., fireplaces, candles) increase the risk of burns or fire should a seizure occur. Smoking is also hazardous for those with seizures.
- ✓ Forced air heating is preferable to radiators, baseboards, and freestanding heaters. If your home has radiators, use radiator guards to increase safety.
- ✓ Bungalows or first-floor apartments reduce the risks associated with stairs. If your home has stairs, a safety gate at the top of the stairs may help.
- ✓ Furniture with round, rather than sharp edges is recommended. Sharp edges on tables and other furniture should be padded.
- ✓ Carpeting the floors, preferably with a thick underlay, may be considered.
- ✓ Using appliances and tools with automatic shut-off switches provides additional safety.
- ✓ Use carpeting on concrete steps, porches, etc.

*Post emergency phone numbers  
and first aid procedures in an obvious  
place in your home.*



## *In Kitchens*

- Use a microwave oven rather than a stove.
- If using a stove, use back burners.
- Turn pot handles to face the back of the stove.
- Serve hot liquids or food onto plates at the stove rather than carrying them to the table.
- Do not carry boiling water.
- If possible, cook when someone else is home.
- Use plastic rather than glass dishware in your kitchen.
- Use cups with lids.
- Limit the use of sharp knives. A blender or food processor is preferable.
- Use pre-cut or prepared foods.
- Sit down to do tasks when possible.
- Place sharp utensils downwards in the dishwasher.
- Wear rubber gloves if washing glass or using sharp utensils.
- Keep frequently used items within easy reach to avoid having to climb up to high cupboards.
- Keep electrical appliances away from sinks.



## *In Bathrooms*



- Take showers rather than baths. Showers are safer than baths for those with epilepsy, but injuries can still occur.
- Use a shower with a temperature monitor.
- Adjust the water heater to a lower temperature.
- Turn cold water on first and off last to prevent burns.
- Use rubber mats or non-skid strips on the floor of the shower.
- Shower when someone else is home.
- Use a handheld shower nozzle.
- Assure that shower and bathtub drains are draining properly.
- Use a recessed soap tray in showers.
- Use a shower with a flat floor rather than an enclosed base where water can accumulate.
- Avoid the use of electrical appliances near water.
- Hang bathroom doors to open outwards in case a fall against a closed door prevents access to those needing to assist you.
- Use mirrors and shower doors with safety glass or plastic.
- Keep your bathroom ventilated to avoid overheating.

## *In Bedrooms*

- Use a monitor in your bedroom so that someone who lives with you will be alerted if you have a seizure.
- Use beds low to the ground and avoid bunk beds.
- Avoid beds with hard edges on bed frames.
- Avoid waterbeds.
- Use Anti Suffocation Epilepsy Pillow.
- Avoid sharp-edged night tables beside the bed.



## *In Living Rooms*

- Avoid decorating with glass or mirrors.
- Consider using hanging lamps instead of floor or table lamps. Always use LED bulbs to avoid burns.

## **For Those With Photosensitive Epilepsy**

Lights flickering at a certain speed and brightness (e.g., older televisions, computer screens) can trigger a seizure in people with photosensitive epilepsy.

- Limit situations that expose you to flickering light (closing one eye helps).
- Do not sit close to the television.
- Watch television in a room that is well lit.
- Take breaks from using the computer and video games.
- Wear polarized blue sunglasses outdoors. Consult an optician for appropriate eyewear. (e.g., Z1 Blue lenses)



The EEA has no relationship with manufacturers, financial or otherwise. Individuals with epilepsy and their health care providers must make their own decisions about this and other devices that are marketed to help offer protection during a seizure.

## *In Workrooms*

- Use a tabletop ironing board or one that is mounted to the wall.
- Use tools with automatic shut-offs.
- Sit at a low workbench.
- If your seizures are not controlled, and you experience no clear warning prior to a seizure, you should not work with dangerous equipment.

## *In Parenting*

- Use safety gates and playpens.
- Use a stroller rather than carrying your child, even in your own home.
- Use a stroller with brakes, a child harness, or a wrist bungee cord when you go out.
- Change diapers or clothes on a pad on the floor or on a large change table, preferably against a wall or in a corner.
- Keep supplies on each level of your home to avoid unnecessarily having to climb stairs with your child.
- If you are alone, give your baby a sponge bath rather than using a bathtub.
- Avoid carrying or drinking hot liquids, or smoking near your child.



- Secure your baby into an infant seat on the floor or in a high chair for bottle feedings and meals.
- If you are breastfeeding, nurse your baby while sitting on the floor surrounded by a soft surface.
- If sleep deprivation is one of your seizure triggers, arrange for someone to help with either nighttime or a daytime feeding, when you can catch up on your sleep. Women who are breastfeeding can pump breast milk into a bottle so that others will be able to help with feedings.
- Keep doors leading outside and gates locked.
- Keep your anti-seizure medication out of reach of children.
- When your child is old enough to understand, discuss your epilepsy with your child. This may alleviate some of the child's concerns. It will also help your child to know how to respond if you have a seizure.
- Explain to your child what should be done in case of a seizure and post the emergency phone numbers in an obvious place.



## Safety at Work

- ✓ Avoid work that involves heights, heavy machinery, extreme heat, fire, molten material, or being over water.
- ✓ Use safety guards and automatic shut-offs if working with machinery or power tools.
- ✓ If using machinery, wear appropriate gloves, safety glasses, boots, etc.
- ✓ Keep consistent work hours to maintain a healthy lifestyle and to avoid sleep deprivation.
- ✓ Learn to manage stress.
- ✓ Assure that co-workers and supervisors know appropriate first aid.
- ✓ Explore options regarding **accommodation** in the workplace.



### Duty To Accommodate

**Accommodation** is the process through which a worksite is modified to remove barriers for a person with a disability. Under the Canadian Human Rights Act and some provincial codes, it is the duty of employers to make reasonable efforts to accommodate individuals with epilepsy in the workplace, unless such accommodation would cause undue hardship.

Accommodation can be as simple as moving furniture in an office or allowing you to trade work with another employee. Details on how safety can be improved at a job site through reasonable accommodation are available through local organizations offering employment assistance for persons with disabilities and through The Canadian Council on Rehabilitation and Work (CCRW).

# Safety in Sports and Recreational Activities

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- ✓ Take extra precautions in sports that increase the risk of head injury, including contact sports such as football, hockey, karate, and soccer.
- ✓ Always use proper safety gear such as helmets, flotation devices, and knee and elbow pads.
- ✓ Avoid activities that are considered too dangerous such as scuba diving and rock climbing.
- ✓ Ride bicycles on side roads or bike paths.
- ✓ If you have uncontrolled seizures, do not swim without constant supervision. Swimming with a companion, preferably an experienced swimmer, is recommended for anyone who has seizures.
- ✓ Swim in a pool rather than open water.
- ✓ Exercise on soft rather than hard surfaces (e.g., mats, grass).
- ✓ Do activities such as skiing, boating, or hiking with a friend.
- ✓ Use a safety hook and strap when using a ski lift.
- ✓ Discuss participation in sports and recreational activities with your doctor.
- ✓ Avoid related problems such as low blood sugar, dehydration, or overexertion, which could increase the risk of seizures.
- ✓ Inform lifeguards, coaches, counsellors, etc. of your condition and how to respond should a seizure occur.
- ✓ If your seizures are induced by flickering light, wear polarized sunglasses (Z1 Blue Lenses) during outdoor activities to reduce the effect of flickering light patterns such as sunlight reflecting off of water.

## First Aid if a Seizure Occurs When a Person is in Water

- Support the person's head.
- Keep the person's face out of the water.
- Tilt head back to keep airway clear.
- Get the person to the side of the pool or to the shore.
- Roll the person onto his or her side.
- Check airway.
- If the person is not breathing, begin CPR.
- Call for emergency assistance. Immediate medical treatment is required even if the person seems to have recovered. Inhaling water can cause heart or lung complications.



## *Safety While Travelling*

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- ✓ Driving is generally not allowed until you have been seizure-free for at least 6 to 12 months and have been medically cleared to drive. Legislation varies, be aware of the local rules.
- ✓ Carry a copy of important medical information, phone numbers, and a list of your anti-seizure medication with you.
- ✓ Assure that you stand back from roads or the edge of platforms while travelling by bus or subway.
- ✓ Use elevators rather than escalators or stairs.
- ✓ Have someone accompany you if you are going to be outdoors during extremely hot or extremely cold weather.
- ✓ If travelling by air, consider travelling with a companion who knows what to do in case of a seizure.



- ✓ Carry some anti-seizure medication on your person in the event of lost luggage.
- ✓ Take all anti-seizure medication in the original bottles. You should carry extra medication just in case.
- ✓ If crossing time zones, ensure that you maintain your anti-seizure medication schedule as prescribed.
- ✓ Some travel companies provide discounted transportation for an escort capable of providing the required assistance if it is medically necessary.

# 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*

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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.

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

Only some of the old terms have been listed. Simple deduction tells us that Limbic Epilepsy, for example, is a Focal Impaired Awareness Seizure, similar to the Gelastic Epilepsy (bouts of unnatural laughter) and Dacrystic Epilepsy (excessive tearing).

# 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 regarding epilepsy. New information about research, and medical technology are continually improving the treatment and understanding of 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](http://www.edmontonepilepsy.org)

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