

Epilepsy Safety: Assistive Technology, Aids & Equipment

The following information is for individuals and/or decision makers to consider and is not a full list of available technologies on the market. It is encouraged that participants liaise with their Neurologist, Occupational Therapist and/or directly with product suppliers before deciding about best fit for their unique needs.

Epilepsy is a neurological condition which causes a person to have recurrent seizures. Due to the unpredictability of seizures & the variation in seizure symptoms & severity, epilepsy may pose an increased risk of injury or harm. Whilst medications aim to reduce the incidence & severity of seizures, people living with epilepsy often turn to assistive technology (AT), aids and equipment to further enhance their functioning, safety, promote independence and peace of mind.

The primary purpose of assistive technologies, aids and equipment is to maintain or improve an individual's functioning and independence, to allow participation and to enhance overall well-being. The types of assistive technology people living with epilepsy will require depends on how epilepsy impacts their life and will vary from person to person.

To choose what AT, aids and equipment is appropriate, individuals might consider several things, including:

- seizure triggers
- safety requirements during a seizure
 - required features of AT and equipment
 - type of seizures
 - whether the person is ever alone (at home, accessing the community, whilst sleeping etc.)
 - access to carers and emergency services
- up front and ongoing costs and funding options.

All people living with epilepsy are advised to maintain good records of what happened before, during and after their seizures. This information may then be shared with their treating doctor to help in decisions around treatment. Keeping this information in an easy to read and easy to access place is important. It may be done in a simple written log format or by using epilepsy specific apps:

- Seer Medical App (Free: Android or iPhone) - <https://www.seermedical.com/seer-app/>
- Seizure Tracker (Free: Android or iPhone) - <https://seizuretracker.com/>

Seizure Triggers

In some instances, a person living with epilepsy may be aware of specific triggers for their seizures. An individual may take steps to reduce their exposure to triggers, and through the use of assistive technologies, aids and equipment may help to prevent breakthrough seizures. Below is a list of some products that may assist in the prevention of seizures related to specific seizure triggers (Please note this list is not exhaustive).

Seizure Trigger	Product	Application	Further Information
Over heating	Cooling Mats	Cooling device for bed, wheelchair etc.	<p>Moreton Medical Equipment https://moretonmedicalequipment.com.au Ph: 07 3284 2811</p> <p>Sleep Solutions https://www.sleepsolutions.com.au/chiligel-cool-gel-mat-pad Ph: 1300 139 350</p> <p>Therapeutic Pillow Australia https://the-pillow.com.au Ph: 03 8585 6685</p>
Over heating	Cooling Clothing	Wearable Cooling Devices	<p>Arctic Heat Cooling vests, caps and wraps www.arcticheat.com.au Ph: 07 5522 1552</p> <p>Independent Living Centre Australia https://ilcaustralia.org.au/contact_us Ph: 1300 885 886</p> <p>Cool Down Australia https://www.cooldownaustralia.com.au/</p>
Poor medication compliance, including incorrect medication dosing, running out of medication etc.	Tab Timer	Dosage aids and alarms	<p>Tab Timer www.tabtimer.com.au Ph: 1300 822 846</p>
	Pre-packed medications	Home medication dispensing packs to assist with medication compliance	<p>See your local pharmacist to discuss options – webster packs, tablet rolls etc.</p> <p>Other – many pharmacies will allow you to leave your scripts with them & can arrange automatic dispense/delivery of medications before your scripts or prepacked medications run out.</p>
Poor medication compliance	Mobile phone alarms and apps	Reminder systems that can be set up to aid medication compliance	<p>Mobile phone: In-built alarm functions can be pre-set with reminders for taking medications, medical appointment reminders and prescription due for refill reminders</p> <p>Medication reminder apps: Seer Medical App - https://www.seermedical.com/seer-app/ (Free: Android or iPhone)</p>

Safety Requirements During a Seizure

When choosing Assistive Technology, aids and devices, an individual living with epilepsy may consider applications that promote safety when a seizure occurs. These applications may include:

- Seizure detection and alert functions
- Personal safety functions
- Home safety functions
- Aids to help responders to provide first aid

Seizure Detection and Alert Functions

For many people living with epilepsy, experiencing a seizure when alone, can pose a significant safety risk. Seizure detection and alert devices can detect specific seizure symptoms and automatically alert carers or remote carers or call centres that a seizure is occurring, allowing for assistance to be provided.

Commonly, these devices are movement activated, making them unsuitable for people with movement disorders (Cerebral Palsy, Parkinson’s Disease, FND etc.). Other devices may alert if a sudden drop to the ground is detected or a sudden change in vital signs, such as an increased heart rate or reduced oxygen saturation levels. **As vital signs may vary naturally throughout the day, it is important to discuss reference ranges with your treating neurologist to avoid unnecessary alerts and concern.**

The table below includes a list of wearable, non-wearable seizure detection and alert applications:

Seizure Detection and Alert Devices						
Device Information					Seizure Types	
Product	Application	Day Use	Night Use	Details	Movement Activated	Non-movement Activated
Sami Alert The Sleep Activity Monitor	Movement based video detection and recording. May detect abnormal movements, alerts caregivers & records events automatically	⊗		Seizure Alert Australia https://www.seizurealertaustralia.com.au/product/sami-3-camera-sleep-activity-monitor/ Ph: 0492 961 777 Upfront fees only	☑	⊗ May be suitable for detecting: Tonic-Clonic seizures Clusters of Myoclonic seizures Focal seizures that involve movement
	Movement activated infrared camera mounted above the bed	⊗	☑			
	Sends an alarm to a carer and logs all activity via the app					

	Compatible for use with Apple devices					
Epilepsy Safe Bed Sensor	<p>Detects and alarms for sustained strong body jerking</p> <p>Sensor is placed under the mattress</p> <p>Can be set up to alarm at the bedside or via a pager in another part of the house</p> <p><u>For those who live alone:</u> The D-1090-2G controller will alert the Lifeminder which will automatically send a text message with google maps for location and dial pre-programmed telephone numbers.</p> <p>The Lifeminder is a small mobile pendant that when activated will send a text message and call all emergency contacts that are provided by the client and pre-programmed into the pendant prior to us sending out.</p> <p>The Lifeminder is on a prepaid plan requires a sim card (client to ensure it has credit).</p>	<p>⊗</p> <p>Unless used when sleeping during the day</p>	<p>⊙</p>	<p>Epi-Assist Australia PTY LTD www.epiassist.com.au PH. 1800 684 422</p> <p>Upfront fees only</p> <p>www.epiassist.com.au or www.lifeminder.com.au</p>	<p>⊙</p> <p>May be suitable for detecting Tonic-Clonic seizures</p>	<p>⊗</p>

	Lifeminder is unable to call 000 direct as the caller needs to be able to talk to the operator and advise of their location and issue.					
Empatica Embrace	<p>Tonic-Clonic seizure detection & alert watch which alerts pre-programmed carers.</p> <p>Not recommended for use in children under the age of 6</p> <p>A wearable watch that must be within Bluetooth range of a compatible Android & Apple device</p>	<p>⊗</p> <p>Not recommended unless used when sleeping during the day</p>	<p>⊙</p>	<p>Empatica https://support.empatica.com/hc/en-us/categories/115000018506-Embrace-Before-You-Buy Error! Hyperlink reference not valid. Currently on available for purchase online from America</p> <p>Upfront fees & ongoing monitoring fees may apply</p>	<p>⊙</p> <p>May be suitable for detecting: Tonic-Clonic seizures</p>	<p>⊗</p>
Night Watch	<p>Detects & alarms for strong movement-based seizures as well as monitoring heart rate</p> <p>Wearable arm band which alarms via a base station in another part of the house</p> <p><u>For those who live alone:</u> NightWatch users who live on their own can use a special, optional module that can call up to five telephone numbers. This module also has an emergency</p>	<p>⊗</p> <p>Unless used when sleeping during the day</p>	<p>⊙</p>	<p>Seizure Alert Australia https://www.seizurealertaustralia.com.au/ Ph: 0492 961 777</p> <p>Upfront fees only Armband needs to be charged during the day</p>	<p>⊙</p> <p>May be suitable for detecting: Tonic-Clonic seizures</p> <p>Clustered Myoclonic seizures</p> <p>Tonic Seizures</p> <p>Hypermotor Seizures</p>	<p>⊗</p>

	<p>button that wearers themselves can operate if they need immediate help.</p> <p>The Nightwatch can be teamed with the Mobeye. https://www.mobeye.com/en/products/cm2500-mobeye-panic-button</p>					
Smart Watches	<p>May have built-in functionality or ability to link with apps that alert if a fall is detected or that monitor and record (do not alert) vital signs like heart rate, oxygen saturations</p>	✓	✓	<p>Functionality varies depending on the make of model of the smart watch. For more information, refer to product information and specifications for your chosen watch.</p> <p>Common watch options include:</p> <ul style="list-style-type: none"> Apple range Samsung Galaxy range <p>Consideration to be given to:</p> <ul style="list-style-type: none"> Falls detection Cellular option Vital sign monitoring and alerts GPS Waterproof Ability to contact other persons easily and quickly (particularly when in an impaired consciousness level) Language, literacy and numeracy skills Accessibility features e.g. colour, font size etc. 	<p>✓</p> <p>May be suitable for detecting seizures that result in a fall</p>	<p>✓</p> <p>May be suitable for detecting seizures that alter vital signs</p>
Seizalarm App	<p>A seizure detection and alert app, that alerts pre-programmed carers.</p> <p>App compatible for use with Apple devices only</p>	✓	✓	<p>http://seizalarm.com/</p> <p>App is free to download but may attract ongoing subscription fees</p>	<p>✓</p>	<p>✗</p>
My Medic Watch	<p>A seizure detection and Alert App that alerts pre-programmed carers.</p>	✓	✓	<p>https://www.mymedicwatch.com/</p> <p>App is free to download but may attract ongoing subscription fees</p>	<p>✓</p>	<p>✗</p>

	App is compatible for use with android and Apple devices					
SmartWatch Inspyre™	<p>An App by Smart Monitor which detects repetitive shaking motion and signals the users device to alert pre-programmed carers.</p> <p>App is compatible for use with android and Apple devices</p>	✓	✓	<p>https://.info@smart-monitor.com Toll Free ph: 1888 334 5045</p> <p>App has annual subscription costs</p> <p>Can use own smart watch or purchase one from Smart Monitor</p>	<p>✓</p> <p>May be suitable for detecting Tonic-Clonic seizures</p>	✓
Epi Hunter	<p>Wearable headband that detects, signals and logs Absence seizures</p> <p>Compatible for use with Android devices</p> <p>Not recommended for use in children under the age of 4 years old</p>	✓	✗	<p>Seizure Alert Australia https://www.seizurealertaustralia.com.au/ Ph: 0492 961 777</p> <p>Upfront and yearly subscription fees may apply</p>	<p>✗</p> <p>Suitable for detecting typical absence seizures</p>	✓
Live Life Mobile Alarm	<p>Wearable personal alarm with falls detection and alert functionality.</p> <p>Utilises mobile network and can alert pre-programmed carers or 000 (no mobile phone required)</p> <p>Can be self-activated (e.g. for alerting for assistance after a seizure has</p>	✓	✓	<p>Live Life Alarms https://livelifealarms.com.au/ Ph: 1800 646 831</p> <p>Upfront fees only</p>	<p>✓</p> <p>May be suitable for detecting seizures that involve a fall Tonic-Clonic Seizures</p> <p>Tonic Seizures</p> <p>Atonic Seizures</p>	<p>✓</p> <p>May be suitable for people who experience focal seizures with awareness or auras</p>

	<p>occurred) or automatically activated via fall detection</p> <p>Sends GPS location to carers or 000</p>					
Tunstall Products	<p>Personal Alarms (self-activated) and Falls detection devices (automatic activation)</p> <p>Devices may be wearable or mounted within the home</p>	✓	✓	<p>Contact Tunstall to discuss the different devices: https://www.tunstallhealthcare.com.au/ Ph: 1800 603 377</p>	<p>✓</p> <p>May be suitable for detecting seizures that involve a fall: Tonic-Clonic Seizures Tonic Seizures Atonic Seizures</p>	<p>✓</p> <p>May be suitable for people who experience focal seizures with awareness or auras</p>
Tic Tok Track	<p>A wearable device that incorporates 3G, GPS and WFI technology so that you can locate and stay in touch with your loved one from your phone or computer</p>	✗	✗	<p>https://www.tictoktrack.com.au Ph: 1300 872 256</p>	<p>Suitable for people who may wander as part of their seizures</p>	
Vital Signs Monitors	<p>Devices that monitor basic vital signs, including heart rate and oxygen saturation levels</p> <p>As vital signs may vary naturally throughout the day, it is important to discuss reference ranges with your treating neurologist to avoid unnecessary alerts and concern</p>	<p>✗</p> <p>Unless used when sleeping during the day</p>	<p>✓</p>	<p>Owlet Baby Sock https://owletcare.com.au/ <i>Suitable for babies</i></p> <p>Snuza Monitors https://www.snuza.com/ <i>Suitable for babies</i></p> <p>Assorted pulse oximeters are available for purchase online</p>	<p>✗</p>	<p>✓</p> <p>May be suitable for detecting seizures that alter vital signs</p>

As well as devices, people living with epilepsy may also consider a seizure detection and response dog. These dogs are professionally trained to detect seizures and assist the person experiencing the seizure. Depending on the needs of their owner, the dog may be trained to:

- Alert prior to a seizure occurring
- Stay with the person throughout the seizure and try to limit injuries
- Alert caregivers or activate an emergency response system

See below for more information:

<https://epilepsyfoundation.org.au/understanding-epilepsy/epilepsy-and-seizure-management-tools/seizure-alert-dogs/>

<http://dogsforlife.com.au/>

<https://www.qld.gov.au/disability/out-and-about/ghad/choosing-ghad>

<https://assistancedogsinternational.org/member-search/?query=%28Region.eq.Oceania%29>

Personal Safety Functions

For people living with epilepsy who experience seizures that cannot be detected by alert devices (listed above), there is a range of safety measures which may help to promote personal safety if/when a seizure occurs.

Product	Suppliers
Anti-suffocation Pillows	<p>Breathe-zy Anti Suffocation Pillow Seizure Alert Australia www.seizurealertaustralia.com.au Ph: 0492 961 777</p> <p>Doability https://www.doability.com.au/breathe-zy-anti-suffocation-pillow Ph:1300 122 355</p> <p>Independent Living Centres Australia www.ilcaustralia.org.au Ph: 1300 885 886</p>
Safety Helmets & Caps	<p>Head Saver www.headsaver.com.au Ph: 1300 767 888</p> <p>Head Bumpa www.headbumpa.com.au Ph: 0419 717 516</p> <p>Dejay https://dejay.com.au/ribcap Qld Office Ph: 0413 076 333</p>

Fall Belts	Drop Support Harness Seizure Alert Australia www.seizurealertaustralia.com.au Ph: 0492 961 777
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Home Safety Functions

There are also aids & equipment that can assist in improving safety around the home for people living with epilepsy. Some of these aids & equipment may include:

Functions	Examples	Suppliers
Home modifications	shatter proof glass for showers 2-way opening internal doors recessed toilet roll holders grab rails	Contact your local Occupational Therapist for assessment & advice
Home Safety Devices	safety switches for stoves kettle pouring devices safety gates for stairwells shower chairs	Independent Living Centres Australia www.ilcaustralia.org.au Ph: 1300 885 886 LifeTec www.lifetec.org.au Ph: 1300 543 383 Do Ability www.doability.com.au Ph: 1300122 355 Do Ability Kids www.doabilitykids.com.au Ph. 1300 122 355

Aids to Help Responders to Provide First Aid

As seizures are unpredictable and may occur anywhere, it is also important for a person living with epilepsy to consider aids that will assist first responders to provide seizure first aid. Some of these aids may include:

Functions	Examples	Suppliers
Medical ID	Wearable ID – Bracelets and jewellery	Medic Alert Foundation Personalised Jewellery that has an engraved identifier code that Doctors, Hospitals, Ambulance Officers can use to access your personal medical history https://www.medicalert.org.au/ Ph: 1800882222 Mediband Generic silicone medical alert bracelets

		<p>https://www.mediband.com/au/medical-alert-bracelets/ Ph: 1300 796 401</p> <p>Generic Medical ID bracelets may also be purchased in selected pharmacies & engraved with important information, for example diagnosis, next of kin contact information</p>
Medical ID	Non-wearable – Seatbelt Wraps	<p>Emergency ID Australia - https://www.emergencyid.com.au/shop/accessories/accessories-car-home/seat-belt-cover-with-emergency-id/ Ph: 1300 369 142</p> <p>The Safety Store Australia - https://safetystoreaustralia.com.au/product/emergency-id-seat-belt-wrap/ Ph: (08) 9378 7745</p>
Medical ID	Mobile Phones	<p>Most smart phones can store next of kin details & basic medical information which can be accessed by emergency responders without a pin code. A simple google search on how to add emergency information to your lock screen for the type of phone you have, should provide you with step-by-step instructions.</p>
Key Locks	<p>These can be stored at your premises & contain the keys to your house so Ambulance officers or carers can enter your property in an emergency, without having to break in.</p> <p>You will need to provide the pin to the Queensland Ambulance Service in advance, Ph: 13 74 68</p>	<p>Vital Call https://www.vitalcall.com.au/products/accessories/lockboxes</p> <p>St John Queensland https://www.stjohnqld.com.au/community-services/medical-alarms-personal-safety/key-safe/</p> <p>A range of key locks are also available in retailers such as Bunnings, Officeworks and Locksmiths.</p>
Triple 000 Apps		<p>App for phoning 000 & providing location details: https://www.emergencyplus.com.au/</p> <p>Apps for teaching children how to phone 000: https://www.coolkidsfirstaid.com/triple-000-trainer/</p>

	https://apps.apple.com/au/app/triple-zero-kids-challenge/id679476707
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Funding options

Assistive technologies and equipment can have both upfront and ongoing costs. There are several different funding options that a person living with epilepsy may be able to access to assist with these costs:

NDIS

People who have epilepsy listed in their NDIS plan, may be able to have the cost of assistive technology and equipment covered by their NDIS plan. Items listed in their plans will need to be deemed reasonable and necessary. For more information refer to the NDIA (<https://www.ndis.gov.au/participants/assistive-technology-explained>) or contact the Living Well Team at Epilepsy Queensland - services@epilepsyqueensland.com.au; or (07) 3435 5000 or 1300 852 853 (Outside Queensland).

Government Rebates and Assistance Schemes

There are a range of government rebate & assistance schemes that assist with the costs associated with medical aids and equipment. These may include but are not limited to the following and are subject to eligibility:

Medical Cooling and Heating Electricity Concession Scheme - <https://www.qld.gov.au/community/cost-of-living-support/concessions/medical-concessions/medical-cooling-heating-electricity-concession-scheme>

Electricity & Gas Rebates - <https://www.qld.gov.au/community/cost-of-living-support/concessions/energy-concessions/electricity-gas-rebates>

Medical Aids Subsidy Scheme - <https://www.qld.gov.au/health/support/equipment/subsidies>

Private Health Insurance

Some Private Health Insurance Extras cover includes subsidies for medical aids and equipment. Contact your private insurance company to see if your required equipment is covered under your premium.

Other

When all other funding options have been exhausted, you may wish to consider approaching your local Rotary, Lions Club, or church community to see if they can assist or you may even consider running your own Go Fund Me campaign. Whilst Epilepsy Queensland does not provide funding for these activities, we may be able to assist with a letter of support that demonstrates the benefits of the AT or device you are seeking to fund.