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Epilepsy & Construction

Private Dwellings

The type of safety considerations necessary in the construction of dwellings for private use by persons with epilepsy depend on the nature, severity and frequency of the seizures. Thus each case should be assessed from a safety viewpoint with input from the person themselves and their medical advisors focusing on:-

How the seizures manifest: e.g. pattern, (if known) night/daytime, environmental trigger factors e.g. flashing lights.

What is likely to happen during a particular seizure, e.g. whether the person loses consciousness or not, whether falls are likely, whether wandering in a confused state is a feature.

What potential risks and hazards there are in the design of a building which can be identified as being relevant to that seizure type and whether these can be eliminated or minimized with careful planning.

Is epilepsy the person's primary disability or do they have other physical or sensory disabilities? The majority of people with epilepsy are able bodied and ambulant so safety recommendations are made herein with their needs in mind in terms of falls from standing, wandering during seizures etc.

However the recommendations made are likely to benefit mobility impaired persons with epilepsy also. People with disabilities additional to epilepsy may need safety considerations tailored to their specific needs.

Guest Accommodation

Having considered individual factors it may be useful to look at some general suggestions which identify areas of concern of safety grounds. These are all applicable to buildings which may be used on a guest/self catering basis by people with epilepsy.

The following points are made in reference to structural issues and also with regard to usage issues.

Throughout The Building

Structures, Fixtures & Usage

Ensure adequate supply of electrical sockets to avoid trailing flexes.

Built in storage cupboards and presses are preferable to freestanding units which can be knocked over easily.

Freestanding appliances such as TV's/hi-fi's may be a hazard. Consider storage units or wall mounting.

Avoid freestanding heating appliances and floor level heating. Radiators may be wall mounted well above floor level to reduce risk of injury during falls through falling directly on top of the appliance or becoming wedged underneath it.

Hot piping should be encased to minimize risk to those who might grab onto it during a seizure.

Use appliances with a low surface temperature.

Open fires are hazardous and probably best avoided - when in use care must be taken to ensure fireguards are secured to the walls or flooring.

Avoid or minimize the use of glass and mirrored panels in doors and other fixtures, where necessary ensure the use of toughened glass to reduce the risk of injury.

Avoid having tight spaces where a person could become trapped during a seizure.

Ground level accommodation is generally preferable, reducing the the risk of falls on stairs.

An alarm/monitoring system which enables emergency contact is useful especially for those living alone.

Where lifts are in place ensure doors remain open when not in use to enable access to any unaccompanied person who might be having a seizure whilst in the lift.

Glare and flicker are factors in those with photosensitive seizures - choose lighting which will not cause glare and flicker problems (15-20 flashes per second is sufficient to trigger a photosensitive seizure). Remember that fluorescent bulbs may cause flicker problems when they are about to blow.

Flooring: Hard tiled surfaces are hazardous during falls and very coarse carpets/matting can lead to friction burns in seizures.

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Strong geometric patterns with heavy contrast can also cause reflex seizures in some people and consideration should be given to this if they are incorporated into design features.

Doors which swing open and shut without need for handle mechanisms are generally safer - door handles may be a hazard during falls.

Doorways should be kept clear of door saddles also.

Fireproof furnishing and fabrics will offer protection in situations where a smoker with epilepsy loses consciousness.

Use of safety gates on stairs may be useful to prevent a person with a tendency to wander during seizures from going up or down stairs - however they should never impede access for other users especially in the event of fire.

Emergency Evacuation Procedures

Care should always be taken to establish that people with epilepsy have successfully evacuated a building during an emergency.

Factors which may precipitate seizures include sudden fright, loud noise (such as an alarm) and excitement or fear. If seizures are a feature then it should be possible to develop a fire evacuation policy which reflects these needs. Where alarms using lights are used these should not be likely to cause photosensitive seizures (see above).

In The Bathroom

Structures, Fixtures & Usage

Showers are preferable to baths on safety grounds.

Shower bases should be floor level to avoid water being trapped by a blocked plug-hole (due to the way a person might fall).

A shower chair may be used to prevent falls.

If baths are used keep water level shallow, turn off taps before getting in and advise someone of your intention to bathe.

Toughened safety glass or Perspex is preferable to shower curtains which can either become entangled around a person or allow them to fall out of the shower.

Bathroom doors should open outwards to enable access to a person during a seizure.

Engaged signs should be provided to maintain privacy whilst keeping doors unlocked.

Water temperatures should be thermostatically controlled to prevent scalding during seizures.

Tight spaces between toilets/showers/hand-basins are hazardous as they lead to entrapment and injury.

Glass shelving should be avoided.

Mirrors must be securely fixed to walls.

Hard flooring such as ceramic tiling is a hazard during falls.

In Bedrooms

Structures, Fixtures & Usage

Built in storage is preferable to freestanding furniture.

Doors should open outwards to enable access from the outside in the event of a seizure.

If the premises is for guest use, special safety pillows for persons having sleep seizures should be acquired, as these reduce risk of smothering during a seizure.

Top bunks are not recommended for persons with sleep seizures - use low level beds with padded headboards.

Keep freestanding furniture, lockers etc. away from bedsides to minimize injury.

Coarse carpets can lead to friction burns, use protective safety matting in case of falls from bed.

Avoid freestanding lamps which can be knocked over - wall mounted is safer generally.

Smoking in bed is unwise in cases of sleep seizures - consider non-flammable bedding and a smoke alarm.

Kitchen Areas

Structures, Fixtures & Usage

Built in cupboards are preferable to freestanding furniture.

Avoid tight spaces where a person could be trapped in a seizure.

Hard tile flooring is a hazard during falls.

Avoid sharp corners and edges on work surfaces and other fixtures.

In self catering premises a food trolley should be available to enable transfer of hot dishes to the table more safely.

Microwave ovens are considered preferable to conventional ovens on safety grounds but they need to be positioned carefully and securely to prevent them being dislodged during seizures.

When using conventional cookers gas heat is usually quicker to extinguish in the event of an emergency.

Cooker guards and rails should be provided when cooker rings are in use.

Cordless appliances with automatic cut-off should be used i.e. kettles, irons etc. which have their stands securely fixed to prevent dislodging during seizures.

Use of sharp kitchen tools should be avoided or restricted where seizures are frequent - practical matters will help - using wall mounted electric can openers instead of a hand held one, electric knives however are a potential hazard.

Garden, Patio or Drive

External Structures & Fixtures

Hard landscaping features such as patio surfaces, rockeries and statuary may be a hazard during falls.

Ponds and open water features are hazardous and are probably best avoided - consider the use of mesh to prevent drowning.

Grassed areas and wooden decking without sharp edges are preferable to very hard surfaces.

Coarse gravel may cause injuries to the skin during seizures - finer gravel could enter the mouth and obstruct breathing.

Parents who have seizures may be unable to supervise children who might wander off - locks on gates need to be effective.

Low walls can be hazardous for those who may fall on them.

Gates and railings with spikes or sharp protrusions are unsuitable.