

## 8 Photosensitive Epilepsy

About 40,000 people in Scotland have epilepsy. Of these, around 2,000 have photosensitive epilepsy.

In photosensitive epilepsy all, or most, seizures are triggered by lights or shapes and patterns.

Both natural and artificial light flickering or flashing at a certain rate and geometric shapes and patterns that appear to be moving can trigger seizures.

Such seizures can only be triggered in a person who is already susceptible or who already has epilepsy.

Photosensitive epilepsy affects more girls than boys and appears to be most common between the ages of 7 and 19.

About 1 in 4 people with epilepsy will grow out of their photosensitivity by their early to mid 20's.

Over 30% of people with juvenile myoclonic epilepsy (JME) are photosensitive.

Tonic clonic seizures sometimes preceded by myoclonic jerks are the most frequent type of seizures triggered by lights and patterns.

### Triggers

Common seizure triggers for people with photosensitive epilepsy include:-

- Lights flashing or flickering at a rate of 3—60 Hertz\* (flashes per second), including strobe lights and faulty fluorescent lights.
- Background light e.g. strobe lights are more likely to trigger a seizure if the room is dark.
- Intensity or brightness of the stimulus.
- Length of exposure to the stimulus, e.g. playing computer games for long periods.
- The area of the field of vision exposed to the light or pattern, e.g. watching a large screen TV or sitting too close to a computer screen increases the risk of triggering a seizure.
- Television, video games and software, and computer graphics.
- Faulty or poorly tuned TVs.
- Sunlight shining through a row of trees or reflecting off water.
- Strongly striped or geometric patterns that appear to be moving.
- Tiredness, dehydration, effects of alcohol/recreational drugs.

## Simple Precautions

- Consult an optician for advice on light-responsive or polarised glasses to reduce glare and reflections.
- In pubs/clubs be aware of and avoid long exposure to flashing lights; take regular breaks from heat and noise. Do not become dehydrated; drink plenty of water.
- Avert direct gaze when passing through lines of trees, railings, road markings, sunlight reflecting on water, looking out of the window of a moving vehicle, looking at a moving escalator.

## TV/Computer Screens, Games & Software

- Make sure the room is well lit. Place a subdued light close to the TV to balance the brightness of the screen.
- Of the newer format TVs - LCD (Liquid Crystal Display), plasma and HD (High Definition) - LCDs are considered to be the safest option for people with photosensitive epilepsy. A flat screen LCD TV with a 100 Hertz screen is a good choice. Plasma screens and HD systems tend to be brighter and have sharper contrast.
- When watching TV, sit level with and at least 2.5 metres (8 feet) away from the screen.
- Avoid watching faulty or poorly tuned TVs.

## TV/Computer Screens, Games & Software

- Change channels with a remote control or cover one eye to reduce the flicker effect if you have to go near the TV while it's switched on.
- Avoid watching the screen during fast forward or rewind.
- Flat screen liquid crystal display (LCD) computer monitors do not flicker and are safe to use.
- UK providers of TV programmes, games and software are required to avoid including flashes and patterns that may trigger photosensitive seizures. Some, but not all, TV programmes, videos, DVDs, games and software have photosensitivity warnings—check before viewing.
- Play games in a well-lit place and sit as far back from the screen as possible.
- Take frequent regular breaks away from the screen - 5 minutes every 30 minutes if watching TV; 5 minutes every 15 minutes if using a computer or playing games
- Stop watching immediately if you feel uncomfortable in any way - dizzy, blurred vision, muscles twitching.

## Treatment and Management of Photosensitive Epilepsy

- An EEG test, which will include a flashing light test (photic stimulation), should confirm whether you have photosensitive epilepsy.
- Some AEDs (especially sodium valproate) can be effective in preventing photosensitive seizures.
- Be aware of your own seizure triggers and take preventive measures where possible.
- Make sure teachers, employers and carers know how your epilepsy affects you and suggest preventive measures that can be put in place to support you.
- Seek advice from Epilepsy Connections.

### \* Definition of Hertz

*Hertz is a way of measuring how often something happens in a second. In photosensitive epilepsy, Hertz refers to the number of flashes or flickers per second. Most people with photosensitive epilepsy are sensitive to 16—25 Hertz but some may be sensitive to rates as low as 3 Hertz and as high as 60 Hertz.*

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Supporting people with epilepsy

## Epilepsy Connections

**Head Office:** 100 Wellington Street  
Glasgow G2 6DH  
Phone: 0141.248.4125 Fax: 0141.248.5887

**Forth Valley Project:** Epilepsy Connections Fieldwork Office  
Estates Corridor  
Falkirk Community Hospital  
Major's Loan  
Falkirk FK1 5QE  
Phone: 01324 624000, Ext 6022

**Email:** [info@epilepsyconnections.org.uk](mailto:info@epilepsyconnections.org.uk)  
**Website:** [www.epilepsyconnections.org.uk](http://www.epilepsyconnections.org.uk)

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