

Photosensitive epilepsy

Many thanks to Professors G Harding (Aston University, England) and S Seri for providing the information on which the following is based.



Introduction

It is often assumed that everybody with epilepsy is photosensitive, but only around five per cent of people with epilepsy are. Photosensitive epilepsy is the name given to a form of epilepsy in which seizures are triggered by flickering or flashing light.

Both natural and artificial light sources can cause flickering which might be a problem for people with photosensitive epilepsy. For example, sunlight reflected off wet surfaces or through leaves of trees, flashing lights in discos and the flickering of faulty fluorescent lighting may also trigger seizures. However the commonest trigger for people with photosensitive epilepsy appears to be Cathode Ray Tube type televisions and computer monitors.

Most people with photosensitive epilepsy are sensitive to flickering around 16-25Hz, although some people may be sensitive to rates as low as 3Hz and as high as 60Hz. Keep in mind that most of the world uses electricity in the 50-60Hz range.

People with photosensitive epilepsy usually develop the condition before the age of 20, with it being most common between the ages of 9 and 15. More females than males seem to have photosensitive epilepsy. There is also evidence of a genetic factor in this condition.

Various types of seizure may be triggered by flickering light, but a tonic-clonic seizure is certainly the most frequent type induced by television, sometimes beginning with myoclonic jerking (brief jerking of the limbs).

Video games

Unless someone has photosensitive epilepsy, or is susceptible to the condition, there is little or no risk of them having a seizure when playing a video game. Some people are sensitive to certain patterns and may be sensitive to certain sequences in some video games.



Precautions

- Avoid playing when tired as tiredness/sleep deprivation may increase the chances of a seizure
- Take frequent breaks and rest between sessions
- Follow manufacturer advice and sit an appropriate distance from your size monitor
- Ensure adequate ambient lighting and adjust the brightness/contrast of the monitor

- Use the highest refresh rate available for your graphics adapter and, if possible, use a monitor with a liquid crystal display. Since the frame rate will limit the refresh rate, use an accelerated graphics adapter with a dedicated Graphics Processing Unit (GPU) and close other applications to minimize the load on your Central Processing Unit(s) (CPU)
- Parents should supervise their children when playing video games. If a child shows any signs of distress or discomfort such as dizziness, blurred vision, loss of awareness or muscle twitching, they should stop playing immediately
- If you are a parent of a child with photosensitive epilepsy, it is recommended that you supervise and monitor your child when playing. If they show any signs of distress or discomfort such as dizziness, blurred vision, loss of awareness or muscle twitching, you should immediately stop your child from playing