Mersey Region Epilepsy Association

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photosensitive epilepsy

Photosensitive epilepsy is the name given to that form of epilepsy in which seizures are provoked by flickering light encountered in everyday life. Both natural and artificial light sources may precipitate seizures but the most common precipitant appears to be television, and the playing of certain computer games.

The first report of epileptic seizures being provoked by watching television was made in the early 1950s. Seizures documented at this stage were said to have been provoked by television sets which were defective, and, therefore, flickered, or in which the vertical hold was faulty, causing the picture to roll. Further clinical investigation, however, has indicated the seizures may also be provoked by a normally functioning television when the viewer is too near the set. The important factor here is the larger area of retina which is stimulated by the flicker frequency of the picture on a television that is, in fact, functioning normally. The nearer the subject is to the set, the more the picture is filling the whole field of vision and so the more likely is an abnormal response in the brain and therefore a resultant seizure.

Seizures occur, therefore, when the person is watching a faulty television set, adjusting the set or is very near the set. Associated factors include the angle from which the set is being viewed, sensitivity to geometric patterns and the effects of tiredness and alcohol.

Various types of seizure may be induced by a flickering light, but a tonic-clonic seizure is certainly the most frequent type induced by television, perhaps preceded by myoclonic jerking.

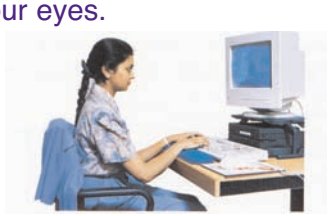
Simple precautions may be taken to avoid having a seizure whilst watching television. The set should always be viewed in a well lit room, from a distance of 8 feet or more, with a small illuminated table lamp placed on top of the set. The person should avoid approaching the television, adjusting and switching channels. Use a remote control if possible to adjust settings, and if approaching the screen then cover one eye.

Factors precipitating seizures in photosensitive epilepsy, apart from television flicker, include sunlight reflected off wet surfaces or through leaves on trees, or seen when the subject is moving rapidly past trees or railings illuminated by sunlight shining from the side. Flashing lights such as those used in discos and the flicker of fluorescent lighting may also induce seizures. The wearing of polarised sunglasses out of doors on sunny days is of assistance in removing flickering reflections.

The frequency of photosensitive epilepsy occurring has increased since the introduction of VDU (visual display units) into places of work, schools, and computer games. It is not always possible to avoid the VDU and it would only be essential to do so if specifically advised by the doctor. Here are some points to note:

- Where the distance from a television set can be located at 8 feet or more,
- The time spent exposed to the flickering plays a major part in provoking a seizure. Ideal VDU time is 15 minutes before looking away for about 5 minutes, television around 30 minutes.
- The contrast must be right for the prevailing environmental lighting and your eyes.
- Sitting at a slight angle to the screen can help.

VDU work inevitably involves viewing a screen at close quarters



- Black and white picture is better than colour since fewer flickers are required to establish the image.

- There are special clip-on screens available to put on VDUs to cut down on flicker.

  Screens are available from high street stores and computer fairs.

- If the computer is being used solely for word processing or graphics, etc. then the only specific guidance is that this should be avoided when tired.

- Covering one eye temporarily or permanently does cut down the retinal area subject to flicker, but it would be best to consult an eye specialist to avoid weakening of eyesight.

- If the subject wishes to wear shaded lenses an optician should be consulted as many 'polarised' lenses are not always effective and can do further damage to eyesight.

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