

Supporting a child with Photo-Sensitive Epilepsy when using a computer

Photo-Sensitive Epilepsy

Only 3-5% of people with epilepsy are in fact photo-sensitive and it is more common in children and young people.

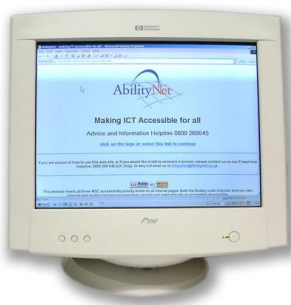
Children with the specific condition called 'photo-sensitive epilepsy' may find that moving or flickering light can cause problems, and this can include computer screens (or monitors). The frequency of flashing light which is most likely to provoke a seizure varies but is generally in the range of 3 to 30 flashes per second, but some children can be sensitive at much higher frequencies than 30 flashes per second. However it is not common to be sensitive below three flashes per second.

You may wish to seek medical advice to determine whether your child's epilepsy is photo sensitive.

Can using the computer screen and computer games trigger photosensitive epilepsy?

The older computer screens use Cathode Ray Tube technology (CRT) and the images on these screens are continually "refreshed" or re-painted and this means that the image can move or flicker and could trigger a seizure. We would recommend that you do NOT use this type of screen with pre-school children with photosensitive epilepsy.

Modern computer screens, including laptops, are now flat screen or flat panels and operate at a very high flicker frequency and most users with photosensitive epilepsy do not have a problem using them. These monitors use Liquid Crystal Display technology or Thin Film Transistor technology (LCD or TFT). This technology does not refresh and operate at such a high flicker frequency and in most cases users are not conscious of this flicker and it causes no problems.



The reason for this is that the more often the screen is refreshed, the more stable the image is and the less it flickers. The refresh rate is expressed in “Hertz” (usually written Hz): the higher the Hz number, the less the flicker.

Most nurseries/children centres and homes now have modern computer screens and it is more important to monitor what type of games you use with a child with photosensitive epilepsy. For example, changing geometric patterns or flashing images could trigger a seizure. We would recommend that before you use any software for your child who has this condition that you have an opportunity to preview it.

Over tiredness can also be a factor and we would recommend that you monitor the amount of time a child is using the computer. We would recommend this not just for pre-school children with photosensitive epilepsy, but for all children and adults to take regular breaks away from the computer screen.

Lighting

Lighting in modern buildings is generally achieved using fluorescent tubes which also flicker to some degree. Slightly flickering screens and flickering lights may in some cases combine to flash at the rate which could trigger a seizure. Try to opt for natural lighting (being careful to avoid glare on sunny days) or “old fashioned” incandescent light bulbs. Note: energy saving bulbs are in fact small folded up fluorescent tubes. Due to the technology employed, these type of bulbs are particularly prone to flickering.

General Advice on using the computer with a child with photosensitive epilepsy

1. Use a computer in a suitably well-lit room.
2. Never use a CRT screen because of their flicker. A TFT or LCD screen is flicker free.
3. Sit the child as far back from the screen as they comfortably can, ensuring they can still see what is on the screen and not straining their eyes.
4. Limit the usage time and make sure they take regular breaks away from the screen.
5. Do not let them play on the computer when they are tired.
6. Your computer screen can be adjusted - keep the contrast and brightness no more vivid than is necessary for comfortable vision.
7. Think about the background and text colours on screen and ensure you have reviewed the games the child is going to have access to, to monitor any flashing images etc...

Useful Organisations

The National Centre for Young People with Epilepsy (NCYPE)

The National Centre for Young People with Epilepsy (NCYPE) is a national charity providing specialist services and support for children and young people with epilepsy and other neurological conditions. These include Asperger's, Autism and a wide range of learning difficulties from moderate to profound and multiple.

NCYPE, St Piers Lane, Lingfield, Surrey, RH7 6PW

Tel: (Confidential enquiry line) 01342 831342

Email: enquiry@ncype.org.uk

Web: www.ncype.org.uk

Epilepsy Action

Epilepsy Action is the working name of British Epilepsy Association and provides information and advice on epilepsy.

Epilepsy Action, New Anstey House, Gate Way Drive, Yeadon, Leeds

LS19 7XY

Tel: 0808 800 5050

Web: www.epilepsy.org.uk

The National Society for Epilepsy

Provides information, support, medical and residential care for people with epilepsy.

The National Society for Epilepsy, Chesham Lane, Chalfont St. Peter, Buckinghamshire
SL9 0RJ

Tel: 01494 601400

Web: www.epilepsynse.org.uk