

Migraine and Lighting in the Workplace

The link between light and headache was investigated through the work of Dr Andy Dowson, Director of Headache Services at King's College Hospital, London, and Alan Maine (European Institute of Health and Medical Sciences). Their research found that migraineurs are specifically sensitive to the red and blue parts of the spectrum, rather than the green middle part of the spectrum. Red light is prominent in strip lighting and blue-tinged highlights are fitted to some cars.

Fluorescent Lights

If you feel your migraine is triggered by fluorescent lights then there are a number of options available to you and your employer.

Fix the light

A lot of fluorescent lights are flickering because the ballast is faulty. The ballast regulates the output of light and if it is irregular it can cause flickering. It is often cheaper to replace the light rather than the ballast if this is the problem.

Turn off the lights

If you are in a work environment where a fluorescent light is over your desk, just ask employers and colleagues' permission to turn the lights off over your desk, even for a number of hours or all day if it does not affect other workers.

Diffuser

Fitting a diffuser to the lights may solve the problem. They are relatively inexpensive and can be a good option in a smaller workspace with the co-operation of employers and colleagues. The diffuser is just a wire mesh fitted over the light and there are different sizes available for different lights so price depends on size of the light.

An Irish supplier is www.electricalwholesaler.ie

Filters

Filters for fluorescent lights are almost like shades over the lights. They can range from relatively cheap filters that can be fitted over the lights to more expensive professional filters. When ordering filters ask your supplier for a filter that filters out blue and red light which migraine sufferers are particularly sensitive to.

Anti Glare Screen

While screen glare can cause trouble for migraine sufferers, the reflection of the light from overhead lights is also a problem so an anti glare screen over your monitor may provide some relief.

LED

LED lighting has been hailed as an improvement for migraine sufferers as there is virtually no flicker emitted from LED lights, compared to fluorescent lights so it triggers fewer migraines in workers. Unfortunately there are a number of issues arising with regard to LEDs in the workplace. Firstly, blue LEDs can trigger migraine, as migraine sufferers are more sensitive to light from the blue spectrum. While blue LED lights would not be used extensively in the workplace, they can be used in backlights or on operational buttons in factories and warehouses. Also, LED light still emits significant and differing levels of blue light, even though they appear white. If you feel you are experiencing increased migraine working in a LED-lit environment then meet with your employer and get him to have a lighting expert check the workplace LED lighting.

Wearing the MigraLens® (see below) may reduce migraine in this instance, as they block light from the blue and red spectrum. Another problem with LED lighting at present is that the differing standards in production of LEDs are resulting in different quality of drivers in the lights. This means some LEDs have much higher rates of flickering than others and so they can trigger migraine. Again, check with your employer and ask him to have a lighting specialist check the flicker rate of LEDs in the workplace.

CFLs

As we have become more environmentally aware, the use of Compact Fluorescent Light bulbs (CFLs) has increased in our homes and in the workplace. These CFL's are causing some problems for some migraine sufferers. Information and guidelines only relate to the emission of ultraviolet radiation from CFL's and there are no clear guidelines or research into the effects of CFL's on migraine sufferers. Talk to your employer and maybe replace the CFL's with LED lights, if you find relief from migraine in a LED work environment.

Migraine and Computer Usage

Antiglare Screens

Antiglare screens are available for most sizes of screens and can also help with VDU flicker.

Limit screen flickering

Ensure that you have the correct screen frequency setting. It is generally agreed that a setting below 70Hz is not acceptable. A figure between 75-85Hz is best but not always possible on older machines. Flat panel screens do not have this problem as they do not have Cathode Ray Tubes (CRT), which causes the flickering.

LED Backlighting

Some migraine sufferers indicate sensitivity to LED backlighting on tablets and laptops. If the laptop is operating on battery power, then the display is flickering (as a power-saving measure). However, if the laptop is plugged in to AC power, and the brightness is set to the maximum, then the LEDs are not flickered, but on constantly. PCs do have settings to disable power saving modes which may reduce flickering but contact your PC provider or IT Department at work directly for advice before changing settings.

Text display

Text can be adjusted to ensure that it is easy enough to read on screen and printed documents. You may also benefit from colour contrasts that are easy on the eye and this should be adjusted on screen and print if required.

Migraine and Night Time Driving

Migraine sufferers can find that driving at night can trigger migraine. While LED lights in the workplace are generally deemed to be better for migraine sufferers, the LEDs in car headlights are focused and directional and can increase glare and the likelihood of a migraine attack. Asking your employer to reduce or eliminate the number of hours you are driving at night. This could come under the reasonable accommodation legislation arising from Irish Employment Equality Acts 1998 -2007.

Solutions for the Migraine Sufferer

Where workplace adaptations are not suitable or financially possible, or simply just don't work, the migraine sufferer may need to employ some special aids and treatments to help improve their working life.

MIGRALENS®

The lenses of the MigraLens® absorb the red and blue light from sunlight, artificial lighting, television, computer screens, etc. You can order MigraLens® at www.migralens.com. For prescription glass wearers, there are options for clip-ons, over your own glasses, or you can get your optician to send your prescription details to the UK and they will manufacture and send the glasses to you when ready.

Please Note: MigraLens® are not suitable for driving.

Neither photochromic nor regular tinted lenses offer protection to migraine sufferers. Migraine Action UK supported research undertaken by Dr Dowson and MediView to investigate the impact on frequency and severity of attacks when using a spectacle lens designed to filter red and blue light – the MigraLens®. The research found that **90%** of volunteers experienced a reduction in headache intensity and **60%** experienced a reduction in frequency and duration of headache. Their effectiveness in sunlight and other sources of bright light was rated as 'very good' or 'excellent' by up to **90%** of people, with **91%** preferring MigraLens® over other tinted glasses previously used.

The Migraine Association of Ireland has no research yet from Ireland with regard to the effectiveness of MigraLens®.

Orthoscopies

Orthoscopies is a process of using colored lenses to correct migraine and perception problems. There are few specialists in the area of orthoscopies in Ireland but these are the links to the two main specialists in Ireland:

Dublin: <http://www.orthoscopies.net/>

Galway: <http://www.optique.ie/orthoscopies-clinic.php>

Axon Optics and TheraSpecs in the US do post their migraine glasses to Ireland but are expensive.

<https://www.axonoptics.com/>

<https://www.theraspecs.com/> - TheraSpecs has a fairly good newsletter you can sign up to