

The lightest touch

Raising awareness on protecting patients with light sensitivity

FEW OF US COME ACROSS PATIENTS with light sensitivity – and few of us would think to link their condition with the new regulations phasing out incandescent lamps. So, when NHS Chief Executive David Nicholson invited light-sensitive patients to put their case forward, QB volunteered to explain and review the evidence.

Who are light-sensitive patients?

People with light sensitivity suffer from a range of conditions, including lupus, psoriasis, porphyria and epilepsy. For these sufferers, exposure to light can trigger some unpleasant symptoms, ranging from skin rashes, fatigue and fainting to memory impairment and, in severe cases, can accelerate the deteriorations of certain conditions, such as lupus and ME. It is thought that approximately 36,000 people in the UK might be affected.¹

Why is lighting changing?

In the UK, the move to phase out traditional lamps in favour of more energy-efficient lighting such as compact fluorescent lamps (CFLs) and LED lamps, has been encouraged by the Government and supported by retailers and the lighting industry since 2007. This change could save up to five million tonnes of CO₂ a year, helping the UK meet its target of reducing greenhouse gas emissions by 80% by 2050, and could also save on energy bills at home and in the workplace by fitting energy-efficient bulbs.

What started as a voluntary initiative in the UK is now supported by EU regulations, banning the placing on the market of incandescent lamps with a wattage of more than 100 W from September 2009 and then 60 W from 1 September 2011.

Lamps procured for use in public spaces, including hospitals, will need to meet the energy efficiency criteria set by the regulations. Hospitals and healthcare facilities utilise fluorescent strip lighting for the lighting of wards, corridors, consulting rooms and offices, so are affected by the phase-out of incandescent lamps if trying to replace them for specialist use in future.

Energy-efficient lighting and patient care

For some light sensitive patients, however, this change is not welcome. David Price, co-ordinator of Spectrum, an alliance of charities that support people with light sensitive conditions, explains:

“Certain types of artificial light can trigger adverse reactions in light sensitive patients. Fluorescent devices that produce a

more intense light or are prone to flicker are known to aggravate a range of existing problems. So do energy-saving lights that emit ultraviolet or a higher than average amount of short-wavelength blue light, and fluorescent tubes. LEDs are still relatively new to market, so it is too soon to tell whether they, too, may be a cause for concern.

“For our patients, the switch to new types of energy-efficient lighting is not a positive one, because it stands to severely affect their health and quality of life. Our patients need care. They should not avoid going to their GP surgery or hospital for fear of getting worse.”

What is the scientific evidence?

Spectrum's concerns over the health of light sensitive patients have been acknowledged by the European Commission, who asked its Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR) to look into the issues.

SCENIHR's report, published in 2008, found no suitable direct scientific data on the relationship between energy-saving lamps and the symptoms in patients with various conditions. Of all compact fluorescent lamps properties, only Ultra Violet (UV)/blue light radiation was identified as a potential risk factor for the aggravation of the light-sensitive symptoms in some patients. However, few studies have been carried out directly with light sensitive volunteers.

The Committee did note that the use of double-envelope energy saving bulbs or similar technology would “largely or entirely mitigate both the risk of approaching workplace limits on UV emissions in extreme conditions and the risk of aggravating the symptoms of light-sensitive individuals”. However, some experts feel that this does not provide sufficient protection in some cases.

This advice is reflected by the Health Protection Agency, who issued precautionary advice to the general public on using the doubly encapsulated type of CFL.

Next steps

Spectrum's David Price advocates further research on all the energy-saving alternatives. He would like hospitals to be able to obtain incandescent lamps and to maintain and create new designated areas, as per the 2006 Early Day Motion, after the Regulations come fully into force.

He suggests that healthcare premises have protocols in place for protecting vulnerable patients throughout the whole of their patient journey, including during transfer from one part of the premises to another. He also wishes for emergency packs to be more widely available in healthcare premises – packs consisting of curtains or blinds of total black-out material to cover windows and doors – and for portable luminaires with incandescent lamps to be available.

¹ *Based on the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR)'s estimations – see http://ec.europa.eu/health/archive/ph_risk/committees/04_scenihr/docs/scenihr_o_019.pdf

Other approaches, advocated by leading clinicians in the field of light sensitivity, are also worth considering (see opposite/ below).

Meanwhile, the EU Commission's Directorate General for Health and Consumers, because of the continuing health concerns from certain parties about the effects of new light sources, has now asked the SCENIHR to compile a further report; SCENIHR have convened a working group to address this.

The Government continues to be in discussion with groups representing those for whom the use of CFLs can aggravate pre-existing light-sensitive conditions. As well as with individuals, discussions have been held via the All Party Parliamentary Groups on lupus and lighting.

The Department of Health is keen to hear from estates professionals with experience of this issue. Please contact Phil Ashcroft with any examples of good practice, so that they may be more widely shared: Philip.ashcroft@dh.gsi.gov.uk.

The clinicians' view

We spoke to two leading clinicians, Prof James Ferguson, Head of the Photobiology Unit at Dundee University, and Dr Bob Sarkany, Head of Photodermatology at Guy's and St Thomas' in London, about how estates and facilities managers could approach the phasing in of energy-efficient lighting with regard to light sensitive patients. Their advice is as follows:

"Gaining an insight into the condition of light-sensitive patients is a good thing in itself. It will help you to understand why low-energy lighting is a potential concern to them.

"Fluorescent devices and energy-saving lights that emit UV and blue light can trigger adverse reactions in light sensitive patients. So in healthcare settings, we would encourage the use of plastic lighting diffusers and other preventive measures, such as applying clear polyester coatings to existing glass, to keep out almost all UV light. Products such as DermaGuard work well equally at home and in healthcare environments.

"Testing of CFLs – both the filtered and non-filtered type – with photosensitive patients has shown that those bulbs with a double-plastic envelope are effective in filtering most UV rays. However, these bulbs are not certified so there is a lack information and awareness within the population at

large, and within the photosensitive community, about which products may be better for their health.

"Our advice to staff working in a healthcare setting would be: 'Aim to respond sensitively and sensibly to requests made by photosensitive patients.' Most patients have developed their own strategies for dealing with their condition – from choosing to walk on the shady side of the street to sitting in the darker part of a reception area. Healthcare staff should listen to their concerns and help to identify and alleviate potential issues on a case-by-case basis. Clinicians will make a judgement call, based on the patient's particular condition, and elicit support from key support staff, including healthcare estates teams, to deliver the best possible outcomes for each patient.

"Understanding why such requests are made and responding positively to them is a step in the right direction."

Professor James Ferguson is Head of the Photobiology Unit and Consultant Dermatologist in the Department of Dermatology, Dundee University.

Dr Robert Sarkany is Consultant Dermatologist and Head of Photodermatology at Guy's and St Thomas's NHS Foundation Trust

Further information

- EC Regulation 244/2009 Ecodesign requirements for non-directional household lamps places restrictions on the type of lamps that can be manufactured and imported in order to improve energy efficiency and reduce mercury emissions from the manufacture of lamps. Certain types of inefficient lamp will be banned. Find out more at: www.netregs.gov.uk/netregs/businesses/111486.aspx
- To find out more about energy-saving lamps, go to www.energysavingtrust.org.uk/Energy-saving-products/Energy-saving-lightbulbs-and-fittings
- To obtain the current report from the SCENIHR, visit http://ec.europa.eu/health/archive/ph_risk/committees/04_scenihhr/docs/scenihhr_o_019.pdf

- Health Protection Agency advice on using doubly encapsulated CFL: www.hpa.org.uk/NewsCentre/NationalPressReleases/2008PressReleases/081009Emissionsfromcompactfluorescentlights/
- Visit Spectrum's website: <http://web.mac.com/johnmryder/iWeb/Spectrum/Home.html>

Spectrum was founded by Ruth Calder in 2007 when the government announced the banning of incandescent lamps in favour of fluorescent tubes, low energy lamps, halogens and LEDs by 2011. Spectrum represents various charities whose members suffer from light sensitivity. The 2006 Early Day Motion (1316) can be found at: <http://edmi.parliament.uk/EDMi/EDMDetails.aspx?EDMID=33091&SESSION=885>