Light and Public Health

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SLL Masterclass, Library of Birmingham, 23 October 2014

Public Health England
We protect and improve the nation's health and wellbeing, and reduce health inequalities.
PHE is an executive agency, sponsored by the Department of Health.

About us

Why PHE?

Laser and Optical Radiation Dosimetry Group (LORD)

Advice

Commercial Services

Research

Standards

Advice
Light and Public Health – SLL Masterclass

John O’Hagan

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2
Optical Radiation Interactions - People

Laser Pointers

1997

PHE Centre for Radiation, Chemical and Environmental Hazards

Trader’s Web Site

Home Use Devices

PHE Centre for Radiation, Chemical and Environmental Hazards

Toys

Fluorescent Lights

PHE Centre for Radiation, Chemical and Environmental Hazards
Tungsten halogen floodlamp

Blacklights

Blacklights

Light Bulbs

Legislation – use of ICNIRP Guidelines

ICNIRP GUIDELINES
ON LIMITS OF EXPOSURE TO LASER RADIATION OF WAVELENGTHS BETWEEN 180 nm AND 1,000 µm

ICNIRP GUIDELINES
ON LIMITS OF EXPOSURE TO INCOHERENT VISIBLE AND INFRARED RADIATION

Adverse health effect (very) unlikely

ELV x ?

“Dose”

Probably OK under “most” circumstances of exposure

ELV

Adverse health effect likely

Adverse health effect (very) unlikely

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Legislation - Europe

on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation) (with individual documents within the meaning of Article 16)(of Directive 89/999/EEC).

2006/154/EC
HEALTH AND SAFETY
The Control of Artificial Optical Radiation at Work Regulations 2010

Product Safety Standard

BS EN 62471:2008
BSI British Standards
Photobiological safety of lamps and lamp systems

Benefit – Manchester, January 2013

Measuring and using light in the melanopsin age


Trends in Neurosciences January 2014, Vol. 37, No. 1

So what?

We don’t yet know!
Still working out:
the right light (spectrum/spectral irradiance)
at the right time
for the specific person
doing that activity
with their past light exposure history
for the right duration
CIE – Founded in 1913

Advancing knowledge and providing standardization to improve the lit environment

The International Commission on Illumination is devoted to worldwide cooperation and the exchange of information on all matters relating to the science and art of light and lighting, colour and vision, photobiology and image technology.

With strong technical, scientific and cultural foundations, the CIE is an independent, non-profit organization that serves member countries on a voluntary basis.

CIE Divisions

Division 1: Vision and Colour
Division 2: Measurement of Light and Radiation
Division 3: Interior Environment and Lighting Design
Division 4: Lighting and Signalling for Transport
Division 5: Exterior Lighting and Other Applications
Division 6: Photobiology and Photochemistry
Division 8: Image Technology

Work in CIE

Each Division
Technical Committees
Volunteers commit to work
Publish documents
Organise meetings/seminars/workshops
Quadrennial Sessions

President - CIE

Professor Ann Webb
University of Manchester
CIE Publications
Conference and Symposia Proceedings
Standards
Technical Reports and Guides
Technical Notes

www.cie.co.at

The National Illumination Committee of Great Britain (CIE-UK) is the member body for UK of the CIE.

Founded in December 2013

CIE-UK Structure
Trustees
Chairman – Nigel Pollard
Council
Sponsoring Organisations (SLL & ILP)
Cooperating Organisations
Universities
Individuals
Discounted CIE publications – 66% discount to members!

CIE is a Gold Associate

First time since 1975

Thank you for listening

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