

Blue light: is it harming my vision?



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What is it and why is it important?

The visible light that our eyes can see is composed of a spectrum of colours, just like a rainbow. Sunlight consists of the entire spectrum of light so we are exposed to the blue light part of the spectrum every time we are outside. Increasingly our eyes are exposed to additional sources of blue light when we are indoors as well. These sources include the backlit displays of our handheld digital devices and TV screens, as well as LED and compact fluorescent light bulbs. By 2020, 90% of all of our light sources are estimated to be LED lighting.

Is this a bad thing?

We can think of good and bad blue light. The shorter the wavelength of light the more energy it contains, the more discomfort it can cause us. We need exposure to the good, longer wavelength, blue light as it helps to regulate our moods and our sleep patterns as well as aiding our memory. However, the high energy of the short wavelength blue light creates flicker that reduces our contrast vision and causes glare.

This can be tiring for the eyes, more so over prolonged periods, causing symptoms such as tiredness, dryness, blur and headache. Blue light exposure in the evenings may also interfere with how well we sleep. It is understood that repeated exposure to blue light can cause degeneration of some important cells for vision on the retina at the back of the eye.

What can I do to address the problem?

Outdoors, sunglasses with the correct tints or coatings are perfect for protection from blue light. Indoors, there are now spectacle lenses designed specifically for this purpose. Blue light filtering lenses block out the harmful wavelength blue light and let the good blue light through.

Results have shown that for people experiencing symptoms that the lenses help their eyes to feel less gritty and dry and that other symptoms of eyestrain were reduced by half. Wearing them in the evenings when at the computer or watching television, makes a notable difference, with the eyes feeling less tired. While blue light filtering lenses look clear, lenses with yellow tints can also block the blue light and help with symptoms experienced when looking at blue light sources through the day.

If you are concerned about the effects of blue light on your vision, please discuss them with optometrists.

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