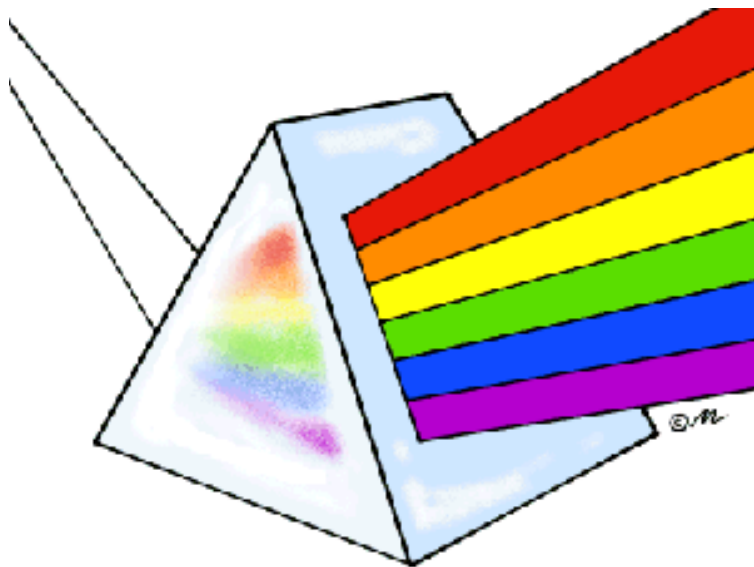


When the Light You See is Not the Light You Want

What is blue light, and what harm can it do?



Blue light is part of the spectrum of white light, as the English genius Isaac Newton (1643-1727) discovered when he shone white light through a prism. As scientists discovered centuries later, it is this part of the spectrum that has special effects on our nervous system.

First, when blue light hits cells in the retina--cells not related to vision, but to regulating our circadian rhythms, or internal clock--it tells our bodies that it is daytime. This message energizes us, which is fine when we want to listen to a lecture, or play tennis, but not convenient if we are trying to chill out.

Second, exposure to blue light in the evening, or during the night, tells our body that it is still time to be awake, and pushes our body's perception of bed-time into the future. That's why exposure to white light before going to bed is likely to keep you up.

Third, blue light at night can harm the eyes. At the risk of oversimplifying the mechanisms involved in sleep, the hormone melatonin, released daily by the pineal gland, is most abundant at night. Melatonin's presence in the retina makes us more sensitive to blue light. Consequently, at night we are most attuned--and vulnerable--to blue light.

And fourth, new research shows that blue light administered from a light box increases food craving and eating ... and, yes, weight gain!

Three Ways to Get the Right Amount of Blue Light

Tone down your computer. To help yourself keep normal hours, you may want to reduce your exposure to white (full-spectrum) light before bed-time. Installing [f.lux](#), a free application which gradually changes the quality of light your monitor gives off during the day and night, will reduce your exposure to blue light during the evening and night.

Nightlights. In addition to minimizing your exposure to blue light in the evening, avoiding blue light at night is common sense. If you (or your children) tend to get up during the night, and use (white) light, you could switch to sensible amber-colored [nightlights](#) that do not wake up your nervous system when you want to go back to sleep. Think lullaby, not fire alarm.

Protective eyewear. Forget Google glasses. If you really want to be smart, wear glasses that will screen out the blue light that makes you alert, but sometimes hyper, when you want to be relaxed.

You may miss being able to tell your Google glasses to take a photo, but you will feel better with eyewear that uses the science of circadian rhythms to create glasses that allow you to work under bright white lights without a problem because the glasses filter out the right part of the spectrum. Consequently, these glasses help you get to sleep earlier.

For a detailed explanation of the benefits of CET's protective eyewear, please visit [our store](#).