

BAD NIGHT'S SLEEP? BLUE LIGHT MAY BE WHY

Artificial blue light may be wreaking havoc on our sleep cycles—and much more.

BY ERIKA FITZGERALD

Ever wake up feeling like you landed in a different time zone with a case of jetlag after late-night Instagram scrolling? Or after bypassing the “Are you still watching?” screen on Netflix more times than you care to admit? Well, you may have a blue light hangover.

A recent report from the New Zealand Royal Society suggests that our increasingly “plugged in” lifestyle is wreaking havoc on our internal clocks—and the world at large. Here’s what you need to know before you power-up the brightness in your life. >>



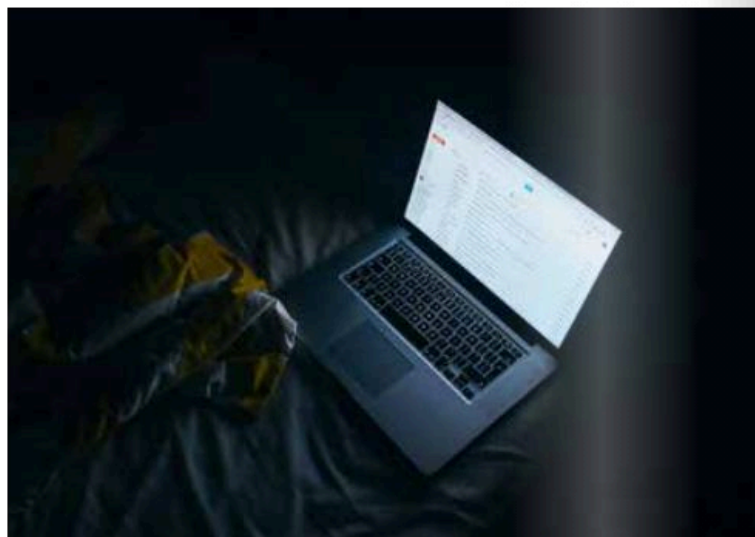
ERIKA FITZGERALD is a writer and traveler with a healthy addiction to kombucha and kale.

#1 WHAT IS BLUE LIGHT?

Simply explained, blue light is a high-frequency wavelength that appears naturally with sunlight and moonlight. The amount of natural blue light varies based on location and weather but typically peaks in the early afternoon.

Like all living things, we rely on this daily cycle of light and dark to wake up, stay up, wind down, and go to sleep. Soaking up blue light wavelengths at appropriate times during the day is good for all life on earth. In contrast, after-hours exposure to artificial blue light from things like energy-efficient LED bulbs and digital screens is cause for concern.

The advent of blue light-emitting electronics and lighting is adding blue wavelengths to our environment at mind-boggling speed. In many ways, man-made light makes modern life easier. So what's the problem?



#2 A GLOWING CONCERN

Our brain receives environmental cues from our eyes, aligning when we feel sleepy or alert with the time of day. Exposure to blue light wavelengths after dark confuses our brain about the time of day. The result: trouble sleeping, morning grogginess, and impaired focus and productivity. Nothing sleeping pills and a double shot of morning espresso can't fix, right? Well, according to research from Harvard Medical School, basking in blue light outside of our natural circadian rhythm may also contribute to the causes of diabetes, heart disease, obesity, and certain types of cancer, as well as eye strain, cognitive dysfunction, and depression.

Our circadian clocks regulate many important functions, including metabolism, immune function, behavior and mood, and—of course—sleep. When these systems get thrown out of whack, our overall health and well-being suffers the consequences.



#3 BEYOND DEEP SLEEP

Many of us spend a whopping 10 hours per day glued to a screen, according to a Nielsen media usage report. Not only does this mess with our sleep—but recent studies suggest it may also accelerate skin aging.

In 2014, the journal *Pigment Cell & Melanoma Research*, wrote that skin exposed to blue light showed “significantly more pronounced hyperpigmentation that lasted up to three months.” This doesn't mean you should shun all your blue light-emitting devices and buy a pricey skin serum promising protection from blue light.

Experts say there's still a lot of research to be done on the relationship between blue light and premature aging. In the meantime, stick with your everyday broad-spectrum sunscreen and limit your screen time as much as possible. >>



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#4 NATURAL CONSIDERATIONS

We humans aren't the only ones feeling the effects of artificial blue light. Plants, animals, and microorganisms also rely on light cycles to guide behaviors like photosynthesis, pollination, migration, hibernation, and reproduction. Blue light in particular influences circadian clocks in plants and animals.

As cities grow and switch from traditional orange-yellow light-emitting street lights to white LED ones, we see an increase in blue light at night—which not only confuses the circadian rhythms of our fellow earthlings but also creates unhealthy light pollution. If you've ever looked up at the night sky from a crowded city, you may have noticed a starless glow looming overhead. This artificial "sky glow" is a result of scattered artificial light. All man-made light pollutes the night sky but blue light scatters especially easily, obscuring our solar system and altering our natural environment.

While modern LED lights are good for saving energy, they can also interrupt natural biological processes that keep our ecosystems healthy. To be a good neighbor, simply shut off unnecessary outside lights and direct light downward so that it doesn't spill into the night sky.

#5 THE FUTURE IS BRIGHT

Artificial blue light is still relatively new on the scene, meaning more research is needed to determine longer-term effects in many aspects of our daily lives. But the good news is, you can avoid it simply by replacing bright-white light bulbs with warmer soft-white ones, reducing screen brightness, using night-mode apps that reduce blue light emission, or better yet, unplugging with a good old-fashioned book.

If you spend a lot of time behind a screen, blue light blocking glasses—or "blue blockers"—also work well to filter blue light. More and more optical brands are offering blue blockers with and without prescription lenses. You can pick up a pair of non-prescription blue blockers for less than \$100. As the famous song lyrics go, "I wear my blue blockers at night, so I can, so I can sleep." (Or something like that. You get the gist.) **SLO LIFE**