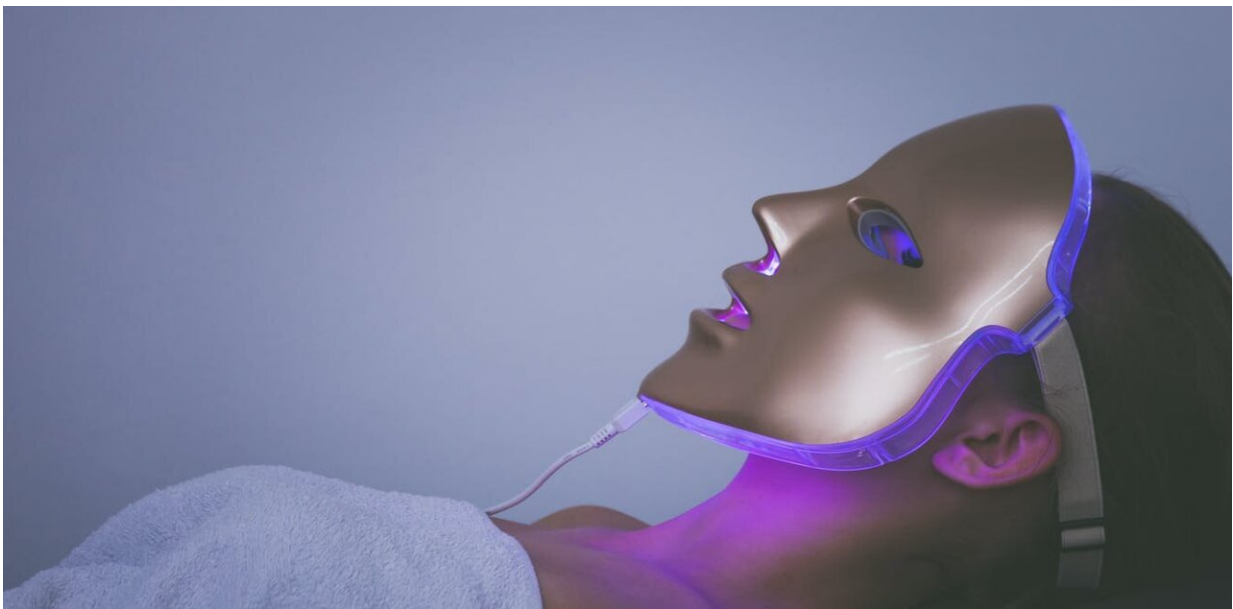


LED face masks are popular on social media for glowing skin, but they could disrupt your sleep

November 1 2021, by Dean J. Miller



Credit: Shutterstock

LED face masks are the latest device promoted on social media as a marriage of technology and beauty.

A range of celebrities have endorsed portable versions of the product that was previously offered in beauty salons. Actress Olivia Munn [carries hers with her at all times](#). Julia Roberts, Victoria Beckham and Chrissy

Tiegen are also [reportedly](#) fans. The trend has even achieved the social media holy grail—a Kardashian Instagram [post](#).

But regardless of whether they'll help make your skin glow, our understanding of circadian rhythms suggests they have the potential to disrupt users' sleep-wake cycles.

Daily rhythms

The human body has its own internal clock which, among other things, helps to control our sleep-wake patterns. This internal clock is influenced by several factors, the most potent being [light exposure](#) directly into the eyes. More specifically, short-wavelength "blue light" [influences this system the most](#).

Exposure to this type of light at night has been shown [interrupt the production of melatonin](#)—also known as "the sleep hormone." [Melatonin](#) is produced by the pineal gland in the brain and released within 2 hours of your habitual bedtime—preparing the body for sleep. But bright blue light exposure may interrupt this process.

There are a range of sources for blue light—including our beloved phones, [electronic devices](#) and also the room lighting in our homes. While it has become a common recommendation to avoid using electronic devices close to bedtime, in the context of blue light exposure, our phones and tablets [do not seem to be bright enough to impact sleep](#). In fact, home lighting appears to have a greater influence—likely due to the [transition to energy-efficient LED, "blue light" wavelength light](#).

Last year, Monash University researchers examined sleep and light exposure in 57 participants, finding that [nearly half of them had LED lighting that suppressed melatonin by 50%](#). The study also found those with greater evening light exposure had increased wakefulness after

bedtime.

Insufficient sleep has been shown to increase the likelihood of poor health outcomes, including [cardiovascular disease](#).

How face masks compare to other LED sources

LED mask manufacturers say they are [the "future of skin care,"](#) with masks emitting light at different wavelengths to target particular skin-related outcomes.

Several devices are FDA-approved in the United States, and claim to [target acne with "blue light" modes](#)—the precise wavelength range that may impact melatonin production.

To date, no experimental research studies have examined the impact of these devices, and their blue light settings, on sleep or the human body clock. But given the [device's](#) proximity to users' eyes and the intensity of LED light bulbs, it is reasonable to flag concerns about their possible impact on our body clock.

[Sean Cain](#), a leading scientist on the impact of light exposure on human health, coined an analogy to provide perspective to the sources of artificial light. The [light](#) we receive from electronic devices can be thought of as like a glass of water being poured over your head, while home LED lighting is more like a bucket of water. In keeping with this analogy, could LED masks be something on the scale of a bathtub or swimming pool? Further research could quantify their effect.

You can still make like a Kardashian ... in the daytime

These concerns, based on well-established circadian principles, do not rule out the use of these devices entirely. However, it is important for

people who use them to avoid doing so at night—especially on the [blue light](#) settings.

Ideally, use of the masks should be during daylight hours, to avoid potential sleep disturbances and/or shifts in the [human body](#) clock. Future research could clarify any negative outcomes associated with these devices and potentially prompt manufacturers to provide recommendations on the timing of their use.

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