

How technology can help you get a better night's sleep

March 16 2018, by Bev Betkowski

It's smart to turn off mobile devices and other small screens at least an hour before bedtime, but technology can also help us power down for a good night's sleep, says expert Cary Brown, a researcher in the University of Alberta's Faculty of Rehabilitation Medicine.

"Technology has created so many of the problems we have with sleep, so it would be naive to think we can turn back the clock to the days before smartphones, laptops and other blue-[light](#)-emitting devices. But, if we understand how to use it wisely, technology can also be used to facilitate sleep," said Brown, a professor in the Department of Occupational Therapy.

"If we attend to light, sound and temperature, we are going a long way to setting things up for a better sleep. These are low-hanging fruit, and we should select them first so that the need for the big interventions—like medication and cognitive behavioural therapy—are minimized and potentially eliminated."

She suggests checking out these devices, available online:

Light-blocking glasses

These orange-tinted goggles are designed to block blue spectrum light, which suppresses the melatonin production we need to sleep. But be sure to get the real thing: there are cheap imitations available that are the

right colour, but the plastic doesn't have light-blocking properties.

White noise machine

This small electronic gadget can mask noise—anything from a ticking clock to a snoring roomie—by providing a consistent, low-key hush that fades into the background, taking distracting sounds with it. An electric fan can also provide [white noise](#).

SAD light

Named for [seasonal affective disorder](#), these small, portable therapy lights are good for dimly lit workplaces. Set up off to the side of a desk and turned on twice a day for 10 minutes at a time, they provide enough blue spectrum light to chase away daytime drowsiness, so people can stick to their normal sleep cycle. Don't use it later than 4 p.m., Brown advised.

Retimer light therapy glasses

Like the SAD light, these high-tech goggles, when worn for about 20 minutes, provide doses of blue spectrum light close to the eyes to help manage sleep rhythm. They can be helpful in re-establishing a sleep schedule affected by jet lag or shift work.

Sleep tracker

This technology, which ranges from a simple wristband to full-bed monitoring systems, won't directly contribute to a better night's rest, but it records heart rate, respiration and movement. "It can help determine if there are disruptive patterns. For instance, if you play hockey on Tuesday nights, it can determine over time if that affects your sleep,"

said Brown.

LED light bulb

Originally developed for astronauts at the International Space Station, a new type of LED bulb filters out blue spectrum light, so it is perfect for use in bedside lamps.

Earplugs

Earplugs are a low-tech solution, useful for people who have to sleep in environments where they cannot get the sound lower than 30 decibels, about the level of a whisper. After 30 decibels, the body produces neurochemicals to alert and awaken a person. Brown suggested silicone earplugs to conform better to the ear.

Provided by University of Alberta

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