- Screen time

Are your devices keeping you awake?

Why do screens keep you up? It may not be the blue light.

The Star Malaysia · 8 Sep 2025 · 1

Experts have long warned about the dangers of blue light before bed. When exposed via smartphones, tvs, laptops and other devices, our brains suppress the production of the hormone melatonin, which normally makes you feel drowsy. As a result, you feel more alert, making it harder to fall – and stay – asleep.



But the link between blue light and sleep is murkier than we thought, said Lauren E. Hartstein, an assistant professor of psychiatry at the University of Arizona. she and other researchers have been taking a closer look at the evidence, which suggests that blue light alone may not be causing poor sleep. And in some cases, screen use could even help you drift off.

Here's what studies on blue light actually suggest – and what may help you sleep more soundly.

Research on blue light and sleep is mixed

Many of the available studies on blue light and sleep are old and are limited by their small sample sizes. they were also often performed in carefully controlled laboratories, so their results don't always reflect real life, Hartstein said.
While it's true that blue light exposure can sink melatonin levels, the limited evidence we have suggests that screen use does not always cause this dip, said Mariana Figueiro, a scientist at the Icahn school of Medicine at Mount sinai in New York City who studies how light influences health.
Some of Figueiro's research suggests, for instance, that how long you use your device for, how close it is to your eyes and how bright it is may play a role. One of her studies from 2013 found that using an ipad at full brightness for two hours caused melatonin levels to drop slightly, whereas using it for one hour caused no change. Another study from 2014 concluded that watching television from 9 feet away had no effect on melatonin levels. And using an ipad at a higher brightness level may suppress melatonin more than using it at a lower brightness level, according to a 2018 study.
What you do during the day may also influence screen-related melatonin drops at night. the more bright sunlight you're exposed to during the day, some research suggests, the less susceptible you may be to an evening dip.
Some people are more sensitive to blue light than others, Hartstein added. In one study published in 2019, researchers exposed 55 adults to a range of light levels (including blue light) during the evening. they found that one participant needed 40 times more light exposure to get the same degree of melatonin suppression as the most blue-light-sensitive participant.
However, it's still not clear whether the levels of melatonin suppression from screen exposure are enough to impair sleep in the first place, Figueiro said.
If a study participant's sleep was disrupted after screen use, it's challenging to know if that was because of the blue light, or something else such as late afternoon caffeine, stress or a snoring bed partner.
The conclusions of these studies are also often mixed. In a 2022 review, researchers analysed two dozen studies on how blue light affected sleep in young adults. Many of the studies found no link between blue light exposure and poor sleep, while a few did.
Last year, the National sleep Foundation concluded that there wasn't enough evidence to demonstrate that blue light exposure from screen use before bed can impair sleep.
"We really need more research," said Allison Harvey, a professor and clinical psychologist at the University of California, Berkeley.
How you use screens may be important
While we don't know exactly what it is about screens that affects our sleep, some research suggests that what you're doing on them can play a big role, Hartstein said.
Interactive activities like playing video games, browsing social media, shopping and gambling are among the worst types of screen use for your sleep, said Dr Daniel Buysse, a psychiatrist and professor focused on sleep at the University of pittsburgh. these behaviours engage the brain's reward system, which can keep you awake and glued to your device well into the night, he said.
social media use is especially concerning, Buysse added, because it's designed to keep you immersed for as long as possible.
Potentially rewarding digital activities, like communicating with friends and playing games, as well as distressing ones, like endlessly scrolling through unnerving news articles or videos, can also stimulate your brain in a way that makes it difficult to sleep, Hartstein said.
You can switch the device off, but "you can't turn your brain off", she said.
A 2024 study of about 500 15year-old boys found that those who said they talked, texted or played video games on a device before bed tended to fall asleep later and sleep for less time than those who said they did not.
There's less consensus about how other types of screen use, like watching television or reading, may affect sleep, Hartstein said. And it may depend on what you're watching or reading on your device, she said.
Starting a new, suspenseful drama to read or watch will most likely impair your sleep more than rewatching or rereading an old, comforting series, Harvey said. If you already know the outcome, you'll have an easier time turning off the tv or e-reader and falling asleep.
The 2024 study on teen boys found that those who reported watching television or movies on any device before bed experienced no difference in their sleep than those who said they did not. the study, however, didn't note the type of movie or show they reported watching.

For people who struggle with a cycle of negative thoughts just before bed, watching certain types of tv shows or movies or reading something relaxing on a tablet may be beneficial.

The content should be engaging enough to distract from their negative thoughts yet boring enough so that it doesn't keep them up.

The "sweet spot" seems to be something positive and familiar, like a scripted comedy, said Aric prather, a psychologist at the University of California, san Francisco, who treats insomnia. the "go-to rumination killer" for one of his patients, prather said, is "It's Always Sunny in Philadelphia."

Whatever you decide to read or watch, try to avoid doing it in your bed. that separation helps your brain associate your bed with one thing – sleep, Hartstein said.

Ultimately, you may find that your screen use is not affecting your sleep at all, Hartstein added. In that case, she sees little reason to cut back.

"If you are able to fall asleep quickly, you sleep well throughout the night, and you feel rested the next day, then that's great," she said. "You don't need to constantly adjust your behaviours."