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Is it true that ... the blue light from night-time scrolling can stop you sleeping?

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Struggling to nod off? It's easy to blame the phone that's just inches from your face and the never-ending newsfeed your thumb is busy scrolling as you lie in bed. But the idea that it's the blue light emitted by your smartphone that's disturbing you isn't quite right.

While blue or short-wavelength light (such as daylight or that emitted by tech) does affect our circadian rhythm, things are less clear cut than we often think.

"Sleep is a complex process," says Stuart Peirson, professor of circadian neuroscience at Oxford University.

He explains that while the receptors in our eyes that tell our brain when it's time to be awake are triggered by cells that absorb blue light, they're also triggered by those that absorb longer wavelengths of light (such as red) too. Which means it's not the colour of the glow that's the problem, it's the brightness and length of time we're exposed to it for – and the screens of our phones are actually pretty dim.

Daylight is 1,000 times brighter than the average light emitted by a phone. Room lighting is, on average, 10 times brighter. (This is why turning off the big light as you wind down in the evening can help you feel sleepier.)

"Technically, blue light from smartphones can affect sleep," says Peirson. "But these effects are small unless you are using your phone for hours with a bright screen and already have sleep problems." In lab studies at Harvard University, even around four hours of light exposure from an e-reader at full strength had only a relatively small effect: a 10-minute delay in sleep onset. In fact, your sleep is more likely to be affected by the kinds of content you're consuming.

If you think light is impacting your sleep, Peirson says you don't need to spend money on special "blue-light blocking" glasses. Instead, he recommends decreasing your screen time and turning down the brightness on your phone.