Blue light effect on sleep

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Melanopic irradiance defines the impact of evening display light on sleep latency, melatonin and alertness

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Abstract

Evening light-emitting visual displays may disrupt sleep, suppress melatonin and increase alertness. Here, we control melanopic irradiance independent of display luminance and colour, in 72 healthy males 4 h before habitual bedtime and expose each of them to one of four luminance levels (i.e., dim light, smartphone, tablet or computer screen illuminance) at a low and a high melanopic irradiance setting. Low melanopic light shortens the time to fall asleep, attenuates evening melatonin suppression, reduces morning melatonin, advances evening melatonin onset and decreases alertness compared to high melanopic light. In addition, we observe dose-dependent increases in sleep latency, reductions in melatonin concentration and delays in melatonin onset as a function of melanopic irradiance—not so for

Article in Nature.com Journal

Who: People who look at screens a lot. us.
What; Impact of screens on melatonin(it dramatically inhibits it, while also increasing general alertness. Not good for sleep.
When: At night.
Why: blue light is an inhibitor of melatonin production in the Pineal gland(center of the brain)
Source: Nature.com Journal