

# Sleep and teenagers: Scientific notes

## REDUCING BLUE LIGHT

### About getting natural light

Natural light is an environmental cue that influences your body's natural 24-hour clock (or circadian rhythm). Cells on the retina in the eye detect the light and cause a decrease in melatonin release (a hormone that makes you feel sleepy) and an increase in the production of serotonin (a hormone that boosts mood). Therefore, getting some natural light exposure in the morning will make you feel more awake during the day, and is shown to improve mood, sleep quality, physical health, and mental health.

### The scientific evidence behind getting natural light

Research supports the beneficial effects of morning light exposure on sleep duration and quality, daytime alertness and mood regulation. The main mechanisms are described, including the effect of natural light on melatonin suppression and availability of serotonin.

Blume, C. et al. (2019). Effects of light on human circadian rhythms, sleep and mood. *Somnologie (Berl)*, 23(3), 147-156, DOI:10.1007/s11818-019-00215-x

Gauthier-Gagne, G. et al. (2023). Associations between multidimensional sleep health parameters and adolescents' self-reported light exposure in the free-living environment. *Journal of Biological Rhythms*, 0(0), doi:10.1177/07487304231152987

### Further reading on getting natural light

The Sleep Foundation provide lots of information on circadian rhythms, melatonin and sleep cycles in this article on 'Light and Sleep': <https://www.sleepfoundation.org/bedroom-environment/light-and-sleep>