

Artificial light from smartphone may disturb sleep

By ACSH Staff — February 11, 2014



Smart phones make life simple by centering work, home, and extra curricular responsibilities into one space but efficiency comes at a cost. New research reports the negative effect of light, emitted by most modern gadgets, on sleep.

In our society, artificial light can infiltrate at any hour of the day, most prominently from our mobile devices. A Facebook-sponsored study designed to understand how smartphone owners use their phones over the course of a day and week reports 79% of respondents have their phone on or near them for all but 2 hours of their waking day. This sustained input of light can interrupt sleep and result in sleep disorders. Especially detrimental is the particularly disruptive effect that the blue wavelength light emitted by smartphones and tablet screens has on our sleep-related hormonal milieu.

Our bodies keep time through a biological process called the circadian rhythm, which is regulated by diverse factors including a sleep-promoting hormone called melatonin. The control of melatonin release is directly related to light exposure. Thus, more light inhibits melatonin, suppressing sleep and activating alertness.

Remaining attached to our smartphones then is quite literally an unhealthy relationship.

Smartphones in our bedroom at night can not only cost us sleep, but also induce threat vigilance, [according to](#) ^[1]Dr. Orfeu M. Buxton, a neuroscientist and assistant professor in the division of sleep medicine at Harvard Medical School. This phenomenon is indicative of a persistent state of alertness, which is the hallmark of insomnia, says Dr. Buxton.

ACSH's research associate, Anisha Contractor, had this comment: Even independent of the effect of artificial light on the sleep cycle and circadian rhythms, people are so connected to their online lives that simply having your phone by your bed makes it more likely you'll wake up, grab your phone to check e-mail and the next thing you know, your cell phone alarm will start buzzing.

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[1] <http://bits.blogs.nytimes.com/2014/02/09/for-a-restful-night-make-your-smartphone-sleep-on-the-couch/>