

Being a Night Owl Is Linked to Depression

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STORY AT-A-GLANCE

- › People with evening chronotypes, otherwise known as night owls, had more symptoms of depression compared to those who go to bed early and wake early
- › Strategies to regulate your circadian rhythm, like exposure to sunlight during the day and avoidance of blue light at night, could benefit your mental health
- › Ideally, go to bed by 9 p.m. or 10 p.m.; if you're a night owl and have no intention of trying to go to bed earlier, wear blue light-blocking glasses after the sun goes down to help protect your health

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Everyone has a chronotype that dictates when they are naturally predisposed to sleep and wake. For people with evening chronotypes, otherwise known as night owls, research suggests your mental health could be influenced by the associated staying up late and sleeping in.

The study, which was presented at the Endocrine Society's 2017 annual meeting in Orlando, Florida, analyzed data from nearly 500 people with Type 2 diabetes.¹ Those with a later chronotype had more symptoms of depression compared to those who go to bed early and wake early,² a finding that could also influence their diabetes outcomes, since depression is linked to diabetes complications.^{3,4}

It could be possible, then, that strategies to regulate your circadian rhythm, like exposure to sunlight during the day and avoidance of blue light at night, could also

benefit your mental health.

However, some people may have a hard time trying to live out of harmony with their chronotype. In this case, if you're a night owl and have no intention of trying to go to bed earlier, wear **blue light-blocking glasses** after the sun goes down to help protect your health.

Regardless of chronotype, the study also found poor sleep quality was associated with depression symptoms — an important link that everyone should be aware of.

The Link Between Sleep, Light Exposure and Depression

Lack of sleep has long been linked to depression, but the 2017 study linking night owls with depressive symptoms could have its roots in light exposure at night. An animal study conducted at Ohio State University Medical Center found, for instance, that chronic exposure to **dim light at night can cause signs of depression** after just a few weeks.⁵

The study also showed changes in hamsters' hippocampus similar to brain changes seen in depressed people, with researchers pointing out that rates of depression have risen along with exposure to artificial light at night.

The link could be due to the production of the hormone **melatonin**, which is interrupted when you're exposed to light at night. Many studies suggest melatonin levels (and by proxy, light exposures) control mood-related symptoms, such as those associated with depression.

For instance, a study published by researchers at the Oregon Health and Science University found that melatonin relieved **seasonal affective disorder** (SAD), which is sometimes known as "winter depression."⁶ The study found insomniacs have a circadian misalignment in which they are "out of phase" with natural sleeping times.

While your body will begin to produce melatonin only after it's dark outside, the level of melatonin produced is related to the amount of exposure you have had to bright

sunshine the previous day; the less bright light exposure the lower your melatonin levels.

Yet another study about melatonin and circadian phase misalignment found a correlation between circadian misalignment and the severity of depression symptoms.⁷ Studies have also linked low melatonin levels to depression in a variety of populations, including [multiple sclerosis](#) patients⁸ and post-menopausal women.⁹

Is Exposure to LEDs Turning You Into a Night Owl?

The other side of the coin is that we're in the midst of an unprecedented light experiment not only because of the widespread use of artificial light in general but also because over the past years powerful blue LED (light-emitting diode) lights have been added to electronics like smartphones, computers and flat-screen TVs.

LED lights are rapidly replacing earlier lighting technology, including incandescent bulbs and compact fluorescent lamps (CFLs). The problem is that when your brain "sees" blue light at night, the mixed message can add up to serious health issues, and widespread ones at that since the use of TVs, computers and cell phones close to bedtime is so pervasive.

In 2011, researchers found that evening exposure to LED-backlit computer screens affects circadian physiology. Among 13 young men, exposure to five hours of an LED-lit screen at night significantly suppressed melatonin production along with sleepiness.¹⁰ Separate research revealed that "blue light from light-emitting diodes elicits a dose-dependent suppression of melatonin in humans."¹¹

Looking at a tablet for even two hours in the evening is enough to suppress your body's natural nighttime rise of this hormone,¹² while bumping it up to four hours leads to reduced feelings of sleepiness, increased time to fall asleep (by about 10 minutes) and lower quality sleep compared to those who read paper books for the same period.

So while the featured study didn't address this, it's quite possible that one reason why night owls have more depressive symptoms could be due to the increased exposure to blue light at night, and its corresponding effect on lowering melatonin levels.

Sleep Therapy May Be Helpful for Depression

The modern world does not cater to people with evening chronotypes, which means, if you're a night owl, you likely still have to get up early anyway. This means there's a good chance you're skimping on sleep as a result. This lack of sleep – whether by choice or due to a condition like insomnia – also increases your risk of depression.

While it was long thought that insomnia was a symptom of depression, it now seems that insomnia may precede depression in some cases and may even double your risk of becoming depressed.¹³ Research also found that sleep therapy resulted in remarkable improvements in depressed patients.

One study found that 87% of depression patients who resolved their insomnia had major improvements to their depression, with symptoms disappearing after eight weeks whether the person took an antidepressant or a placebo pill. Study participants received four biweekly talk therapy sessions, known as **cognitive behavior therapy for insomnia (CBT-I)**, to treat their insomnia.¹⁴

Unlike sleep hygiene therapy, which focuses on regular exercise, avoiding caffeine and alcohol at night and promotion of other healthy habits for restful sleep, CBT-I teaches people to reserve their bed only for sleeping and involves the following guidance:

- Establish a regular wake-up time
- Get out of bed when you're awake
- Avoid eating, reading, watching TV or performing similar activities in bed
- Avoid daytime napping

The study found that those who overcame their insomnia using this program recovered from their depression at nearly twice the rate of those who did not. If you're having trouble getting to bed on time because you're a night owl, it's possible that sleep therapy could help you adjust your sleeping schedule as well.

Tip No. 1 for Night Owls – Wear Blue-Blocking Glasses After Sundown

If you regularly stay up late, I'd first recommend trying to adjust your sleep schedule so you're asleep by 9 p.m. or 10 p.m. – this is typically when your brain starts progressively increasing melatonin to make you sleepy.

However, if you're awake after sundown, be sure you're wearing blue-blocking, amber-colored glasses. Red and amber lights will not suppress melatonin, while blue, green and white lights – the wavelengths that are the most common outdoors during daytime hours – will.

Once you have your glasses on, it doesn't matter what light sources you have on in your house. I typically put them on around dusk, but if you struggle with sleep issues it would probably be wise to put them on even earlier, especially if your light exposure during the day has been limited.

Alternatively, you could shift to a low-wattage bulb with yellow, orange or red light at sundown if you need illumination. A salt lamp illuminated by a 5-watt bulb is an ideal solution that will not interfere with your melatonin production.

If using a computer or smart phone, install blue light-blocking software like f.lux. The program automatically alters the color temperature of your screen as the day goes on, pulling out the blue wavelengths as it gets late. Wearing blue-blocking glasses is the simplest solution, however, and it's also effective.

Studies have confirmed that when using blue-blocking glasses, people produce as much melatonin as they do in dim light, even if they're in a lit room or using light-emitting technology.¹⁵

Other studies have shown that people using blue-blocking glasses had major improvements in both sleep quality and mood. Shift workers who use them before bedtime (i.e., in the morning when it's bright out) also report improved sleep.¹⁶

How to Reset Your Body Clock

It may not be possible, or advisable, to try to alter your innate chronotype. However, there are certainly some people who identify more as night owls primarily because of environmental factors and not necessarily because they're "hard-wired" that way.

If you think the latter may apply to you, I recommend realigning your circadian rhythm to the natural rhythm of daylight and nightfall. Without this synchronization, aspects of your waking/sleeping system will be working at a less-than-ideal time. The following three factors will help "anchor" your biological rhythm, which will make falling asleep easier while promoting body clock synchronization and optimal health.

- Get bright daylight exposure, ideally around solar noon, for at least half an hour or more each day. This will "anchor" your circadian rhythm and make it less prone to drifting if you're exposed to light later in the evening.
- Then, in the evening, put on blue-blocking glasses and/or dim environmental lights and avoid source of blue light wavelength (this includes LED light bulbs, TVs and most electronic gadgets).
- When it's time to go to sleep, make sure your bedroom is pitch black. I recommend installing blackout shades for this purpose or using a sleep mask. Also, keep in mind that digital alarm clocks with blue light displays could have a detrimental effect, so if you have to use an LED clock, opt for one with a red display, and set it on its dimmest setting.

Are You Ready to Get Some Sleep?

Small adjustments to your daily routine and sleeping area can go a long way toward ensuring you get uninterrupted, restful sleep – and thereby better health, both mental and physical. In addition to what was already discussed above, the following suggestions can also be helpful if you're having trouble falling or staying asleep. You can also review my [Top 33 Tips to Optimize Your Sleep Routine](#) for even more tips.

Address mental states that prevent peaceful slumber – A sleep disturbance is always caused by something, be it physical, emotional or both. Anxiety and anger are two mental states that are incompatible with sleep. Feeling overwhelmed with responsibilities is another common sleep blocker. To identify the cause of your wakefulness, analyze the thoughts that circle in your mind during the time you lie awake, and look for themes.

Many who have learned the [Emotional Freedom Techniques](#) (EFT) find it incredibly useful in helping them to sleep. One strategy is to compile a list of your current concerns, and then "tap" on each issue. To learn how to tap, please refer to our free [EFT](#) guide.

Keep the temperature in your bedroom below 70 degrees Fahrenheit – Many people keep their homes too warm (particularly their bedrooms). Studies show that the [optimal room temperature for sleep](#) is between 60 and 68 degrees Fahrenheit.

Take a hot bath 90 to 120 minutes before bedtime – This raises your core body temperature, and when you get out of the bath it abruptly drops, signaling your body that you're ready for sleep.

Be mindful of electromagnetic fields (EMFs) in your bedroom – EMFs can disrupt your pineal gland and its melatonin production, and may have other detrimental biological effects. A Gauss meter is required if you want to measure [EMF levels](#) in various areas of your home. Ideally, you should turn off any wireless router while you are sleeping – after all, you don't need the internet when you sleep.

Develop a relaxing pre-sleep routine – Going to bed and getting up at the same time each day helps keep your sleep on track, but having a consistent pre-sleep routine or "sleep ritual" is also important. For instance, if you read before heading to bed, your body knows that reading at night signals it's time for sleep. Calming music, stretching or doing relaxation or mindfulness exercises can also be helpful.

Use a fitness tracker to help you get to bed on time and track which activities boost or hinder deep sleep – To optimize sleep, you need to make sure you're going to bed early enough. If you have to get up at 6:30 a.m., you're not going to get enough sleep if you go to bed after midnight.

Many **fitness trackers** can now track both daytime body movement and sleep, allowing you to get a better picture of how much sleep you're actually getting, as opposed to the time you spend in bed. Newer fitness trackers can even tell you which activities led to your best sleep and what factors resulted in poor sleep.

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