

SCIENCE &amp; WELLNESS

# Why Turning Your Clocks Back Gives Your Brain A Boost

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Are you ready to fall back? It's that time of year when it gets harder to drag yourself out of bed in the morning because it is so dark outside. Fortunately, daylight savings time ends on the first Sunday in November when clocks are moved back an hour at 2 a.m. for most of the United States (with the exception of Hawaii and Arizona). This clock shift gives us a brighter morning and helps get us moving during the long, cold, dark winter months soon upon us. Getting that spark of natural light first thing in the morning can bring several welcome benefits to our body and mind this time of year.

## Keeps Body's Rhythm On Track

Sunlight influences our natural daily cycle called the circadian rhythm that controls our biological, mental, and behavioral activities over a 24-hour period. Every living thing relies on circadian rhythms to function, and the amount of light and darkness we are exposed to on a daily basis can impact our lives. Exposure to light is so important because it triggers the genes that control our

internal clocks, turning them either on or off. Circadian rhythms direct our sleep-wake cycles, hormone releases, body temperature, and other important bodily functions. When our circadian rhythm is disrupted, we can experience a host of health issues like sleep disorders, obesity, diabetes, depression, bipolar disorder, and seasonal affective disorder (SAD).

### Improves Sleep

Believe it or not, being exposed to more natural light during the day can actually help you sleep more soundly at night. The light helps to regulate your biological clock and keep it on track and by impacting how much melatonin your brain produces. Melatonin is the chemical that tells our brain when it is time to sleep. When it gets dark, you start producing melatonin so you are ready to sleep in about two hours. Exposure to light throughout the day, particularly in the early morning for at least a half an hour, can help you sleep better at night.

### Increases Productivity

Numerous studies have found that exposure to natural light can improve our productivity at both work and in the classroom. One frequently cited study assessed performance data of 21,000 students from three elementary school districts and found a link between higher test scores and daylight in classrooms. Researchers believe this was due to better visibility, mood, alertness, and behavior of the children in classrooms with more natural light.

In addition, a study by the Swiss Federal Institute of Technology found that employees working in natural light experienced higher levels of energy than those working under artificial light.

### Enhances Mood

Sunlight is a also natural mood enhancer. Exposure to sunlight increases the brain's release of a hormone called serotonin, which is associated with making us feel happier and calmer. The light-induced effects of serotonin are triggered by sunlight that goes through our eye. Sunlight signals special areas in the retina, which triggers the release of serotonin. Without enough sunlight exposure, our serotonin levels can dip, causing us to feel gloomy or even depressed. It also makes people more susceptible to suffering from SAD during the winter months. Of course, spending time outside in direct sunlight comes with a whole host of risks like sun damage, so be sure to wear your sun protection. However, you can still reap the benefits even from enjoying the light from indoors. In addition, the classroom studies found that the natural light improved the mood of their students, keeping them calm and improving their alertness and attention spans.

Enjoy this burst of sunlight in the morning while it lasts, because in the spring we have to start all over when we reset our clocks for Daylight Saving Time again and lose an hour of sleep.



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