

Exposure to artificial light at night is unnatural



In less than 100 years, humans have radically altered our nighttime environment, putting our health at risk. Due to the rapid growth of artificial light at night, most of us spend our nights bathed in light. But basking in all this light at night is not natural and it may be taking a serious toll on our health.

We are only just beginning to understand the potential negative consequences of this swift change in our environment. A growing body of scientific research suggests that artificial light at night can have lasting adverse effects on human health.

“The power to artificially override the natural cycle of light and dark is a recent event and represents a man-made self-experiment.”

—The American Medical Association



Not All Artificial Light Is Created Equally

Warm White 2700K-3500k Natural White 4000 K-4500 K Day White 5000 K-5500 K Cool White 6000 K-7000 K

Exposure to blue light at night is especially harmful because it is particularly disruptive to circadian rhythms and melatonin production. Unfortunately, most LEDs used for outdoor lighting — as well as computer screens, TVs and other electronic displays — create abundant blue light. We recommend using light bulbs that emit warm white light with a color temperature of 3000K or lower.

About DarkSky Ohio

DarkSky Ohio is a nonprofit organization comprised of community members dedicated to protecting Ohio’s natural nighttime environment. We encourage homeowners, businesses, and municipalities to use light at night responsibly

Our Mission

To preserve and protect the nighttime environment and our heritage of dark skies through environmentally responsible outdoor lighting.

Our Goals

- Advocate for the protection of the night sky
- Educate the public and policymakers about night sky conservation
- Promote environmentally responsible outdoor lighting
- Empower the public with tools and resources to help bring back the night

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Artificial Light at Night Can Put Your Health at Risk



DarkSky
OHIO

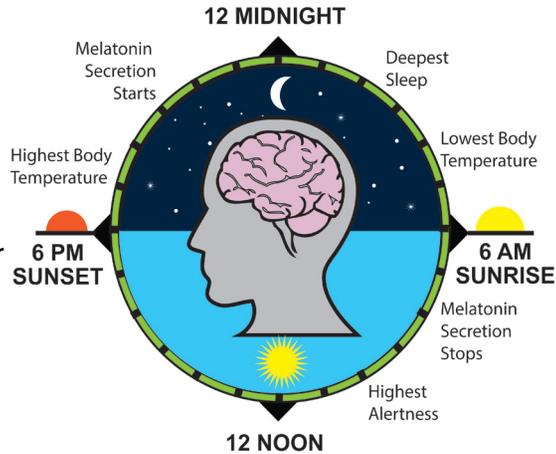
Humans need the natural day/night cycle

Our Biological Clocks Help Keep Us Healthy

What is Circadian Rhythm?

Humans evolved with the rhythms of the natural light-dark cycle of bright days and dark nights. Before the advent of artificial lighting, we spent our evenings in relative darkness.

Like most life on Earth, humans adhere to a circadian rhythm — our master clock, which is crucial for our overall health. It interacts with our body systems, changes our hormone levels and even modifies our genetic code. Natural light helps keep our clock in tune with Earth's 24-hour cycle.



Effects of Circadian Disruption

Circadian disruption may increase our risk of obesity, diabetes, mood disorders, reproductive problems and cancers.

Numerous studies have linked working the night shift and exposure to light at night to increased risks for breast and prostate cancers and other health problems.

Circadian disruption can affect our natural sleep patterns, too. A good night's sleep helps reduce weight gain, stress, depression and the onset of diabetes.

What is Circadian Disruption?

When our master clock is out of sync with the day-night cycle, it's called circadian disruption. Altering or interrupting our normal circadian rhythm can put us at risk for physiological and behavioral impacts. Shift work almost always causes circadian disruption because it puts the internal body clock at odds with the shift schedule.



What is Melatonin?

We don't know why light at night appears to be so bad for us. But we do know that exposure to light at night — even if it's dim — can suppress the body's natural production of melatonin, a hormone that is important for our health including regulating our sleep-wake cycle, metabolism and immune system.



Solutions

- Use only fully shielded, dark sky friendly fixtures for all outdoor lighting, so lights shine down, not up.
- Use only the right amount of light needed. Too much light is wasteful, creating glare and harsh shadows that impair vision.
- Keep the blues away. Two to three hours before bed avoid devices with screens that emit blue light such as tablets, smartphones, computers and televisions.
- If you must use devices at night, install a color temperature app that automatically limits blue light at night based on your time zone.
- Keep your bedroom dark by using blackout curtains and cover or remove light sources such as clock radios and charging stations.
- If you need a nightlight, use one with dim red or amber light. Red light is least likely to be disruptive.
- Use indoor light bulbs that emit warm white light with a color temperature of 3000K or lower. All packaging for new CFL & LED light bulbs provide this information.
- Work with your neighbors and local government to keep light on the ground and the night skies natural.

Glare Impairs Our Vision

Artificial light at night can also create blinding glare from overly bright and poorly shielded outdoor lighting. Aging eyes are especially at risk. The effects of glare are cumulative, meaning that every light source in view impacts our vision. Blue light, like that in many newer LED streetlights, is more likely than conventional light sources to impair our vision.



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for resources and more information.