

HUMANS NEED THE NATURAL DAY/NIGHT CYCLE

Our Biological Clocks Help Keep Us Healthy

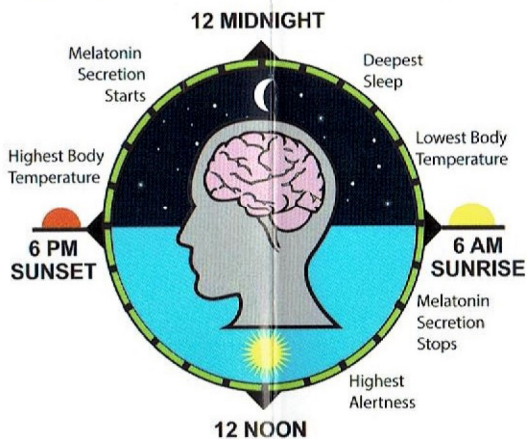
WHAT IS CIRCADIAN RHYTHM?

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.

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.



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 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.

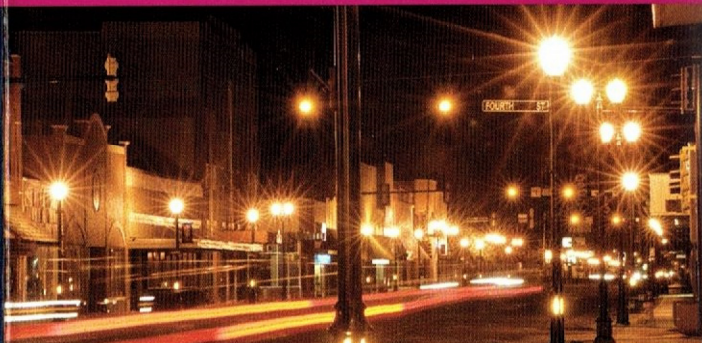


SAFE LIGHTING SOLUTIONS

- Use only fully shielded, IDA dark sky certified fixtures for all outdoor lighting, so lights shine down, not up.
- Use only the right amount of light needed. Too much light is wasteful and can create harsh shadows that impair vision.
- 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 Vision

Overly bright and poorly shielded outdoor lighting can create blinding glare. 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.



Visit darksky.org for more information.

** UPDATE: IDA recommends maximum of 2200 Kelvin; or use amber or "Bug" lights to reduce impacts of blue light waves from LED light sources