



Mind: Light – Circadian Rhythms – Health and Well Being

Body: Less Light – Less Weight!

Spirit: Contentment

Light – Circadian Rhythms – Health and Well Being



Did you know that your tissues and organs have their own biological clocks? Even more compelling is the fact that these clocks are coordinated and synchronized!

The conductor of this grand synchronization is a ‘master clock’ residing in nerve cells in a part of the brain known as the hypothalamus. Within the hypothalamus, this master clock is made up of approximately 20,000 nerve cells referred to as the suprachiasmatic nucleus (SNC.) Responding primarily to light, this orchestration controls almost every bodily function. When the synchronization is in harmony, the music of the body, mind, and spirit is elegant. When the biological clocks are out of sync, our mental and physical health suffers.

Circadian Rhythms

According to the National Institute of General Medical Sciences (NIGMS,) circadian rhythms are “physical, mental, and behavioral changes that follow a 24-hour cycle.” They influence the ebb and flow of

our major systems impacting changes in our digestion, hormones, heart-rate, metabolism, blood pressure, immune system, and temperature. The most predominant expression of our circadian rhythm is our 24-hour sleep and wake cycle.

This is fairly new science. With their research funded by the NIGMS, Jeffrey Hall, Michael Rosbash, and Michael W. Young, in 2017, won the Nobel Prize for Medicine when they discovered how clock genes control our 24-hour cycle. We all know how it feels when we are in sync with the cycle of the rotation of the planet, and these researchers can now describe the biological triggers and processes that rule the biorhythms and functions.

It's All About The Light

Light (both natural and artificial) triggers our master conductor, the SNC to orchestrate a symphony of biological clocks throughout our 24-hour period. We need the presence of light to tell our bodies to be awake and alert and ready to perform for our day, and we need the absence of light to prepare for sleep and restoration. The circadian clock has an identifiable period when it is the most sensitive to light – 2 hours before your typical sleep time, and 1 hour after your typical wake time. It is our ‘inner clock’ and not the ‘outer clock’ that triggers these important bodily functions.

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Why this is Important

For some time now we have known that good quality sleep contributes toward quality wake time experiences, optimum health, and wellbeing. Indeed, a multibillion dollar industry has emerged promising the bliss and benefits of a good night's rest. From devices, apps, special mattresses, to supplements, drugs, and CBD oil, there exists an endless variety of products designed to induce what is managed naturally.

Leading circadian rhythm and sleep expert, Dr. Steven Lockley states that, "The absolute key to healthy sleep and circadian rhythms is stable, regularly-timed daily light and dark exposure – our natural daily time cues...the management of lighting will have major impacts on human health." Could it be that simple? It appears so.

The timing of light and darkness must assume a central role to optimize our wellness. Contrary to common thought, our circadian rhythms cannot be reset by external means such as food, exercise, caffeine, massage etc.

Here are some TIPS to help manage your light and darkness exposure:

- Reduce exposure to electronic devices at least 2 hours before bed. These devices emit blue light, have a larger effect on melatonin and circadian rhythm and can contribute to sleep problems.
- When preparing for bed, keep your lights dim utilizing warm colour spectrum lighting.

- For ultimate sleep – remove all electronics (including TVs) from the bedroom. If that cannot be done, consider special glasses that block blue light.
- If you fall asleep watching TV, engage a setting that automatically turns off the TV after a period of inactivity.
- Keep your bedroom as dark as possible – even low levels of light can disrupt sleep and cause eye strain.

In conclusion, our internal biological clocks are wired with the precision of an expensive Swiss watch! Aligning your routines with natural circadian rhythms maximizes the most effective wake times and restorative sleep times. It doesn't require a lot of concoctions or expensive tools. Being mindful to our routine and stable exposure to light (especially sunlight) will help to keep our rhythms running in sync with your world.

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Less Light – Less weight!

The presence of light during the sleep cycle has been shown to disrupt the circadian regulation of our metabolism, contributing to a potential gain for women of 10 pounds or more over a 5-year period. (Off to buy those black out curtains right now!)

Contentment

"Be content with what you have; rejoice in the way things are. When you realize there is nothing lacking, the whole world belongs to you."

Lao Tzu