

9 BENEFITS OF MORNING SUNLIGHT

Woman holding yoga mat and shaker bottle outdoors

We are the fortunate planet in our solar system where life is possible thanks to many factors. One of the key factors is our sweet-spot distance from the sun where it's neither too hot, nor too cold.

Without the sun, we wouldn't be here today. We know this thanks to scientific advances, but even ancient cultures, from the Greeks to the Egyptians to the Incas and Aztecs found ways to praise the sun through various sun gods.

Clearly, there's something fundamentally important about the sun, which humans across time have tried to give language and story to in their own way.

On a smaller scale, we've learned more and more about how sunlight exposure is fundamental for everything from optimal alertness and performance, to sleep and immune health.

Many of these health benefits you can get anytime of day, thanks to our body's ability to produce vitamin D from sun exposure.

However, there are some uniquely suited to the morning time.

WHY IS MORNING SUNLIGHT SO IMPORTANT? ENTER: THE CORTISOL-MELATONIN CYCLE

We are "diurnal" creatures. You probably know the term "nocturnal," which refers to creatures that stay awake in the evening and sleep during the day. Diurnal means the opposite, and describes animals typically awake during the day.

Many of our physiological processes are built around this, including our circadian rhythm.

THE CIRCADIAN RHYTHM: THE INVERSE RELATIONSHIP BETWEEN CORTISOL AND MELATONIN

You probably also know the terms circadian rhythm or internal clock, but may not fully understand what they refer to.

In order for your body to stay alert during the daytime and asleep at night, key hormones follow a 24-hour cycle.

These hormones can be placed into two buckets: sympathetic hormones and parasympathetic hormones.

Sympathetic hormones keep us alert, awake, and able to perform our best. They're responsible for "fight or flight" responses.

Parasympathetic hormones help us unwind, sleep, and do things like digest food. They're responsible for "rest and digest" responses.

When it comes to sleep and wake cycles, the sympathetic hormone cortisol and the parasympathetic hormone melatonin run the show.

In an ideal circadian rhythm, cortisol is high in the morning, and low in the evening. Melatonin is the inverse. It should be high in the evening and lowest in the morning.

MORNING SUN EXPOSURE HELPS REGULATE THESE HORMONES

Without sun exposure, our body can't effectively regulate these two hormones on the 24-hour cycle.

Getting outside in the morning jumpstarts healthy cortisol production, while simultaneously resetting our melatonin clock.

This, in turn, has an array of benefits.

9 BENEFITS OF MORNING SUNLIGHT

1) INCREASED ALERTNESS

Morning sunlight will increase your cortisol levels, which will subsequently improve your alertness. One

Woman tying shoe on running track

3) INCREASED PRODUCTIVITY

While related, increased alertness, energy, and relaxation can also put you in the ideal spot to be more productive and creative. The hours after morning sun exposure is when your cortisol is typically highest. This is the ideal time to do some of your most demanding work.

4) BETTER SLEEP, IMPROVED SLEEP QUALITY

While counterintuitive, the morning time is one of the most important times to set yourself up for a great night's sleep. Morning sunlight resets our circadian rhythm. More specifically, by increasing cortisol, it signals a reset of our melatonin clock. That way, when evening comes around, we can have higher melatonin levels naturally and get a great night of sleep.

This has been studied directly. One 2008 clinical trial showed that blue-enriched light (to mimic the sun) improved sleep quality. A 2017 study on office workers showed that daytime light exposures

2019 study following healthy adults showed that "increases in cortisol were significantly associated with subsequent rises in activeness, alertness, and relaxation."

2) MORE ENERGY

Similarly, increases in cortisol as a result of morning sun exposure can help increase your subjective feelings of energy. If you get your sunlight in conjunction with a walk or other movement, then that will also support your energy and alertness.

reduced sleep onset latency (how long it took them to fall asleep) and increased sleep quality. Simply, getting out in the sun for a few minutes in the morning, will help you get higher quality sleep in the evening.

5) IMPROVED MOOD

The two previous studies also mentioned how morning sunlight improved mood. Anecdotally, you might agree with this. Remember what it's like when winter is nearly over and the spring sun shines for the first time? You too likely feel a noticeable improvement in your mood from getting out in the sun.

Getting out in the sun helps us get the vitamin D we need to stave off a drop in our mood, especially in the winter.

6) SUPPORTS IMMUNE FUNCTION

As mentioned in this study on the benefits of sunlight, "At least 1,000 different genes governing virtually every tissue in the body are now thought to be regulated by [vitamin D3] including several

involved in calcium metabolism and neuromuscular and immune system functioning." Simply, it's crucial for our immune health and function.

However, there's a line to draw with this one. As is covered in this 2016 study, too much sunlight can cause many skin cancers as well as other problems. This is partly caused by "UV-induced immunosuppression." However, with morning sunlight, we're not talking about spending hours in the sun on a hot day while neglecting to wear sunscreen.

Ultraviolet (UV) rays, which are one of the causes of sunburn and resulting skin problems, are typically strongest from 10am to 4pm (EPA). This points to another benefit of getting your sunlight in the morning.

7) VITAL FOR HEALTHY BONES

Vitamin D also plays a key role in healthy bones. While we've all been taught about the importance of calcium for bone health, without vitamin D, our body can't absorb calcium effectively.

8) FIGHTS JET LAG

"Jet Lag" happens when we travel across time zones. Just because you're physically in a new time zone, doesn't mean your sleep and wake hormones are in sync. You might have a hard time staying asleep in the evening, and be sleepy during the day.

Use morning sunlight as a tool to reset this. By getting sun exposure in the morning, you'll signal an increase in cortisol, and help reset your melatonin clock.

9) HELPS BUILD A ROUTINE

As a final, intangible benefit, if you make a habit of getting morning sunlight, you'll likely also build other routines around it.

James Clear, author of Atomic Habits, calls this "habit stacking." One of the best ways to build a new habit is to stack it on top of another one.

If you want to move more, for example, stack it with your morning sunlight. Make your quota not necessarily to get outside for ten minutes, but to walk outside for ten minutes. Stack the habits of movement and sunlight.

If your goal is to build a meditation habit, or listen to more podcasts, or read in the morning, you can also stack that with your morning sunlight routine.

CREATING YOUR HIGH-PERFORMANCE HABITS

Performing your best in the gym, at the office, and in all facets of life requires a host of habits and attention to many areas. If you want to lift more weight, you have to pay attention to your sleep. If you want to just feel better, you must be aware of factors like sunlight and movement. Physiologically, nothing exists in a vacuum.

MORNING SUNLIGHT FAQ

HOW MUCH MORNING SUNLIGHT SHOULD YOU GET?

While there is no clear answer for this, there are some clear guidelines. Stanford neuroscientist Dr. Andrew Huberman, who extensively studies the eyes and the visual system, advises at least 2-10 minutes within the first 30-60 minutes of your day (HubermanLab). If it's cloudy, you can still benefit from getting outside, but try to stay out a little longer.

DOES THE SUN HAVE TO TOUCH MY SKIN?

We have photoreceptors in our eyes and skin. This means we receive many of these benefits from either. Of course, in the cold winter we'll have less skin exposure, but that doesn't mean we can't get most of these benefits thanks to our eyes.

SHOULD I FACE THE SUN TO GET THE BEST EFFECT?

You shouldn't look directly at the sun. However, facing east in the morning you'll get more direct sunlight.

HOW COMMON IS VITAMIN D DEFICIENCY?

Some research has called vitamin D deficiency, "an ignored epidemic." The best way to know if you're deficient is to talk to your healthcare provider about getting your vitamin D levels tested.

DOES SEROTONIN PLAY A ROLE IN OUR INTERNAL CLOCK ALSO?

Indirectly, yes. Serotonin is a precursor to melatonin. It's normally produced during the day, and then, in relative darkness (night time) it converts to melatonin.

REFERENCES

González Maglio, D H et al. "Sunlight Effects on Immune System: Is There Something Else in addition to UV-Induced Immunosuppression?." *BioMed research international* vol. 2016 (2016): 1934518. doi:10.1155/2016/1934518

Hoyt, Lindsay T et al. "Positive upshots of cortisol in everyday life." *Emotion (Washington, D.C.)* vol. 16,4 (2016): 431-5. doi: 10.1037/emo0000174

Huberman, Andrew. "Using Light, Sunlight, Blue Light, and Red Light to Optimize Health." Huberman Lab, Accessed 24 Apr. 2023, <https://hubermanlab.com/using-light-sunlight-blue-light-and-red-light-to-optimize-health/>.

Mead, M Nathaniel. "Benefits of sunlight: a bright spot for human health." *Environmental health perspectives* vol. 116,4 (2008): A160-7. doi:10.1289/ehp.116-a160

Naeem, Zahid. "Vitamin d deficiency- an ignored epidemic." *International journal of health sciences* vol. 4,1 (2010): V-VI.

Viola, Antoine U et al. "Blue-enriched white light in the workplace improves self-reported alertness, performance and sleep quality." *Scandinavian journal of work, environment & health* vol. 34,4 (2008): 297-306. doi:10.5271/sjweh.1268

United States Environmental Protection Agency. "Ultraviolet (UV) Radiation and Sun Exposure." EPA, Environmental Protection Agency, Accessed 24 Apr. 2023, <https://www.epa.gov/radtown/ultraviolet-uv-radiation-and-sun-exposure>.