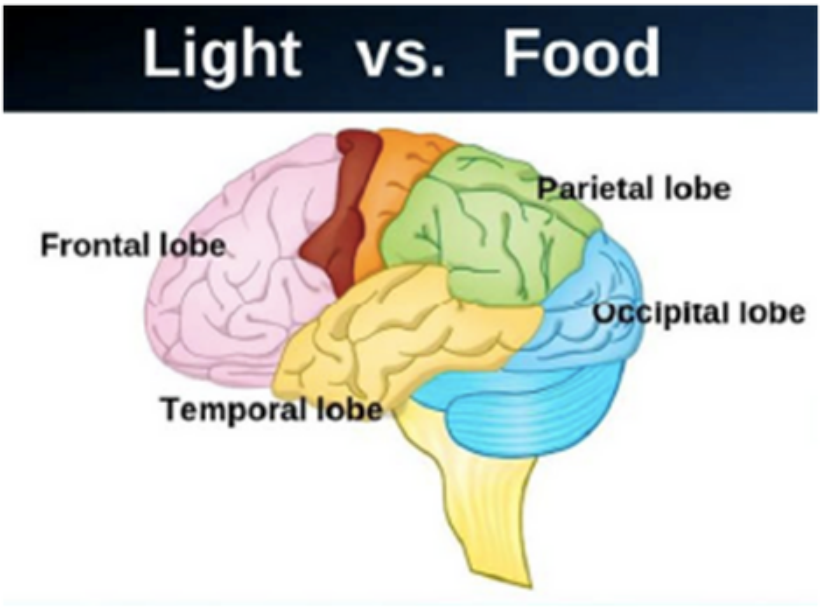
Why Light Is Just As Important As Food

S B
L B



> “It’s been shown that 48% of your brain is influenced by frequencies of light and only 10% of your brain is influenced by food. Is it time we paid more attention to light?”
>
> **Nathan Walz, Founder of Journey to Optimal Healt**

How light controls your health

We have a major problem in our modern world and few people are aware of it’s true implications.

It’s impacting your health in many ways, especially your ability to achieve the deep, restful and restorative sleep that’s required to live your life to it’s fullest potential.

Human beings are solar powered creatures. The light around us shapes our health chiefly through controlling our circadian rhythm and the ability of our cells to create energy.

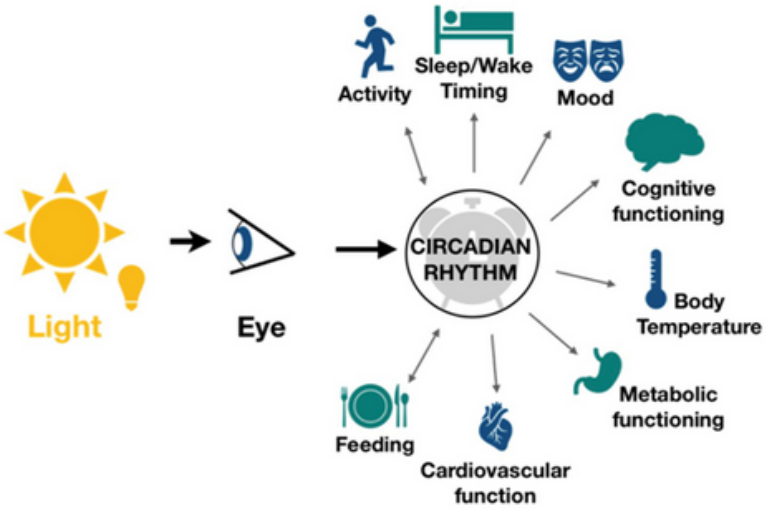
Your circadian rhythm is the 24-hour biological clock that is built-in to every single cell, organ and system of your body, affecting how every aspect of your physiology functions.

Your master clock influences your hunger, digestion, metabolism, energy production, alertness, core body temperature, mood, the function and production of key neurotransmitters, hormones and most crucially the timing and quality of your sleep.

Your circadian rhythm is the hidden engine running your personal health show in the background of your life, and NOBODY in conventional health care is giving you the advice and information needed to make sure that it's working properly.

Light is the most influential zeitgeiber ('time-cue') controlling your circadian rhythm (and with it your sleep and overall health).

You NEED to understand how to have a correctly timed relationship with the right types of light on a daily basis to be healthy and full of energy in the modern world.



Humans' relationship with light is governed by the laws of nature.

If you obey these evolutionary principles and interact with light in the correct ways, high-quality sleep, vibrant energy, higher motivation, happiness and radiant health can be yours.

If you disobey nature's laws when it comes to the timing and type of light you should be exposed to, you can expect to suffer the various physical, mental and emotional consequences.

For 99% of our time on earth as a species, the timing of our sleep and circadian rhythm were controlled by the daily 24-hour solar rhythm of natural light and dark.

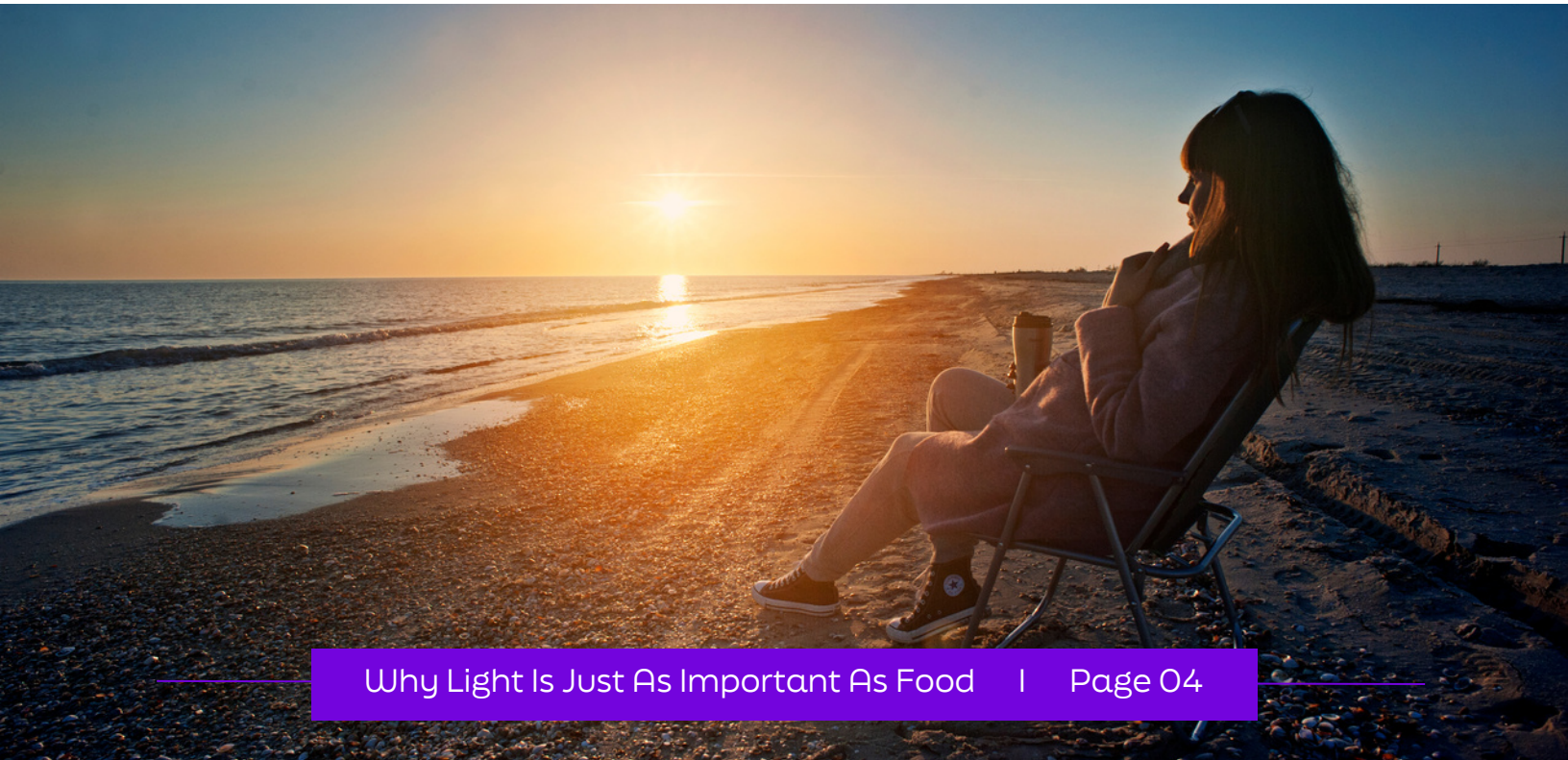
In no other period of time has human health declined so rapidly as the last century where our relationship to the natural daylight and darkness cycle has been radically altered.

These changes have been caused by constant access to electricity, increasingly brighter light bulbs and mass increases in the time spent in front of digital screens in every age group.

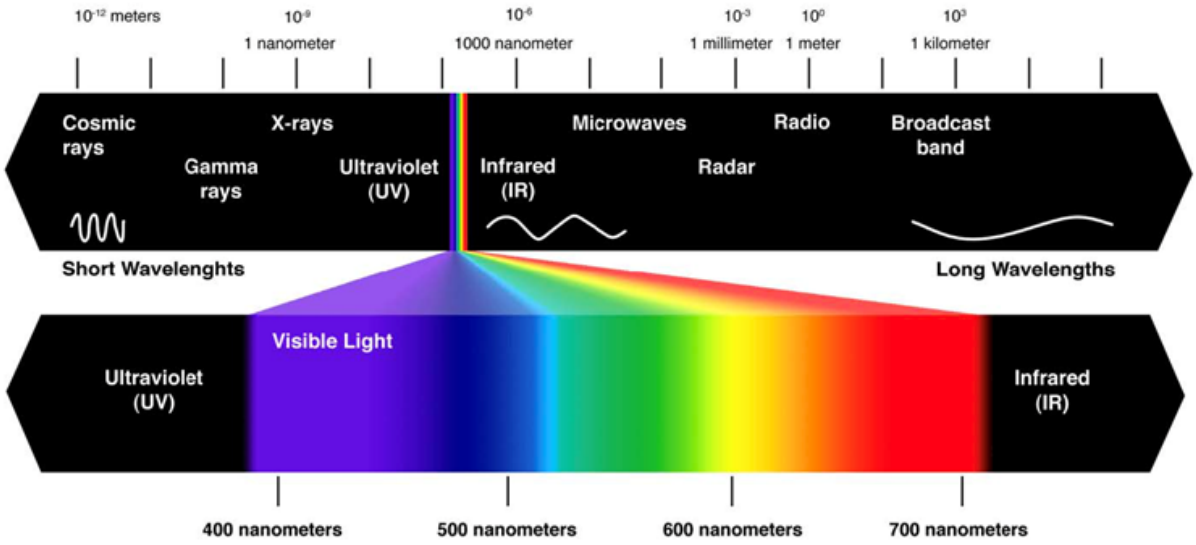
You need to understand how our ancestors interacted with light, where we've lost touch with nature in the modern world and how we can take corrective action by applying the right tools and behaviours.

We wrote this guide to explain the most important information you need to know about light so that you can optimise your sleep quality and feel at your best mentally and physically.

Mastering your health begins with mastering your light exposure.



What is light and how does artificial/natural light differ



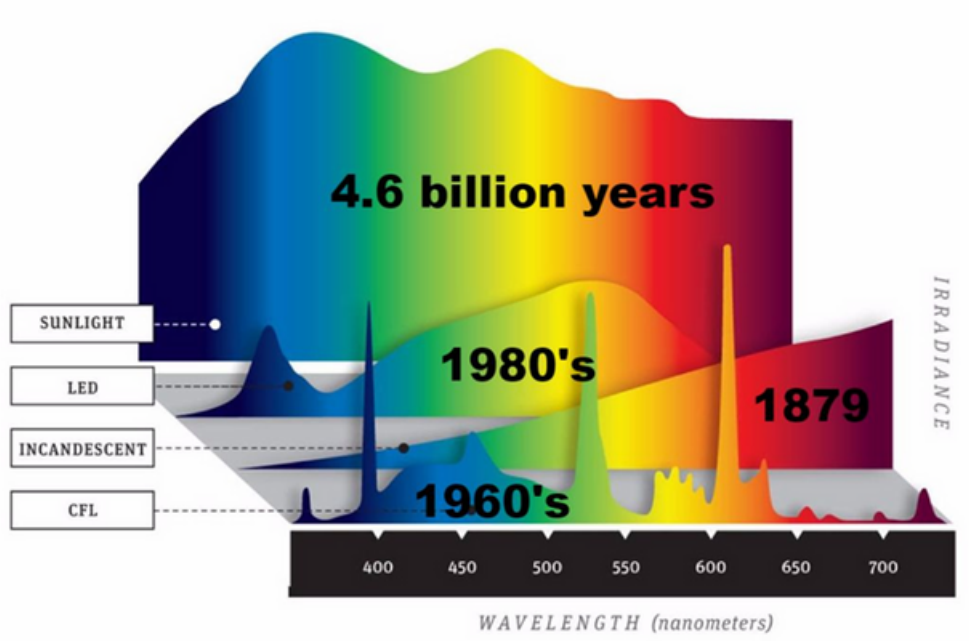
What we see (visible light) is part of the electromagnetic spectrum ranging from purple (380nm) to red (700nm) - think of the range of colours created by nature when you see a rainbow.

Throughout our evolution, the main source of light that controlled the timing of our circadian rhythm and brought many other health benefits was sunlight.

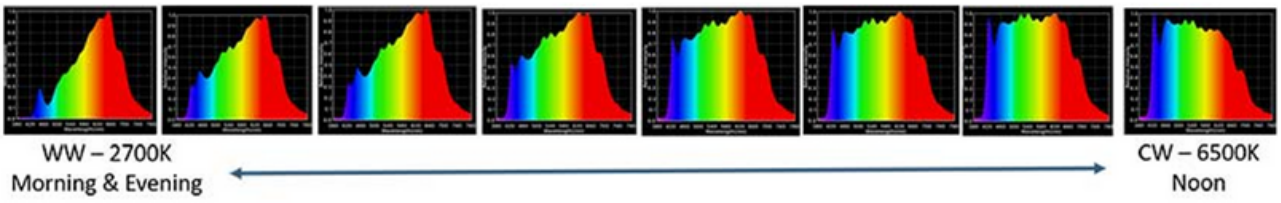
Sunlight is what we call 'full spectrum light' as it is composed of frequencies that range all the way from Ultraviolet (UV) to Infrared (IR) with every visible wavelength in between.

Over the course of the modern industrial revolution, we invented other types of lights powered by DC electricity including incandescent, CFL (fluorescent) and LED bulbs.

Artificial lighting provides a very different wavelength distribution compared to that seen by sunlight. This has very important implications for our health because human biology evolved under the full spectrum (UV through to visible light and IR) and there are no forms of artificial light available today that can mimic the exact benefits and impacts of sunlight.



Why your body needs natural light



Every day throughout evolution, the timing of our ancestors' circadian rhythm (body clock) was controlled by exposure to natural light from the morning, midday, afternoon and evening sun.

Over the course of the morning until noon, sunlight contains increasingly higher amounts of 'blue' and 'green' light which act as a time cue received by our eyes and skin, sending information to the 'master clock' in our brain called the suprachiasmatic nucleus.

This type of light instructs the master clock to sychronise the 24-hour clocks in all of our cells and corresponding organs and glands, bringing energy, alertness and vitality for the day ahead.

The message that natural daylight (abundant in blue/green light) sends to your brain is “wake up, it’s time to be alive and active”.

An important function of higher exposure to blue/green light during the daytime is that this increases the production of cortisol, a daytime stress hormone that helps energise and alert us.

From noon throughout the afternoon until the sun sets at the end of the day, the amount of blue and green light contained within sunlight lowers gradually until sunset when all of the blue/green light disappears from the environment until the next morning.

It’s vital that we get enough natural morning/midday light to activate the rhythmic biological processes that wake us up for the day ahead.

It’s equally important that we get some afternoon/evening light exposure so that our brain understands that the day is coming to a close and that it should begin to wind down for sleep.

Benefits of Exposure to Natural Morning and Daytime Light

- Required to synchronise the body’s circadian rhythms every day (to set our internal time)
- Boosts serotonin, dopamine, cortisol and endorphins increasing mood, energy and alertness
- Essential for a healthy body clock that programmes us for high-quality sleep at night

Why darkness is essential for high quality sleep

As the sunsets each evening and darkness approaches, the changing qualities of light in the sky are the next cue that directs our brains to prepare for sleep by beginning to wind down and release large amounts of a key sleep and recovery hormone called melatonin.

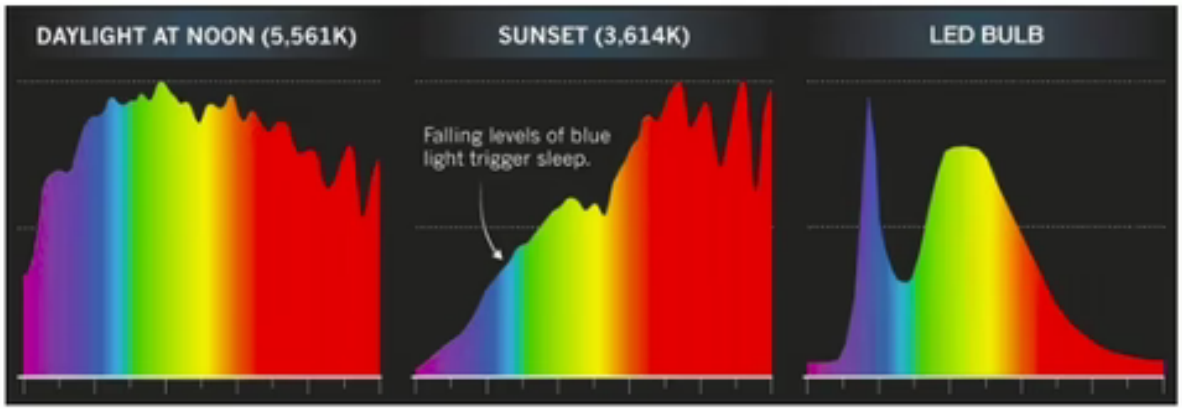
Melatonin creates the conditions for all of the cells in your body to regenerate and heal, as well as strengthening the immune system and supporting deep sleep.

I can't emphasise enough how important it is that your body is able to naturally release as much melatonin as possible at nighttime (in darkness).

Once the sun has fully set, there is no more blue and green light in our environment until the next day (remember that these are the colours that wake us up and stimulate our circadian rhythm to be alert).

Instead, sunset contains an abundance of red and IR light before our environment moves into complete darkness (aside from the much weaker light of the moon).

This is the time at which modern artificial lighting most sabotages our health, because brightly lit LED and fluorescent bulbs contained within home/public lighting and technology screens such as televisions, smartphones, laptops, tablets and other equipment all continue to emit huge amounts of blue and some green light at night when there shouldn't be any.



If you really want to sleep well you need to be aware of the way that artificial light is impacting your circadian rhythm and your brain's nightly release of melatonin.

When you continue to be exposed to blue/green light after sunset, this sends confusing signals to your circadian rhythm which encourages the overproduction of the daytime stress hormone cortisol, ultimately making you feel alert and 'tired but wired' in the evening.

This makes it more difficult to wind down and get to sleep. It also decreases the quality of your sleep and lowers the repair and rejuvenation happening in your body and brain at night due to lower levels of melatonin being released.

You need to take the necessary steps to avoid the damage the wrong types of light at the wrong time of day are causing, otherwise this will continue to contribute towards poorer sleep quality every night and greatly damage your health over time.

The amount of melatonin that you're able to produce at night (in darkness and an absence of blue/green light) is directly proportional to the quality of your body's regeneration and overall health.

More nighttime melatonin = deeper sleep and a longer and happier life.

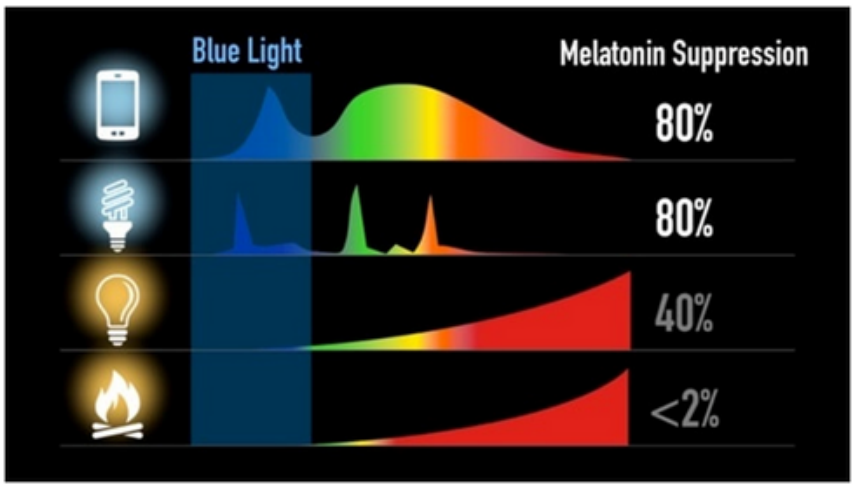
How ALAN (artificial light at night) destroys sleep

Modern technology has arguably resulted in the most miraculous achievements of our civilisation to date, but, less often considered is the hidden contribution that the artificial light that screens emit is having on the decline of everyday physical and mental health.

Harvard University researchers have shown that exposure to artificial blue and green light at night throws our hormones and circadian rhythm out of sync.

They demonstrated that:

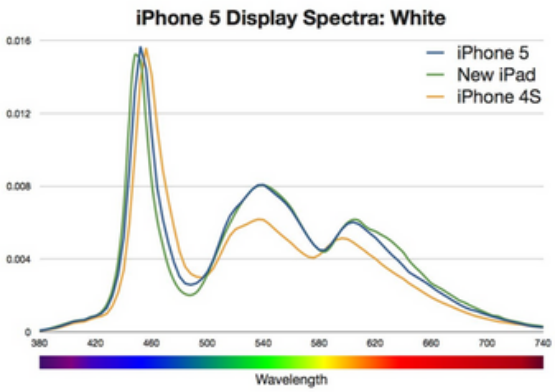
- Blue and green light exposure at night stimulates the stress hormone cortisol and suppresses melatonin production.
- Different types of light suppress melatonin to varying degrees; LED/fluorescent by up to 80% and incandescent up to 40%, compared with firelight which was shown to only suppress melatonin by 2%



The world's biggest technology companies know about this.

Why do you think big brands like Apple and Microsoft have developed "Night Shift Mode" to alter the blue light given off by their devices in the evening? (PS. Sadly these don't do enough to completely eliminate the blue/green light).

They know their screens harm our sleep, but they also know that the blue light emitted from these devices stimulates dopamine/cortisol and keeps us awake and addicted to their use (engagement/profits > health in this case).



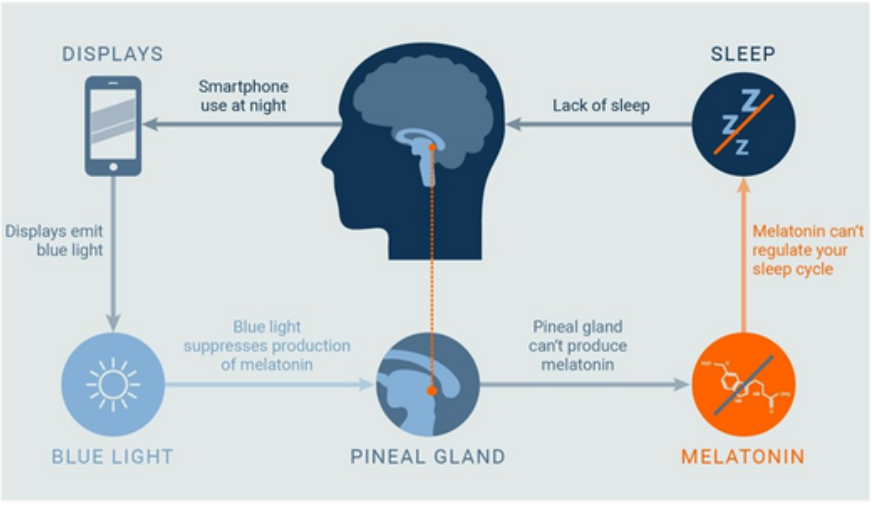
Not only does exposure to blue light at night result in terrible quality sleep and reduced recovery, but science has shown that the circadian rhythm disruption it causes also increases your risk of anxiety, depression, cancer, obesity, autoimmune conditions, diabetes, heart disease, infertility and other diseases.

Blue light at night has also been shown to impair glucose tolerance, increase insulin resistance and raise blood glucose in the brain. Not good news for weight gain.

Thankfully, it's been discovered that not all colours of light have the same effect.

Whilst the most damaging to our sleep are blue and green wavelengths, other wavelengths such as amber and red are not as disruptive.

This means that with some smart light-filtering and a few creative lighting changes, you're able to filter dangerous light at night and replace it with sleep-friendlier light.



How to protect your sleep from dangerous nighttime light whilst still using technology at night

By using the strategies that we highlight to naturally reduce the harmful blue and green light in your night time environment, you can still view the screens from technology devices and modern lighting in the evening whilst keeping your sleep and circadian rhythm intact.

1. Nighttime blue light blocking glasses

Nighttime amber or red blue light blocking glasses are inexpensive and serve as the perfect tools to help you block out harmful light at night, whether you are making the conscious choice to use technology, or when you have no other choice than to be exposed to light at night due to public lighting or the decisions of those around you.

Research has been very clear in showing the benefits of blue light blocking glasses, so much so that we recommend them to every single client that we work with.

Our charitable foundation has also conducted large scale research studies in UK schools where we have seen huge benefit for teenagers and young adults (who have some of the highest nighttime screen use of any age group) when wearing these glasses.

It's important that you invest in pairs with red or amber lenses, as these will block 100% of blue light which is required to promote the highest melatonin release in the hours before bedtime. Clear pairs of blue light blocking glasses don't block as much light and won't fully benefit sleep.

We recommend purchasing them from Sleep Better Live Better or our partner website Block Blue Light (where the code 'SBLB' will get you a 15% discount).

2. Turning off and filtering artificial light sources at night

Another important factor to consider is limiting bright artificial blue/green-containing light within your home during the evening hours by turning off overhead lighting and reducing or deactivating any other bright lights.

This might mean switching to using lamps and lower-level lighting or dimming the light coming from your screens and devices. Note: reducing the brightness of light alone is not enough - you must also filter/block all blue/green light to get the best sleep possible.

In our guide "How To Hack Your Smartphone, PC and Laptop For Better Sleep", we show you the different settings, applications and programmes that can be used to filter the blue/green light coming from technology screens.

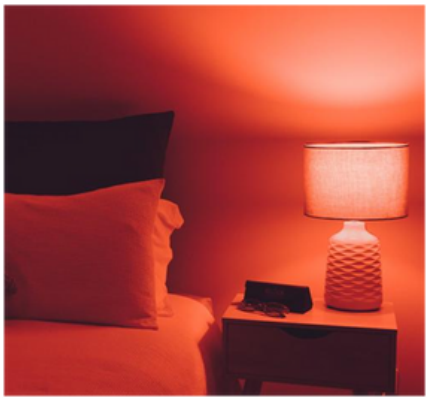
3. Purchase sleep-friendly red or amber lighting for your home

Unlike the harmful cool-white LED from screens and fluorescent/LED bulbs in your home which are destroying your sleep, many companies have invented sleep-friendly red and amber bulbs that do not contain blue or green wavelengths of light.

These bulbs can be used in living rooms, bedrooms, bathrooms or any other areas where you spend time in the evening hours before bed.

We recommend using them in addition to blue light blocking glasses to help you achieve the darkest and warmest light environment that promotes the best quality sleep possible.

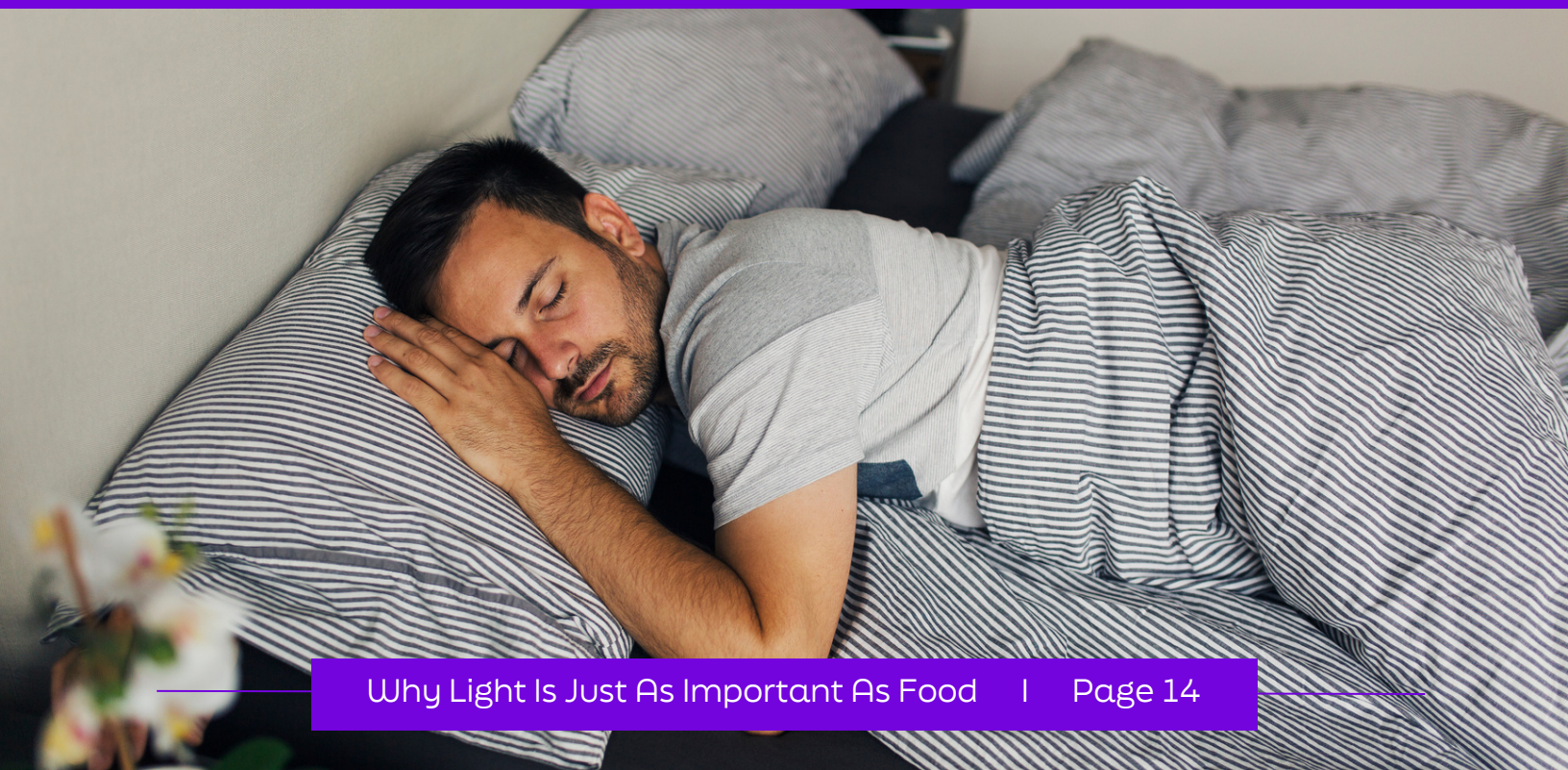
Our go-to website to source a variety of different sleep-friendly lights is Block Blue Light (where the code 'SBLB' will get you a 15% discount).



Summary...

This information is just the tip of the iceberg when it come to understanding how to protect and enhance your circadian rhythms so that your sleep and overall health can flourish. Here are the key points to remember:

- Light is the master orchestrator of our circadian rhythm, controlling almost all of our physiological functions.
- As our circadian biology rules our overall health, the correct day time and evening light exposure is critical for us to thrive mentally and physically.
- Sunlight provides the natural spectrum of light that we need to coordinate the production of serotonin, cortisol, melatonin and many other vital hormones and neurochemicals that ensure our circadian rhythm functions well and keeps us energised, alert and focused during the daytime.
- Artificial blue/green light from home lighting and screens after sunset reduces our body's ability to release melatonin and stimulates excessive cortisol production, causing circadian rhythm disruption that increases our risk for disease, makes it harder to get to sleep and lowers the quality of our rest and recovery.
- To put this in the most simple terms, exposing yourself to more natural light during the day and filtering/reducing artificial blue/green light exposure at night are the key ingredients for a healthy circadian rhythm, high-quality sleep, happiness and good health.



Disclaimer

Contained within this publication are the ideas and opinions of the author. This publication is intended to provide information and helpful educational material on the subjects addressed within.

This publication is provided with the understanding that the author and publisher are not engaged in providing medical, health, psychological or any other kind of professional advice or services in this book. If you, the reader, require personal medical, health or other assistance, you should consult with your registered health professional.

This book's author and publisher specifically disclaim all responsibility for any liability, loss, or risk, personal or otherwise, that is incurred as a direct or indirect consequence of the use and application of any of the information and content provided in this guide.