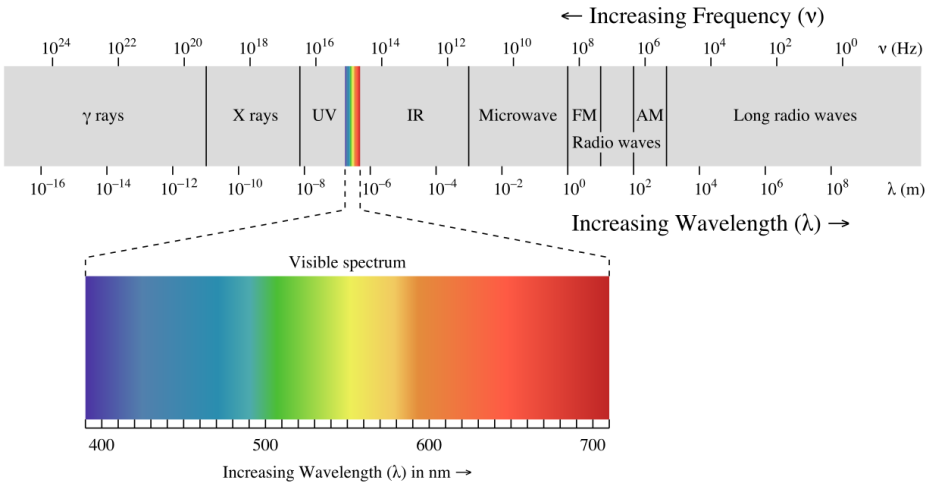
Healthy Lifestyle Changes

Kick out ALAN

ALAN stands for Artificial Light At Night. This means your overhead lights, tv screens, computer screens, the light in the fridge, bathroom light, etc. Artificial lighting needs to minimised as much as possible. While we cannot live in the modern world without artificial lighting, there are still things you can do to offset the damage to your body that ALAN causes.

You might be wondering how ALAN causes damage to your body? Basically, all of your body's functions, such as hormone release, gene expression, etc, are regulated by LIGHT SIGNALS. Visible light, what we see with our eyes, is just one part of the electromagnetic spectrum. But all electromagnetic waves are forms of light. This means things like radiowaves, microwaves, your wifi signal etc, are all forms of light, and so all affect your body. We understand the need to protect ourselves from excessive exposure to medical x-rays and even the kitchen microwave, but it is equally important to protect ourselves from EM signals such as those emanating from our WiFi routers and LED lights!



Above is a picture of the ELECTROMAGNETIC SPECTRUM, which comprises all forms of electromagnetic (EM) energy. EM energies are all forms of LIGHT, they just have different frequencies, or wavelengths. For instance, the colour red is electromagnetic energy with a wavelength of around 700nm. Your brain tunes in to the different frequencies around you to tell your body what is going on in its environment. All signals that your five senses detect - sounds, smells, sights etc. - are all simply forms of energy oscillating at different frequencies. Your brain works to decode these electrical signals and represent them to your mind in such a way that you can navigate the world around you. But it is not just the five senses which are governed by energy frequencies; *all* biological process in your body are ultimately governed by light (energy) frequencies. Humans evolved without artificial lighting, electricity or wifi signals in their environment. All chronic modern diseases such as Diabetes, Alzheimer's Disease, Parkinson's Disease, Cancer, ADHD, Autoimmune Disease etc., are caused by the toxic EMF environment we live in. In order to optimise your health, you need to match your body to the light environment it evolved to live in, which means kicking out ALAN!

Circadian Biology - The Key to Health:

The 2017 Nobel Prize in Medicine or Physiology was awarded to three scientists “for their discoveries of molecular mechanisms controlling the circadian rhythm”. What are Circadian Rhythms?

Your Circadian Rhythm is your internal body clock. Your body clock is synchronised to the light and dark cycles of the earth, as well as the fluctuating magnetic field and temperature. The term ‘circadian’ comes from the Latin *circa*, meaning “about”, and *diem*, meaning “day”. Your circadian rhythm is the daily rhythm of your body as it undergoes an orchestrated symphony of hormone release, gene expression, sleep regulation, etc. These biological functions need to be perfectly timed in order for you to stay healthy. For instance, in the morning you need the hormone cortisol to be released in order to wake you up. But then at night, you need cortisol to be suppressed and melatonin to be activated so that you can fall asleep. We don’t consciously control things like our heart beat, sleep cycles, blood pressure, glucose levels, protein folding, and so on. These process are taken care of by our autonomic nervous system, occurring in real time in response to our environment. Think of these different biological processes as being akin to the many musical instruments in an orchestra. They each have to be playing the same tune at the same time in order for the music to sound good, otherwise it’s a cacophony. The same thing happens in your body, only the musical instruments are molecules like proteins and DNA. So what is acting as the conductor in this case? LIGHT. Electromagnetic radiation in all its forms (visible light, radio waves from wifi, microwaves, etc) is the conductor to your circadian orchestra.

The only source of light that is healthy at night is RED or ORANGE light.

Melatonin is commonly known as the sleep hormone, though it has numerous essential functions in addition to regulating sleep. At night when it gets dark, the lack of high frequency light signals tells your brain to release melatonin which in turn causes the body to go into sleep mode. When you are sleeping, your body (including the brain) cleans and repairs itself. These processes are called autophagy (the recycling of damaged cells), apoptosis (removal of dead or damaged cells), and ubiquitination (protein folding). Without adequate amounts of deep sleep each night, misfolded proteins cannot be dissolved and refolded, toxic metabolic waste products cannot be cleaned out, and dead or damaged cells cannot be removed. Over time, the damage accumulated and result in diseases like Alzheimer’s. Without adequate sleep, these essential processes are impaired and your health suffers as a result. There’s a very real reason why we feel better after a good night’s sleep.

Light signals in the 600-700nm range (orange-red) won’t interfere with melatonin release at night. These frequencies are found in candle light and fires, or red/orange lamps/globes. Use these of a night to help with sleep hygiene. Light signals in the 400-550nm range (blue-green) prevent melatonin from being released causing a disruption to your circadian rhythms. Install some red lights in your kitchen and bathroom so that you can see of an evening and in case you need to use the bathroom at night. Blue lights in the house at night, including those coming from TVs and computers, send a signal to your brain that it’s the middle of the day. Consequently, your brain will tell the body to run on ‘day mode’. Even if you mange to fall asleep, those essential repair mechanisms which occur during deep sleep will be impaired. If your brain is getting light signals telling it that it’s the middle of the day, then your body cannot undergo the necessary repair processes during sleep that keep you healthy.

Watch the sunrise every morning.

A strict bedtime routine is the key to heath. Hormones and gene expression are triggered by light cues. If you're not getting the correct light cues (morning sunrise to reset your biology, darkness at night, blocking artificial blue light etc) then your health will suffer drastically. Your body's daily RESET button which brings all biological processes into alignment is the SUNRISE! You need to watch the sunrise each morning (and the sunset each night) to setup the correct hormone cascade to keep your body functioning healthily.

Sunrise light does not contain any Ultraviolet (UV) light. The light from sunrise activates certain hormones, like cortisol, to wake up your brain. But once your brain is awake, it no longer needs that cortisol switch turned on. If the cortisol tap is left running, eventually your body will be flooded with cortisol - and recall that cortisol is a stress hormone. So in order for your body to not be under constant stress, that cortisol signal need to be turned off once your brain is awake. The off switch is UVA radiation. UVA light shows up in the atmosphere a little after sunrise (the exact time depends on your location and the time of year. I recommend using the free D-minder App to accustom yourself to the timing of sun signals). It's essential to not only see the sunrise first thing, but to also get sunlight into your eyes a little later in the morning, as the UVA light frequencies send your brain this 'off' signal for cortisol. Think of it like having a coffee in the morning. You have a morning coffee to wake you up, but then you stop drinking it. You wouldn't just keep drinking coffee constantly all day, or your body would be over stressed. It's the same thing with hormones and light signals.

Even later in the morning, a couple of hours after sunrise, UVB light shows up. This light frequency is also essential as it's UVB light which produces vitamin D on the surface of your skin. You need to get as much of your skin exposed to the sun in order to make vitamin D. This is difficult when you have to work indoors, and so it's essential to prioritise skin/sun exposure on the weekends. But if you can get daily exposure then do so.

It is actually cholesterol in the skin which is converted to Vitamin D, through UVB radiation. This is why the advice to lower your cholesterol is terrible advice! You NEED cholesterol in order to be healthy. So eat lots and lots of organic free range eggs (not cheap caged eggs - the chickens need to have been exposed to the sun too!). Also lots of wild caught seafood and grass-fed meats and ghee. The cholesterol needs to be sulfated in order to convert into vitamin D. You can get sulfur from lots of organic green vegetables like broccoli and spinach. So in terms of healthy eating, fatty bacon, eggs, with green vegetables fried in coconut oil and plenty of Celtic sea salt is a fantastic meal. Once you've got these raw ingredients into your body, then you need to cook them in the SUN!

More on Technology and Artificial Light:

Artificial blue light at night and nonEMF (non-native electromagnetic fields) can actually induce diabetes in the body. The key to optimising you health is to go on a technology diet. Having proper nutrition food wise will speed up the process, but the biggest factor affecting your health is light. Also essential is good quality water (not tap water).

Turn the Wifi off at night.

Wifi is a radio frequency, very close to microwaves (see the EM spectrum image above). Now, what happens when you put a steak in the microwave? It heats up the steak by energising the water molecules inside, but actually dehydrates the meat in the process. If you leave your steak in the microwave for too long it will turn into a piece of dried up leather. Unfortunately, this is exactly what happens to *your* body around radio frequencies and microwaves coming from your technology (wifi, mobile phone, etc). Your body is becoming dehydrated, just like that steak. All of the biochemical reactions in your body take place in the *water* inside your cells. No water = death. The less wifi you are exposed to the healthier you will be. Turn your wifi router off *every night*. It would be ideal to use an ethernet cable and ground your computer directly to the outlet.

Drink More Water

Water is essential to health so drink up. Make sure your water is free of contaminants like chloride and fluoride. Tap water has been found to contain pharmaceuticals, endocrine disruptors and various other contaminants in addition to these toxic compounds. The water you drink should be structured and energised.

Eat Seafood

Seafood contains a molecule called Docosahexaenoic Acid, or DHA. This is the molecule that gives you all the benefits from OMEGA-3 fish oil. You need to be eating seafood as often as you can. DO NOT supplement with fish oil tablets! Supplements are typical sourced from farmed fish which don't contain DHA since the fish are not eating their natural algal food sources. The delicate oils in supplements are also typically rancid since they've been stored in warehouses and shipped in non-refrigerated trucks. These Supplements also contain aldehydes which are extremely toxic.

Eating seafood will repair your eyesight. How? The DHA molecule forms part of the membrane in most of your body's cells. The greatest amount of DHA is found in the RETINA and the BRAIN. It's actually through the DHA molecule that your body can utilise the light signal to turn it into a DC current to run your body. Basically, photons from the sun excite electrons in the DHA molecule, freeing them up so they can carry a charge. This is the photoelectric effect, which Einstein won the Nobel Prize for. Just like metal heats up in the sun, your body generates current through sunlight, but instead of metal heating up, it's DHA 'heating up'.

DHA is recycled in the eye - this is called the Bazan Effect. When your eyes are damaged from excessive blue light the retaina DHA can't be recycled, which means that there is less DC current being generated to fuel your body. The body is a bioelectric machine. (There is a reason myopia is on the rise - more people than ever spend the majority of their day looking at a computer screen. This is the equivalent of staring at the midday sun). If the DHA can't be recycled in the eye (the short loop), then your body will get DHA from the liver (long look) to put it back into your eye. In order for this to happen, you need to be eating LOTS of seafood (remember, DHA comes from fish oil). The best source of DHA is Oysters. The next best source of DHA besides oysters is other forms of shellfish - so eat as many prawns, crabs, lobsters as you can. Seafood needs to be your MAIN FOOD SOURCE if you're recovering from a neurological condition.

Spend time in nature

Spending time in nature, barefoot, is a way to ground yourself. Our bodies are supposed to be entrained to the magnetic fields of the earth. Grounding, or Earthing, reduced inflammation by reducing the buildup of positive charge in the body. Your body runs on bioelectricity so needs to have a negative charge. You literally absorb electrons from the earth when you are grounded. Visiting the beach is an excellent way to heal. You can combine grounding with heliotherapy. Ocean water is a natural Faraday Cage, and walking along the sand is a great way to relax. If it's cold, even better. You need as much sun exposure as possible. DO NOT WEAR SUNSCREEN OR SUNGLASSES. Protect yourself from excessive sun exposure so you don't get burnt, but the point is to get your eyes and skin exposed to the sun in order to entrain your circadian rhythms, produce the correct hormones (like vitamin D). Neurotransmitters like dopmaine, and neuropeptides like beta-endorphin are actually produced through exposure to ultraviolet radiation. Conditions such as depression and addiction are related to a lack of sunlight for this very reason. The opioid epidemic corresponds to the lack of sunlight exposure and excessive exposure to blue light technology.

DON'T WEAR SUNGLASSES! Your eyes will only heal if you expose them to SUNLIGHT! Yes, this is backwards to what your optometrist and doctors will tell you. But you need sunlight in your eyes and on your skin. If you need the lenses to drive, that's fine. But take them off every second you're outside. The less you rely on spectacles to accommodate your vision, the more you rely on your own ciliary muscles and the stronger your eyes will become.

Summary:

No artificial light at night, unless it's red.

Remove the TV from your bedroom.

Turn Wifi off at night, or better yet ground your computer.

Wear blue blockers whenever using a screen.

Install (and use) IRIS software.

Eat as much seafood as possible.

Watch the sunrise every morning.

Expose skin and eyes to the sun every day.

Never wear sunglasses outside (driving okay if prescription lenses).

Find a relaxation practice such as beach walking, tai chi etc.

Sleep in complete darkness and silence.

Spend more time visiting family and friends.