## The Importance of Sleep

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James Armour, CMT
Many of us lead busy lives, and we often don't allow for enough time to rest. Or, when we finally do get some downtime or try to go to sleep, we find ourselves unable to unwind and relax our minds as our brains keep us awake as it processes the events and stresses of the day. Over time, this lack of adequate restful sleep can contribute to a multitude of mental and emotional problems such as lethargy, memory, and cognition problems. Lack of sleep is also associated with several mood disorders like irritability, depression, stress, inability to regulate healthy emotional states, and being excessively reactive in stressful situations. In some cases, it can also be associated with more serious mood disorders like bipolar disorders, paranoid states, and psychosis. Low sleep can also affect our physical bodies by decreasing motor skills, increasing general pain sensations, becoming more overweight or obese, Type 2 diabetes, apnea, and worsening existing hypertension (high blood pressure).

We are designed to be self-repairing and resilient, but lack of good sleep can seriously impair our ability to come out of sympathetic nervous system states (fight, flight, or freeze states) and enter parasympathetic nervous system states (rest, relax, and repair states). When this happens, our abilities to self-repair and regulate become compromised, leaving us in depleted states that get worse as they continue. Correcting sleeping challenges and finally getting sufficient sleep can dramatically improve the quality of your life.

I have personally experienced the wearing effects of low sleep volume and quality. Over the last several years I have felt chronically depleted and fatigued, and much of it was due to my inability to stay asleep once I went to bed as I kept waking up throughout the night. It also felt like I could never fall deeply asleep, and I started to feel negative effects in my general energy levels, my sense of body and mental resilience, my memory and cognition, and I had vague and non-specific feelings of depression and a general lack of enthusiasm. I used to dream (well, daydream anyway!) about just taking a few weeks or months off and doing nothing but sleep. I became very interested in what was causing this chronic sense of depletion, and I started to look at what I could do to correct the situation. And over the last 6 months I have finally been able to make significant improvements in my sleep habits, and as a result I have seen my energy levels and general mood improve dramatically.

Here are a few of the techniques and strategies that I discovered along the way that have helped me improve my sleeping situation. I hope that some of these suggestions help you to get a better nights' rest as well!

## General Sleep Hygiene Tips

Go to bed earlier, and at a consistent time: There is a lot of research suggesting we get more quality sleep when we go to bed earlier rather than later, even if we're in bed for the same amount of time. This likely has something to do with our circadian biorhythms, which are biological processes that sync our bodies to whether it's daylight or nighttime outside, and we function better the more we are in harmony with these natural cycles. Additionally, if we go to bed at the same time every night, we start
to develop a habit that helps program our brains to make it easier to consistently transition from being awake to being asleep.

Have a comfortable and conducive sleeping environment: This might seem a bit obvious, but making sure that your sleeping environment is quiet, a comfortable temperature, and sufficiently dark can make a big impact on sleep depth and duration. Also, ensuring your mattress and pillows are comfortable and that you are not waking up in more pain or discomfort than when you go to bed is very important. We (hopefully) spend about a third of our lives in bed, so investing in a good bed and pillows can pay off greatly.

Cut screen time at least an hour before going to bed: The screen brightness can trick our brains and our circadian rhythms into thinking that it's still daylight outside and therefore not time to sleep, especially if they are set to blue or white light output. Setting screen displays to a warmer yellow light waves may help, but the best solution is none at all. In addition to not messing with our natural biorhythms, this downtime will help remove a lot of potential mental or emotional stimulation right before going to bed.

Only use your bed for sleeping and sex: The bed is not for reading or looking at your phone or working on your computer. Train your body that every time you go to bed, it's for sleep or sex only. And to help reinforce this pattern, only go to bed when you are tired. If you don't fall asleep within about 20 minutes or so, get up and do some non-stimulating task, such as doing the dishes, meditating, or possibly re-reading this article if you have it printed out! Wait until you become drowsy, and then try to go back to sleep. This will help establish habits that the bed is not for tossing and turning either.

Get regular exercise: While researchers don't understand the exact mechanism for this, sleep research has clear correlations between people who exercise regularly and falling asleep faster/experiencing deeper sleep states. The research is less clear about what time of the day is the best time to exercise in order to support quality sleep, so try out a few different times and see what you personally respond best to.

## Supplements

There are many supplements that can assist in naturally promoting better sleep rather than having to take a medication like Ambien (which can breed dependency and have unpleasant side effects). Some supplements, like melatonin, add to existing sleep hormones your body naturally produces to help fall asleep during nights where you have acute stress or jetlag. However, melatonin has proven less effective for longer-term insomnia issues. Valerian root and chamomile have also been shown to help calm the nervous system and/or the digestive system, and aid in more restful and deeper sleep. Vitamin D deficiencies have also been linked to sleep deficiency, and taking certain forms of magnesium has in some cases shown to be very effective in helping promote good sleep (possibly by aiding the muscles in the body to relax more completely). As a sidenote, taking magnesium glycinate and vitamin D probably had the biggest personal impact on me in terms of improving my sleep challenges.

As with any kind of supplement, it's a good idea to consult with a health professional before trying some of these out on your own... Some, like melatonin, increase the potency of certain blood thinners like warfarin, which can cause increased risk of bleeding. Others shouldn't be taken in cases of pregnancy.

And vitamin $D$ is a fat-soluble vitamin so it doesn't eliminate easily from your system, which can lead to overdose issues if taken in too high quantities.

## Diet

The food we eat (or don't eat), and when we eat it, can make a big difference in sleep quality. Here are some helpful general dietary guidelines:

Eat dinner earlier in the evening rather than later: Eating late can lead to increased weight gain in animal studies, but these studies are less conclusive as to whether or not this affects humans in the same way. However, having large amounts of food in your body when you go to sleep can not only be uncomfortable, it can also lead to reflux issues that can push food or stomach acids back up the esophagus. Over time, it can cause serious harm to your esophagus. Eating earlier gives your body a chance to properly metabolize your food and bring it down into the intestinal tract, which can reduce pressure in your stomach and the chance of reflux and nighttime discomfort.

Caffeine: Caffeine is a stimulant, and as such it can make it difficult to fall asleep if it is present in our bodies. Caffeine can take 10 hours to completely clear from our bloodstream, so making sure not to have any caffeine after late morning will help ensure it's completely cleared from the bloodstream by bedtime. However, caffeine is present in many foods and drinks that we might not be aware of, so it's a good idea to take a look at the ingredient lists when deciding what to consume later in the day. Sodas, coffee and many teas, and chocolate (I know) can be overlooked and unintended sources of caffeine.

Sugar: Sugar is also a stimulant, but it is often overlooked when considering what's keeping us awake at night. Because sugar is present in many of our foods, it's a good idea to carefully check the ingredient lists of what you consume later in the day or the evening to make sure it's not high in sugar. There are few things more unwelcome than a 2 AM sugar rush!

Alcohol: A common myth is that alcohol converts to sugar during the metabolism process, but this is actually not true. Despite this, alcohol is still disruptive to the sleep cycle, our circadian rhythms, and sleep quality. It also makes it harder to fall asleep, increases the risk of sleep apnea, decreases REM, and can increase the chance of nightmares.

## Two Additional Considerations

## Proper Vagal Nerve Tone and Function

The vagus nerve is one of the most important nerves in our body. In addition to being the longest nerve in the body and innervating most of our major organs, it also plays one of the most important parts in helping us come out of sympathetic states and into a parasympathetic state. However, if it becomes irritated or compressed (such as from tension around the base of the skull or from a generalized inflammatory condition), the parasympathetic response can become compromised and a person will often remain in a sympathetic feedback loop and unable to effectively enter into the rest and relax phase. This can be a major drain on your system's resources as this feedback loop consumes a lot of unnecessary energy, and it often results in persistent feelings of anxiety, fear, or worry which can negatively disrupt sleep patterns and making us feel even more depleted.

Deep breathing, humming or singing, yoga, meditation, or cold (such as an icepack at the base of your skull or a cold shower along your spine and head) can all help stimulate the vagus nerve and help the body finally enter a parasympathetic state. Maintaining proper neck health is also very important, and doing neck exercises like this video to help keep it supple and moving well can reduce vagus nerve compression, as well as general neck pain, which may interfere with deep sleep.

Finally, there is a device called a still point inducer that is thought to help "reset" the nervous system by temporarily shutting off the cranial flow, which can help a person come out of a sympathetic state feedback loop. It also helps disengage the condyles of the occiput from the first cervical vertebra, and can help unload excess pressure and compression on the vagus nerve. The video link above talks more about what a still point inducer does, and how to get one or make one for yourself.

## Journaling

Sometimes our lives are so busy that our heads are rather full by the time we go to bed, and our brains often try to sort out and process all of the events of the day right as we are trying to get to sleep. In cases like this, taking a few minutes to journal before going to bed can help organize your thoughts and help to settle your mind down. One note though: If you are journaling right before going to bed, it's best to use an old-fashioned paper journal and pen rather than a computer in to avoid unnecessary screen time.

I wish you all a restful and rejuvenating night's sleep!

## Sources

## Dysfunctions related to inadequate sleep

https://www.nichd.nih.gov/health/topics/sleep/conditioninfo/inadequate-sleep

## Supplements and Diet

https://health.clevelandclinic.org/can-vitamins-and-supplements-help-you-
sleep/https://corpina.com/best-form-magnesium-sleep/
https://my.clevelandclinic.org/health/articles/15496-caffeine-how-to-hack-it-and-how-to-quit-it https://www.addictiongroup.org/alcohol/effects/insomnia/

## General Habits

https://www.cdc.gov/sleep/about sleep/sleep hygiene.html
https://sleepeducation.org/healthy-sleep/healthy-sleep-habits/

## Circadian Rhythm

https://www.salk.edu/news-release/why-screen-time-can-disrupt-sleep/
https://pubmed.ncbi.nlm.nih.gov/33091726/
Still Point Inducer
http://unityofthree.com/video-resources

## Vagus Nerve

https://psychology-spot.com/vagus-nerve-anxiety/
(Also, a very special thanks to Eric Moya and his Chronic Depletion class material!)

