

# Sleep – Why You Need It and 50 Ways to Improve It

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## STORY AT-A-GLANCE

- › Estimates suggest 1 in 3 Americans gets less than seven hours of sleep a night and more than 83 million adults in the U.S. are sleep-deprived
- › Wakefulness is associated with mitochondrial stress and without sufficient sleep, neuron degeneration sets in, which can lead to dementia
- › When you upset your circadian rhythm, the results cascade through your system, raising blood pressure, dysregulating hunger hormones and blood sugar, increasing the expression of genes associated with inflammation, immune excitability, diabetes, cancer risk and stress, and much more
- › During sleep, your brain pulls together and extracts meaning from the day's events, thereby fostering insight into the workings of your life
- › Adults need seven to nine hours of sleep per night for optimal health. Included are 50 tips and tricks to help improve the quality and quantity of your sleep

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While sleep is still a largely neglected area of health, research soundly refutes the idea that sleep is "a waste of time" and can be omitted without major repercussions. On the contrary, without proper sleep, every aspect of your health will suffer adverse

consequences. Estimates suggest 1 in 3 Americans gets less than seven hours of sleep a night and more than 83 million adults in the U.S. are sleep-deprived.<sup>1</sup>

Here, I'll review some of the most important findings that have emerged in more recent years, answering key questions such as: What happens during sleep that makes it so crucial for optimal health? What are the consequences of sleeping too little or getting poor-quality sleep? How much sleep do you actually need? And, how can you improve sleep quality and quantity?

## **What Happens During Sleep?**

Why do we sleep? For many ambitious and driven individuals, sleep can seem like an annoyance without clear purpose. Far from being a waste of time, sleep serves many important functions, and without it, your body (and mind) starts to fall apart at the proverbial seams.

In the video above, professor Matthew Walker, Ph.D., founder and director of the University of California Berkeley's Center for Human Sleep Science and author of the book, "Why We Sleep: The New Science of Sleep and Dreams," shares the latest discoveries about sleep and how it impacts virtually every area of your physical and mental health. For example, sleep is required for:

- **Maintaining metabolic homeostasis in your brain** – Wakefulness is associated with mitochondrial stress and without sufficient sleep, neuron degeneration sets in, which can lead to dementia.<sup>2,3,4</sup> Animal research reveals inconsistent, intermittent sleep results in considerable and irreversible brain damage.

In one study, mice lost 25% of the neurons located in their locus coeruleus,<sup>5</sup> a nucleus in the brainstem associated with arousal, wakefulness and certain cognitive processes. In a similar vein, research published in the journal *Neurobiology of Aging* suggests people with chronic sleep problems develop Alzheimer's disease sooner than those who sleep well.<sup>6</sup>

- **Maintaining biological homeostasis** – Your body contains an array of body clocks that regulate everything from metabolism to psychological functioning.

When you upset your circadian rhythm by not getting enough sleep, the results cascade through your system, raising blood pressure, dysregulating hunger hormones and blood sugar, increasing the expression of genes associated with inflammation, immune excitability, diabetes, cancer risk and stress,<sup>7</sup> and much more.

While the master clock in your brain synchronizes your bodily functions to match the 24-hour light and dark cycle, each and every organ, indeed each cell, has its own biological clock. The Nobel Prize in physiology or medicine in 2017<sup>8</sup> was actually awarded for the discovery of these body clocks.

Even half your genes have been shown to be under circadian control, turning on and off in cyclical waves. All of these clocks, while having slightly different rhythms, are synchronized to the master clock in your brain. Needless to say, when these clocks become desynchronized, a wide array of health problems can ensue.

- **Removal of toxic waste from your brain through the glymphatic system** – This system ramps up its activity during deep sleep, thereby allowing your brain to clear out toxins, including harmful proteins linked to brain disorders such as Alzheimer's.

By pumping cerebral spinal fluid through your brain's tissues, the glymphatic system flushes the waste from your brain, back into your body's circulatory system. From there, the waste eventually reaches your liver, where it can be eliminated.<sup>9,10,11,12, 13</sup>

- **Memory formation, extracting meaning from life events and improving daytime performance** – During sleep, your brain pulls together and extracts meaning from the day's events, thereby fostering insight into the workings of your life.

Dreams play important roles as well. In addition to helping you gain insight into what's going on in your life, tests reveal dreaming about performing an activity

increases actual physical performance tenfold.<sup>14</sup> In the dream state, your brain is actually processing information at multiple levels. Your whole brain is engaged.

Part of your brain is busy stabilizing, enhancing and integrating new memories. It's also extracting rules and the gist of what's going on. Then, during dreaming, old and new memories are integrated to form a new whole, and possible futures are imagined. (This is what you actually perceive as "the action" of your dream.) The sum total of these processes then allows you to see the meaning of your life.

## **The Consequences of Insufficient Sleep**

The list above should alert you to many of the possible ramifications associated with insufficient sleep. Considering the fact that sleep plays a key role in everything from gene expression and hormone regulation to brain detoxification and cognition, it becomes clear that there aren't many facets of your being that can skate by unscathed when you skimp on sleep. Here are some examples of the health problems linked to insufficient sleep:

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**Impaired memory and reduced ability to learn new things<sup>15</sup>** — Due to your hippocampus shutting down, you will experience a 40% deficit in your brain with respect to its ability to make new memories when you're sleep-deprived.

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**Reduced productivity at work and poor grades in school**

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**Reduced ability to perform tasks**

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**Reduced athletic performance**

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**Reduced creativity at work or in other activities**

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**Slowed reaction time, increasing your risk of accidents on the road and at work** — Getting less than six hours of sleep leaves you cognitively impaired. In 2013, drowsy drivers caused 72,000 car accidents in which 800 Americans were killed and 44,000

were injured.<sup>16</sup> This is more than died from those texting and drunk drivers combined. Sadly, drowsy driving continues to be a major cause of car accidents, with more than 90,000 in 2017.<sup>17</sup>

In 2022, the National Highway Traffic Safety Administration estimates there will be 100,000 drowsy-driving accidents. Even a single night of sleeping only four to six hours can impact your ability to think clearly the next day.

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**Increased risk of neurological problems, ranging from depression to dementia and Alzheimer's disease<sup>18</sup>** — Your blood-brain barrier becomes more permeable with age, allowing more toxins to enter.<sup>19</sup> This, in conjunction with reduced efficiency of the glymphatic system due to lack of sleep, allows for more rapid damage to occur in your brain and this deterioration is thought to play a significant role in the development of Alzheimer's.

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**Increased risk of Type 2 diabetes** — In one study,<sup>20</sup> excessive daytime sleepiness increased the risk of Type 2 diabetes by 56%.

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**Decreased immune function** — Research<sup>21</sup> suggests deep sleep strengthens immunological memories of previously encountered pathogens. In this way, your immune system is able to mount a much faster and more effective response when an antigen is encountered a second time.

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**Increased risk of obesity**

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**Increased risk of cancer** — Tumors grew faster in laboratory animals with severe sleep dysfunctions.<sup>22</sup> The primary mechanism thought to be responsible for this effect is disrupted melatonin production, a hormone with both antioxidant and anticancer activity.

Melatonin both inhibits the proliferation of cancer cells and triggers cancer cell apoptosis (self-destruction). It also interferes with the new blood supply tumors required for their rapid growth (angiogenesis).

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## **Increased risk of high blood pressure, heart attacks and cardiovascular disease –**

As noted by Walker in the video above, "In the spring when we lose one hour of sleep, we see a subsequent 24% increase in heart attacks. In the fall, when we gain one hour of sleep, we see a 21% decrease in heart attacks. That is how fragile your body is with even the smallest perturbations of sleep ..."

In his book, Walker also cites Japanese research showing male workers who average six hours of sleep per night or less are 400 to 500% more likely to suffer one or more cardiac arrests than those getting more than six hours of sleep each night.

Other research has demonstrated that women who get less than four hours of shut-eye per night increase their risk of dying from heart disease by 82%. Conversely, getting too much sleep increased their risk of heart disease by 95%, showing that it's important to make sure you get enough sleep, but not too much.<sup>23</sup>

In another study,<sup>24</sup> adults who slept less than five hours a night had 50% more coronary calcium, a sign of oncoming heart disease, than those who regularly got seven hours.

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## **Increased risk of osteoporosis**

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**Increased risk of pain and pain-related conditions such as fibromyalgia –** In one study, poor or insufficient sleep was the strongest predictor for pain in adults over 50.<sup>25</sup>

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## **Increased susceptibility to stomach ulcers**

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## **Impaired sexual function<sup>26,27</sup>**

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**Impaired regulation of emotions and emotional perception –** Your amygdala, one of your brain's centerpiece regions for generating strong emotional reactions, including negative ones, becomes more reactive than usual when you've slept poorly or insufficiently, resulting in increased emotional intensity and volatility.<sup>28</sup>

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**Increased risk of depression and anxiety (including post-traumatic stress disorder), schizophrenia and suicide** – According to a study in *Neurologic Clinics*, "there is growing experimental evidence that the relationship between psychiatric disorders and sleep is complex," and can greatly influence bipolar disorder, anxiety disorder, schizophrenia and other psychological disorders.<sup>29</sup>

**Premature aging** by interfering with growth hormone production, normally released by your pituitary gland during deep sleep.

**Increased risk of dying from any cause<sup>30</sup>** – Compared to people without insomnia, the adjusted hazard ratio for all-cause mortality among those with chronic insomnia was 300% higher.

## General Sleep Guidelines

So, how much sleep do you need to avoid this avalanche of ill effects? According to a scientific review of more than 300 studies published between 2004 and 2014 to ascertain how many hours of sleep most people need in order to maintain their health, a panel of experts came up with the following recommendations.<sup>31</sup> Keep in mind that if you're sick, injured or pregnant, you may need a bit more than normal.

Age Group	Hours of sleep needed for health
<b>Newborns</b> (0 to 3 months)	14 to 17 hours
<b>Infants</b> (4 to 11 months)	12 to 15 hours
<b>Toddlers</b> (1 to 2 years)	11 to 14 hours
<b>Preschoolers</b> (3 to 5)	10 to 13 hours
<b>School-age children</b> (6 to 13)	9 to 11 hours

Age Group	Hours of sleep needed for health
Teenagers (14 to 17)	8 to 10 hours
Adults (18 to 64)	7 to 9 hours
Seniors (65 and older)	7 to 8 hours

## How to Diagnose Sleep Deprivation

The following three factors, in combination, influence how restorative your sleep is:

- 1. Duration** – This is the number of hours you sleep. Sleep requirements are highly individual and can change from one day to the next, depending on factors like stress, physical exertion, illness and pregnancy, just to name a few. But, on average, most people need about eight hours of sleep per night.
- 2. Timing** – This is the habit of going to bed at approximately the same time each night. When you go to bed and wake up at the same times, your body becomes accustomed to the routine. This helps regulate your circadian clock so you fall asleep and stay asleep all night. Keep this routine, even on the weekends,<sup>32</sup> because even if the duration of sleep is the same, when the timing of your sleep is shifted, it's not going to be as restorative.
- 3. Intensity** – This has to do with the different stages your brain and body go through over the course of the night; the sequence of them, and how those stages are linked. Some medications will suppress certain phases of sleep, and certain conditions like sleep apnea will lead to fragmented sleep. With these scenarios, even if you're sleeping for an adequate duration and have consistent timing, your sleep will not be as restorative.

One of the easiest ways to gauge whether you've slept enough is to assess your level of sleepiness the next day. For example, if you had the opportunity, would you be able to



take a nap? Do you need caffeine to keep you going?

Answering yes to these two questions would indicate you need more and/or better sleep. Sometimes, however, signs of sleep deprivation can be less obvious. The late Nathaniel Kleitman, Ph.D., Professor Emeritus in physiology at the University of Chicago and a well-recognized pioneer in sleep research,<sup>33</sup> developed a "sleep onset latency test," to determine if you're sleep-deprived. Here's how it works:<sup>34</sup>

1. In the early afternoon, grab a spoon and head off to your darkened bedroom to take a nap. Place a metal tray on the floor beside your bed and hold the spoon over the tray as you attempt to fall asleep. Be sure to check the time as you lie down. (If you don't have a spoon and metal tray handy, you can still take this test by setting an alarm for 15 minutes to see if you fall asleep before it goes off.)
2. When you fall asleep and the spoon crashes down onto the tray, waking you up, immediately check the time again and note how much time has passed.
  - a. If you fell asleep within five minutes, it means you're severely sleep-deprived.
  - b. If it took you 10 minutes to fall asleep, you could still use more sleep.
  - c. If you managed to stay awake for 15 minutes or more before falling asleep, you're probably well rested.

## **The Best Position for Sleep**

In the video above, chiropractor and exercise physiologist Dr. Peter Martone discusses the benefits of adopting a neutral sleeping position. If you're a side or stomach sleeper and find yourself frequently tossing and turning at night and/or wake up with aches and pains, your sleeping position may be a primary culprit. As noted by Martone, for sound, healthy sleep, you need to sleep on your back, with your neck and spine in a neutral position.

The key to achieving this is to prop a pillow under your neck, not your head, as this allows you to maintain a proper spinal curve. For a demonstration on how to use your pillow to support your neck rather than simply elevating your head, please see the video. In Martone's experience, it takes an average of three to four months to convert from a side sleeper to a back sleeper, and even longer if you're used to sleeping on your stomach.

## **Inclined Bed Therapy**

Another posture-related change that might help improve your sleep is to raise the head of your bed so that you're sleeping on an incline. Inclined bed therapy – which simply involves raising the head of your bed 6 to 8 inches so you're sleeping on a 5-degree incline – may have a number of benefits, including:

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Improving blood circulation

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Boosting metabolism

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Improving glymphatic drainage from the brain

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Improving immune system function

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Improving respiratory function

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Easing symptoms associated with Alzheimer's, diabetes, glaucoma, migraines, multiple sclerosis, sleep apnea, acid reflux, edema, varicose veins and more

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Please note that sleeping on an incline is not the same as sleeping on an adjustable bed that allows you to raise the head while the lower portion remains horizontal. Your body should be straight, but on an incline. You're not looking to sleep in a sitting position where only your torso is lifted.

The alignment of your body is important, as you want your blood to circulate freely throughout your whole body and avoid stress on your hip joint. For tips on how to create an inclined bed, see [InclinedBedTherapy.com](http://InclinedBedTherapy.com).<sup>35</sup> For example, you can build your own wooden bed frame, or use leg risers or full-length foam wedges.

## **Clean Up Your Sleep Hygiene to Optimize Your Health**

There's simply no doubt that sleep needs to be a priority in your life if you intend to live a long and healthy life. Anyone struggling with chronic disease – which is at least half of the American adult population – would be wise to take sleep seriously, as it can have a significant impact, not only contributing to the problem but also counteracting any other healthy lifestyle strategies you're using to address it.

As a general guideline, seek to get right around eight hours of sleep every night. Anything under seven hours really starts to impact your health (if you're an adult). For many, this means forgoing night-owl tendencies and getting to bed at a reasonable time. If you need to be up at 6 a.m., you have to have a lights-out deadline of 9:30 or 10 p.m., depending on how quickly you tend to fall asleep.

The good news is there are many ways to improve your odds of sleeping well, even if you're currently struggling. Following are 50 of my top sleep tips. Go through this list and assess where your weaknesses might be, and start addressing the most obvious culprits. You may have to experiment a bit to find a combination that works best for you, but it'll be well worth the effort.

## **50 Other Ways to Improve Your Sleep**

- 1. Sleep in complete darkness, or as close to it as possible** – Even the tiniest bit of light can disrupt your pineal gland's production of melatonin and serotonin, thereby disrupting your sleep cycle. Even the tiniest glow from your clock radio has the potential to interfere with your sleep.

So, close your bedroom door, get rid of night lights and use blackout shades or thick drapes. If shades are out of your budget, use a well-fitting eye mask. Refrain from turning on any light at all during the night, even when getting up to go to the bathroom. If you absolutely have to have some sort of night light, use a red bulb.

- 2. Keep the temperature in your bedroom no higher than 70 degrees F** – Studies show the optimal room temperature for sleep is between 60 to 68 degrees F.

Keeping your room cooler or hotter can lead to restless sleep. When you sleep, your body's internal temperature drops to its lowest level, generally about four hours after you fall asleep. Scientists believe a cooler bedroom may therefore be most conducive to sleep, since it mimics your body's natural temperature drop.

- 3. Sleep naked** – Something as simple as sleeping naked may do the trick if you don't want to crank down the temperature on your air conditioning. One of the established benefits of sleeping in the buff is improved sleep quality, in part by preventing overheating.

One study showed a surface skin temperature difference of as little as 0.08 degrees F (or 0.4 degrees C) led to sounder sleep.<sup>36,37,38</sup> Studies have also found sleeping in the nude has several other health benefits, including improved metabolism and blood circulation.

- 4. Conquer sound pollution** – Like temperature and light, sound can be a disruptive factor that's keeping you awake. An inexpensive pair of earplugs can eliminate most noise.
- 5. Eliminate electric and electromagnetic fields (EMFs) in your bedroom** – These can disrupt your pineal gland's production of melatonin and serotonin, and are a significant contributor to mitochondrial damage and dysfunction, which is at the heart of virtually all chronic disease.

EMF exposure has also been linked to neuronal changes that affect memory and your ability to learn.<sup>39,40</sup> EMFs harm your body's mitochondria by producing

excessive oxidative damage, so "marinating" in EMFs all night, every night, can cause or contribute to chronic ailments, including premature aging.

Ideally, shut down the electricity to your bedroom by pulling your circuit breaker before bed. If you have neighbors on the other side of the wall, floor or ceiling, consider installing a Faraday cage (copper- and/or silver-threaded fabric) around your bed. If you live in a high-rise and have neighbors beneath you, place the Faraday fabric on the floor beneath your bed as well. This may significantly improve your sleep quality.

However, even if you completely shut off the electricity in your bedroom 2 out of 3 people will still have electrified rooms. This is what happened to me, and when I used sophisticated body voltage measurements I was able to detect this.

This is a result of electrical fields (not electricity) transferred into your home by the electric utility and spreading in your home. This can be remediated with some effective types of paint shielding that is then grounded to form a Faraday cage, which stops the fields from entering your bedroom.

- 6. Shut down your Wi-Fi at night** – Another really important step is to turn off your Wi-Fi at night. It would be best to hard wire your home so you have no Wi-Fi 24/7 in your home, but I realize many are unwilling or unable to take this step. It's important to realize that the Wi-Fi in your home is nearly always more of a danger to you than what's coming from outside your home.

You can confirm this by measuring the microwave signals with a meter, and seeing what your exposure is. The fact is, you don't need Wi-Fi while sleeping, so this is a wholly unnecessary exposure that is easily remedied by turning it off.

- 7. Move alarm clocks and other electrical devices away from your bed** – If these devices must be used, keep them as far away from your bed as possible, preferably at least 3 feet. Keep your cellphone as far away from your bedroom as possible if it must be on. If you keep it in your bedroom, either shut it down or put it in airplane mode.

**8. Avoid using loud alarm clocks** – It is very stressful on your body to be suddenly jolted awake. If you are regularly getting enough sleep, an alarm may even be unnecessary.

Alternatives include a sun alarm clock, which wakes you up by gradually increasing the intensity of light, thereby simulating sunrise, or a talking alarm clock, designed for the visually impaired. I use the talking clock, as it allows me to sleep in complete darkness. If I need to know the time, I just press a large button, and the clock audibly tells me the time.

**9. 5-hydroxytryptophan (5-HTP)** – One of my absolute favorite sleep aids is 5-HTP. 5-HTP is the hydroxylated form of tryptophan and easily passes your blood brain barrier when it is converted to serotonin, thereby giving mood a boost and enhancing sleep and then to melatonin.

I believe this is a superior approach to using melatonin. In one study, an amino acid preparation containing both GABA (a calming neurotransmitter) and 5-HTP reduced time to fall asleep, increased the duration of sleep and improved sleep quality.<sup>41</sup>

**10. Take magnesium malate or glycinate before bed** to increase body relaxation.

**11. Reserve your bed for sleeping** – If you are used to watching TV or doing work in bed, you may find it harder to relax and drift off to sleep, so avoid doing these activities in bed.

**12. Consider separate bedrooms** – Recent studies suggest that, for many people, sharing a bed with a partner can significantly impair sleep, especially if the partner is a restless sleeper or snores. If bedfellows are consistently interfering with your sleep, you may want to consider a separate bedroom. Pets may also need to be banished if their presence impair your sleep.

**13. Get to bed as early as possible, ideally between 9 and 10 p.m.** – Prior to the widespread use of electricity, people would go to bed shortly after sundown, as most animals do, and which nature intended for humans as well. My personal target

is to actually be asleep by 9 p.m. Your body does a majority of its recharging between the hours of 11 p.m. and 1 a.m.

- 14. Don't change your bedtime** – Go to bed and wake up at the same times each day, even on the weekends. This will help your body to get into a sleep rhythm and make it easier to fall asleep and get up in the morning.
- 15. Consider taking cannabidiol (CBD) oil** – By bringing tissues back into balance, CBD oil helps reduce pain, nerve stimulation and muscle spasm. It also promotes relaxation and has been shown to improve sleep.
- 16. Establish a relaxing bedtime routine** – This could include meditating, deep breathing, using aromatherapy or essential oils or indulging in a massage from your partner. The key is to find something that makes you feel relaxed, then repeat it each night to help you release the tensions of the day.
- 17. Avoid drinking fluids within two hours of going to bed** – This will reduce the likelihood of needing to get up and go to the bathroom, or at least minimize the frequency.
- 18. Go to the bathroom right before bed** – This will reduce the chances that you'll wake up to go in the middle of the night.
- 19. Avoid eating at least three hours before bedtime, particularly grains and sugars** – These will raise your blood sugar, delay sleep and raise your risk of acid reflux. Later, when blood sugar drops too low (hypoglycemia), you may wake up and be unable to fall back asleep.

Aside from that, eating too close to bedtime can harm your health in other ways. If you consume more calories than your body can immediately use, there will be an excess of free electrons, which back up inside your mitochondria.

These electrons are highly reactive and start to leak out of the electron transport chain in the mitochondria. These excess electrons wind up prematurely killing the mitochondria, and then wreak further havoc by damaging your cell membranes and

contributing to DNA mutations. There's compelling evidence to suggest this type of mitochondrial dysfunction is one of the keys to accelerated aging.

- 20. Take a hot bath or shower before bed** – When your body temperature is raised in the late evening, it will fall at bedtime, facilitating slumber. The temperature drop from getting out of the bath signals your body it's time for bed. It will also help if you finish your shower with a cold rinse.
  - 21. Take a sauna followed by cold immersion in an unheated pool or shower, two to three hours before bed** – This combination helps activate your parasympathetic nervous system to induce relaxation, allowing for sounder, deeper sleep.
  - 22. Wear socks to bed** – Feet often feel cold before the rest of the body because they have the poorest circulation. At least one study has shown that wearing socks to bed reduces night waking. As an alternative, you could place a hot water bottle near your feet at night.
  - 23. Put your work away at least one hour before bed (preferably two hours or more)** – This will give your mind a chance to unwind so you can go to sleep feeling calm, not hyped up or anxious about tomorrow's deadlines.
  - 24. Avoid watching TV right before bed** – Even better, get the TV out of the bedroom or even completely out of the house. It's too stimulating to the brain, preventing you from falling asleep quickly. TV disrupts your pineal gland function.
  - 25. Minimize use of electronics, both during the day and in the evening** – Electronic screens are major sleep thieves, robbing you of the ability to fall asleep quickly. Research has shown that the more time you spend on electronic devices during the day, and especially at night, the longer it takes to fall asleep and the less sleep you get overall.<sup>42,43</sup>
- Teenagers who used electronic devices such as MP3 players, video games, tablets, smartphones and/or computers for more than five hours a day were 3.5 times more



likely to get fewer than five hours of sleep per night. They were also 49% more likely to need more than an hour to actually fall asleep.

**26. Swap out LEDs and fluorescent light bulbs in your home for incandescents** – LEDs and fluorescent lights emit blue light that is not balanced by red and near infrared frequencies.<sup>44</sup> Incandescent lights emit red and near infrared wavelengths and very little in the blue wavelengths, making them a far healthier type of lighting in general.

Once the sun has set, the lower the light in your home the better. Candlelight is ideal. Salt lamps are another option that will not have an adverse impact on your health and sleep quality.

**27. Use blue-blocking glasses after sunset** – While amber lenses work, glasses with red lenses actually work even better, as they not only block blue light, but also yellow and green. You can get inexpensive amber glasses and red glasses on Amazon.

**28. Install blue-blocking software on your electronic screen devices** – Iris is the absolute best one and I have used it for many years. If you use Iris at night, you won't need blue blocking glasses.

**29. Reset your circadian clock** – Expose yourself to bright sunlight in the morning and/or around solar noon to "set" your master clock, and to avoid blue light exposure after sunset for the same reason.<sup>45</sup>

**30. Listen to relaxation CDs** – Some people find the sound of white noise or nature sounds, such as the ocean or forest, to be soothing for sleep. An excellent relaxation/meditation option to listen to before bed is the Insight audio CD.

**31. Read something spiritual or uplifting** – This may help you relax. Don't read anything stimulating, such as a mystery or suspense novel, which has the opposite effect. In addition, if you are really enjoying a suspenseful book, you might be tempted to go on reading for hours, instead of going to sleep.

- 32. Start journaling, if you're not already** – If you often lie in bed with your mind racing, it might be helpful to keep a journal and write down your thoughts before bed.
- 33. Short-circuit worry with creative distractions** – If worry has you in its grip, try thinking of something else that interests you but is of no importance. Sleep expert Neil Stanley, Ph.D., said, "I fly a lot, so I imagine I have my own private jet and how would I arrange the furniture on it. If you're someone who likes going to music festivals, what would your lineup be?"
- 34. Reduce or avoid as many drugs as possible** – Many drugs, both prescription and over-the-counter, may adversely affect sleep. In most cases, the condition causing the drugs to be taken in the first place can be addressed by following guidelines elsewhere on my website.
- 35. Avoid caffeine** – At least one study has shown that, in some people, caffeine is not metabolized efficiently, leaving you feeling its effects long after consumption. So, an afternoon cup of coffee or tea will keep some people from falling asleep at night. Be aware that some medications also contain caffeine (for example, some over-the-counter pain relievers and cold and decongestion products may contain caffeine).
- 36. Avoid alcohol** – Although alcohol will make you drowsy, the effect is short-lived and you will often wake up several hours later, unable to fall back asleep. Alcohol will also keep you from entering the deeper stages of sleep, where your body does most of its healing.
- 37. Avoid foods you may be sensitive to** – This is particularly true for sugar, grains and pasteurized dairy. Sensitivity reactions can cause excess congestion, gastrointestinal upset, gas and other problems.
- 38. Exercise regularly, but not within three hours of bedtime** – Exercising for at least 30 minutes per day can improve your sleep. However, don't exercise too close to bedtime or it may keep you awake. Studies show exercising in the morning is the best if you can manage it.

- 39. Lose excess weight** — Being overweight can increase your risk of sleep apnea, which can seriously impair your sleep.
- 40. Have your adrenals checked by a good natural medicine clinician** — Scientists have found that insomnia may be caused by adrenal stress.
- 41. If you are menopausal or perimenopausal, get checked out by a good natural medicine physician** — The hormonal changes at this time may cause sleep problems if not properly addressed.
- 42. Get out of bed** — Rather than tossing and turning, allowing frustration to grow, get out of bed. Try writing your thoughts down; just be sure to keep the lights dim. Telling yourself you're going to try to stay awake instead may also have the paradoxical effect of making you sleepy. The reason for this is because once you're OK with being awake, your frustration and arousal level drops, making it easier to fall asleep.
- 43. Do some controlled breathing exercises** — Breathing is both an involuntary and a voluntary process. You can alter the speed and the depth of your breathing, and you can choose to breathe through your mouth or your nose. These choices lead to physical changes in your body.

Slow, deep and steady breathing activates your parasympathetic response while rapid, shallow breathing activates your sympathetic response, involved in releasing cortisol and other stress hormones.

The combination of controlled breathing with counting can be particularly effective when your mind refuses to shut down at night, as it gives your mind something to focus on. One breathing exercise involving counting that you could try is the 4-7-8 breathing technique taught by Dr. Andrew Weil. It's a potent remedy for anxiety, as it acts as a natural tranquilizer for your nervous system.

- 44. Tape your mouth to prevent mouth breathing** — While this may sound bizarre, it's quite effective and not at all painful or risky. Simply place a small piece of medical

tape (please do not use industrial types of tape which can damage your skin) across your lips. This will encourage breathing through your nose throughout the night, which has a number of health benefits aside from regulating sleep disordered breathing that can progress to sleep apnea.

**45. Boost your melatonin** – Ideally it is best to increase levels naturally with exposure to bright sunlight in the daytime (along with full spectrum fluorescent bulbs in the winter) and absolute complete darkness at night. If that fails or isn't possible, you may want to consider a melatonin supplement.

In scientific studies, melatonin has been shown to increase sleepiness, help you fall asleep more quickly and stay asleep, decrease restlessness and reverse daytime fatigue.

Melatonin is a completely natural substance, made by your body, and has many health benefits in addition to sleep. Start with as little as 0.25 milligrams (mg) and work your way up in quarter-gram increments until you get the desired effect.

**46. Use a natural sleep aid such as valerian root** – Studies have found valerian root helps improve the speed at which you fall asleep, depth of sleep (achieving deep sleep 36% faster<sup>46</sup>) and overall quality of sleep.

Start with a minimal dose and use the lowest dose needed to achieve the desired effect, as higher dosages can have an energizing effect in some people. Typical dosages used in studies range between 400 mg and 900 mg, taken anywhere from 30 minutes to two hours before bed.

**47. Drink chamomile tea** – This herb is typically used in the form of infusions, teas, liquid extracts or essential oils made from the plant's fresh or dried flower heads. It has sedative effects that may help with sleep, which is why chamomile tea is often sipped before bed.

**48. Tap for insomnia** – One of my favorite remedies for insomnia is the Emotional Freedom Techniques (EFT). Most people can learn the basics of this gentle tapping

technique in a few minutes. EFT can help balance your body's bioenergy system and resolve some of the emotional stresses that are contributing to your insomnia at a very deep level. The results are typically long lasting and improvement is remarkably rapid.

**49. Limit daytime naps, and avoid napping after 5 p.m.** – If you're tired during the day, you may be tempted to take naps. This, however, can make it more difficult to fall asleep later in the evening, so limit naps to 15 or 20 minutes, and don't nap too late in the afternoon.

**50. Use a sleep tracker** – Many fitness trackers now include sleep tracking software that can be quite useful, allowing you to evaluate the effects of different strategies. For example, did that afternoon coffee disrupt your sleep? Did morning exercise make it better but evening exercise made it worse? How long does it take you to actually fall asleep, and how much earlier must you go to bed to get a full eight hours of sleep?

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