# The Truth About Sleep

Analysis by Dr. Joseph Mercola ✔ Fact Checked

February 17, 2023

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**STORY AT-A-GLANCE**

- Our modern lifestyle, which glamorizes constant internet connectivity and round-the-clock activity, conspires to keep us awake far longer than is healthy
- The standard recommendation for adults is to get seven to eight hours of sleep per night. Teenagers need around nine hours, while younger school-age children may need upward of 11 hours
- Healthy sleep consists of five general stages, each stage lasting five to 15 minutes, with a complete cycle (light, deep and REM sleep) taking between 90 and 120 minutes. You cycle through these stages four to six times each night, and this cycling is tremendously important, from both a biological and psychological perspective
- So far, 51 DNA markers that appear to influence sleep have been found, including markers for long and short sleep duration, morning and evening personalities, insomnia, and high or low sleep efficiency
- Sleep deprivation has a number of concerning health ramifications, including the promotion of diabetes, excess weight, heart disease, cancer and cognitive decline, just to name a few


As a medical journalist for BBC in the U.K., Dr. Michael Mosley has put a number of different health strategies under the proverbial loupe, including the ketogenic diet, which I interviewed him about in 2014.

In this BBC program, "The Truth About Sleep," which originally aired in 2017, Mosley investigates the health ramifications of insomnia, which is a problem he shares with many others in the world. In it, he reviews the hazards of sleep deprivation, and shares a variety of methods found to improve sleep quality and quantity.

About 70% of Britons feel they get less sleep than they need, and about a third report suffering from insomnia, Mosley says. His own problem has to do with staying asleep. While he has no problem falling asleep initially, he wakes up around 3 a.m. and has a hard time drifting off again. "I'm simply not getting enough sleep," he says.

## How Much Sleep Is Required for Health?

As noted by Mosley, the standard recommendation for adults is to get seven to eight hours of sleep per night. Teenagers need around nine hours, while younger school-age children may need upward of 11 hours.

While insomnia is one reason cited for lack of sleep, there are many other causes as well, including shift work and excessive partying. Our modern lifestyle, which glamorizes constant internet connectivity and round-the-clock activity, essentially conspires to keep us awake far longer than is healthy.

How can you tell if you're actually sleep deprived or getting the "right" amount of sleep for you? Mosley demonstrates a test that can clue you in. It's simple. Just go to bed in the middle of the afternoon and time how long it takes you to fall asleep. To conduct this sleep onset latency test, all you need is a watch, a metal spoon and a metal tray.

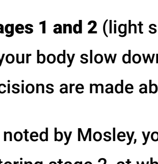
Place the metal tray next to your bed and lay down, holding the spoon in your hand so that when it falls, it will fall onto the tray. Relax. When you start falling asleep, the muscles in your hand will relax, causing the spoon to drop. The clanking will wake you up. Look at your watch. How long did it take you to drift off?

If it takes you more than 15 minutes, you're getting enough sleep. If you fall asleep in less than 10 minutes, you're moderately sleep deprived. Falling asleep in five minutes or less is indicative of severe sleep deprivation.

## The High Cost of Sleep Deprivation

The price tag for sleep deprivation is steep. A bleary-eyed workforce costs the U.K. up to £40 billion (about $59 billion) a year in low productivity and absenteeism, Mosley notes. When asking random people on the street what keeps them up at night, the answers are manifold.

Many younger adults cite internet videos and social media. Working out in the evening, mental worries and a disruptive partner are other reasons people give for not getting enough shut-eye.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## What Happens During Sleep?

Sleep is not just one long, solid state. Healthy sleep consists of several stages,[1] each stage lasting five to 15 minutes, with a complete cycle (light, deep and rapid eye movement or REM sleep) taking between 90 and 120 minutes.

A full sleep cycle starts out in light sleep and progresses through to deep sleep, then reverses back from deep to light sleep before entering REM. You cycle through each of these stages four to six times during the night, and this cycling is tremendously important, from both a biological and psychological perspective.

- **Stages 1 and 2** (light sleep; non-REM) — During the initial stages of sleep, biological processes in your body slow down but your brain remains active as it begins the editing process where decisions are made about which memories to store and which to discard.

  As noted by Mosley, you drift in and out of consciousness in stage 1, before ultimately entering stage 2, at which point your brainwaves slow down.

- **Stages 3 and 4** (deep sleep; non-REM) — In these deeper sleep stages you enter into a near coma-like state, during which physiological cleansing and detoxification processes in the brain[2] take place.

  Your brain cells actually shrink by about 60% during this deep sleep phase. This creates more space in-between the cells, giving your cerebrospinal fluid more space to flush out the debris. Before entering stage 5 REM sleep, you cycle back into stage 2.

- **Stage 5** (REM) — During this last phase, you enter rapid eye movement (REM) sleep, where dreaming takes place. In this phase, your brain is as active as it is during wakefulness, but your body is paralyzed, which prevents you from acting out your dreams.

  The frightening experience of sleep paralysis occurs when you awaken during this phase and find your body unresponsive. The "treatment" for this disorder is knowledge. You simply need to be educated about what's happening so that you can calmly ride out the episode, which typically will not last more than a few minutes.

All of these stages are important, and it's important to cycle through them enough times each night — especially the deeper stages. When stages 3 and 4 are interrupted or missing, your brain gets clogged with debris associated with Alzheimer's disease and, indeed, sleep deprivation is a risk factor for severe dementia. Stages 1 through 4 are also what allow you to feel refreshed in the morning, while stage 5 is important for memory.

## Genetic Influences

To investigate the influence of genetics, Mosley sends off a blood sample for DNA analysis. Simon Archer, Ph.D., a chronobiologist at the Surrey Clinical Research Centre, is investigating genetic markers related to sleep characteristics and hereditary sleep problems. Fifty-one DNA markers have so far been found that appear to influence sleep.

Mosley has three genetic markers that are predictive of being a morning person. He also has five markers for long sleep duration. Taken together, these genetic markers suggest Mosley needs slightly more sleep than the average person.

He also has a marker that increases his risk for insomnia, and one associated with "low sleep efficiency in people exposed to high levels of work-related stress," Archer says. These two markers may well help explain Mosley's inability to stay asleep throughout the night — especially when stressed.

Lastly, Mosley has a marker for increased caffeine sensitivity and caffeine-induced sleep disruption. Caffeine is a common culprit in sleep deprivation, although many (including Mosley) believe they "can drink coffee with impunity."

Many also turn to alcohol, thinking it helps them nod off faster. Alas, research shows alcohol consumption promotes poor sleep quality. By relaxing your throat muscles, it also promotes snoring, which can be problematic not just for the sleeper but others in the household as well.

## Sleep Quality Affects Your Heart Health

Sleeping poorly has a number of concerning health ramifications, including the promotion of diabetes, excess weight, heart disease, cancer and cognitive decline, just to name a few.

One interesting study[3] found poor sleep excessively ages your heart, thus putting you at increased risk for heart disease at an earlier age. People who got seven hours of sleep each night had hearts showing signs of being 3.7 years older, based on biological age, than their chronological age.

People who regularly slept either six or eight hours had hearts that were on average 4.5 years older than their chronological age, while those who got just five hours or less of sleep each night had the oldest biological heart age — 5.1 years older than their chronological age.

Other research[4] has found that even if you sleep a healthy number of hours, the quality of that sleep can have a significant impact on your risk for high blood pressure and vascular inflammation associated with heart disease.

Women who had mild sleep disturbance such as taking longer to fall asleep or waking up one or more times during the night were "significantly more likely to have high blood pressure than those who fell asleep quickly and slept soundly," Forbes reports.[5]

## Other Health Impacts of Sleep Deprivation

Other examples of health problems linked to insufficient sleep include:

**Increased risk of obesity and Type 2 diabetes —** Mosley, who is at high risk for diabetes, participates in a sleep deprivation experiment to see how it affects glucose levels. As shown in many other studies, sleep deprivation causes an exaggerated rise in glucose and triggers carb and sugar cravings.

Together, this can easily lead to excess weight gain and Type 2 diabetes. A scientific review article[6] published in 2017 noted "difficulty initiating sleep increased the risk of Type 2 diabetes by 55%, while difficulty maintaining sleep increased its risk" by a whopping 74%.

**Increased risk of neurological problems, ranging from depression to dementia and Alzheimer's disease**[7] — Your blood-brain barrier becomes more permeable with age, allowing more toxins to enter.[8] 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.

**Decreased immune function —** Research[9] 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.

**Increased risk of cancer —** Tumors grow two to three times faster in laboratory animals with severe sleep dysfunctions. 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 require for their rapid growth (angiogenesis).

**Increased risk of osteoporosis.**

**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.[10]

**Increased susceptibility to stomach ulcers.**

**Impaired sexual function.**[11]

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

**Increased risk of dying from any cause**[12] — Compared to people without insomnia, the adjusted hazard ratio for all-cause mortality among those with chronic insomnia was 300% higher.

**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 about 60% more reactive than usual when you've slept poorly or insufficiently, resulting in increased emotional intensity and volatility.

**Increased risk of depression and anxiety (including post-traumatic stress disorder), schizophrenia and suicide —** In fact, researchers have been unable to find a single psychiatric condition in which the subject's sleep is normal.

**Impaired memory and reduced ability to learn new things**[13] **—** 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.

**Reduced productivity, performance and creativity.**

**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.[14]

This is more than died from those texting and drunk drivers combined. Even a single night of sleeping only four to six hours can impact your ability to think clearly the next day.

## Sleep Deprivation Affects Your Gut Bacteria

Mosley also investigates how sleep deprivation affects gut bacteria, which is yet another way in which it can influence your obesity risk. As explained in "The Truth About Sleep," gut bacteria help extract nutrients from the food you eat and act as a barrier against infectious agents.

So, not only do they play a key role in your metabolism, they also influence your immune system function. By looking at stool samples, researchers have noted that sleep deprivation increases the ratio of two types of bacteria associated with obesity.

The way these bacteria promote obesity is by increasing your energy uptake. When you eat, the bacteria in your gut largely determine how many calories are absorbed. Interestingly, when sleep deprived, your gut becomes more efficient at absorbing calories, even if the amount of food you eat remains unchanged.

This may be quite beneficial if food is scarce, but when combined with round-the-clock food availability, it tends to promote obesity. According to Mosley, research has shown that half of those sleeping five hours or less per night are in fact obese.

## Sleeping Pills Are Far From Ideal

Sleeping pills are a common go-to solution for those struggling with poor or insufficient sleep. Mosley interviews Dr. Sara Kayat, a general practitioner, about her views on sleeping pills. She only recommends and prescribes them for acute, short-term issues.

In the long term, they're simply not a good solution, as they create dependency. You also build up a tolerance to them, so you end up needing higher and higher doses to get the same effect.

While not addressed in "The Truth About Sleep," research has repeatedly shown sleeping pills don't provide a significant amount of extra sleep, while having a range of potentially dangerous side effects.

For example, the best performing sleep drug in Consumer Reports' "Best Buy Drugs Report" for 2015, zolpidem, allowed patients to fall asleep 20 minutes faster and sleep 34 minutes longer on average, compared to placebo.[15,16]

Similarly, a 2012 meta-analysis[17] of data from 13 studies submitted to the U.S. Food and Drug Administration found Z drugs (nonbenzodiazepine hypnotics) decreased the time it took to fall asleep by 11 to 33 minutes (average 22 minutes) compared with placebo.

Far from contributing to health, the minor increase in sleep time that sleeping pills provide has been shown to actually increase your mortality risk over the long term.

A Norwegian study[18] published in 2007, which included data from 14,451 men and women aged 40 to 42 who were followed for 18 years, found frequent use of sleeping pills increased men's risk of death by 150% and women's risk by 170%, after adjusting for confounding factors.

A 2010 Canadian study[19] of 14,117 people between the ages of 18 and 102 also found those who used sleeping pills were 1.36 times (136%) more likely to die than nonusers. You can learn more about the hazards of sleeping pills in my May 2019 article "Sleeping Pills Get Black Box Warning Following Accidental Deaths."

## Resetting Your Body Clock to Sleep Better

Mosley goes on to visit the University of Oxford, where scientists are investigating how the human body clock or circadian rhythm influences sleep. Russel Foster, a professor of circadian neuroscience, explains how the master clock in your hypothalamus is influenced by a third light-sensing system in your eyes.

Your rods and cones grab light, allowing us to see. But you also have another set of light sensors in your eyes that register dawn and dusk signals, and these cells are responsible for controlling your circadian rhythm, by communicating with the master clock in your hypothalamus.

In addition, every cell in your body has its own circadian rhythm, and all of these are coordinated by and synced to your master clock. When your master clock gets desynchronized or shifted out of phase — which can easily happen if you stay up too late watching TV or perusing your cellphone — all the other internal clocks start desynchronizing, which can trigger a cascade of health problems.

Artificial light exposure in the evening, combined with a deficiency of light exposure during daytime hours, significantly contributes to master clock desynchronization and poor sleep. Mosley visits a research laboratory on a Danish island. Built entirely of glass, the house allows your body to synchronize to the rising and setting sun.

While living in a glass house is impractical, you can reset your master clock each day by making sure you get plenty of bright sunlight first thing in the morning and around midday.

Remove electronic screens from your bedroom, such as TVs, laptops and cellphones, and stop using them at least one hour before bedtime. Really make an effort to keep your bedroom for sleeping only, without the distractions of work, school, hobbies and entertainment.

## Novel Sleep Solutions

While many insomnia treatments are obvious, Mosley found a few that are a bit more unusual, yet have published papers suggesting they might be useful. These include:

- Practicing mindfulness meditation
- Taking a hot bath or shower about an hour before bed
- Taking a prebiotic fiber supplement

Mosley and three volunteers each tried one of these strategies for seven days, and agreed they all helped improve their insomnia to some degree. Prebiotic supplementation appeared to be one of the most effective of these strategies.

Data collected by Mosley's activity bracelet showed he went from 21% activity or wakefulness during the night before taking the supplement, to 8% activity after taking it for five days. Subjectively he also felt like he slept better when taking it. For additional sleep tips, see my "Top 33 Tips to Optimize Your Sleep Routine."


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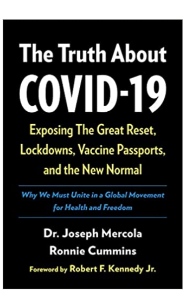


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**stanleybecker**
Joined On 11/12/2012 3:21:48 AM
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the need for sleep is clear evidence that life forms on our planet have cosmic influences - the turning of our planet creates light and dark periods - our biological function has been designed to repair many functions while asleep - in the movie "Wall Street" it is stated that "lunch is for wimps" - this is suggestive that "sleep is for wimps" - nothing could be further from the truth - "sleep, glorious sleep" - this is what warriors and heroes believe - boost your immunity and avoid the latest Big Pharma POWER GRAB by indulging yourself in the glorious comfort of the relaxation and luxurious daily holiday of a good night's sleep - fools believe that sleep is a waste of time - lack of sleep is a form of chronic stress - lack of restored balance and organ repair will accumulate and eventually disrupt your well being - dreams mainly occur during sleep - your psyche interacts with your ego in the modality of sleep - what your psyche knows about you and your fears and desires you will never find in a Hollywood movie - take heed

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**Guillermou**
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Good morning STAN. Yes, sleep is a necessity and a great help to benefit cognitive processes. The unconscious as a great repository where packages are stored containing your convictions, memories, and life experiences. The content of said deposit, then affects your behavior and your actions in different circumstances. When we sleep, our conscious also sleeps, but our unconscious remains awake. Dreams and the unconscious connect and can help solve problems.

The purpose of dreams is to organize the information we have received during the day, in our unconscious. Dreams affect the unconscious, and disturb our emotions. Yes, we dream of something that affects us emotionally, this can affect your behavior once awake. The dreams, historically, have had a function to face the situations feared by the human being. The interpretation of dreams can help us overcome the anxiety that these situations cause.

If sleep affects learning and memory processes, when we enter REM the association of ideas can give a boost to creativity. Cutting this last REM stage from 6 to 8 hours of sleep will have a direct and material impact on your ability to solve problems creatively and productively. Stay asleep and your brain will continue to actively work on the challenges of your day, employing a number of tactics that are not available to the waking mind. An experiment conducted by the University of Berkeley even showed that the brain's problem solving ability during REM sleep was 15-35% more effective than its ability to solve the same problems while awake. blog.fluidui.com/dreams-creativity-and-how-they-are-connected (2018) 7 Great Examples of Scientific Discoveries Made in Dreams www.famousscientists.org/7-great-examples-of-scientific-discoveries-ma..

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**juststeve**
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Very well covered guys, couldn't agree more. Dreams understood properly can provide a map to understand yesterday and for one to take on the day. Jung is a good place to start. He might scare the hell out of you until you begin to understand the symbolic messages properly.

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**Guillermou**
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The molecular understanding of circadian rhythms has raised new therapeutic frontiers for cancer that could place the circadian clock in an indispensable role in treatment. Abnormal circadian rhythms as a potential carcinogen, which has increased focus on defining the mechanisms underlying circadian disruption-induced tumorigenesis. These rhythms arise primarily from the interaction between circadian clocks and sleep-wake cycles, eat-fast cycles, and work-rest cycles. These circadian rhythms can modulate several key aspects of cellular and organ functions with profound implications for cancer treatment.

In fact, accumulating evidence has shown that disturbed circadian rhythms are closely related to tumorigenesis in breast cancer, prostate cancer, colorectal cancer (CRC), pancreatic adenocarcinoma, liver cancer, lung cancer, and others. The circadian rhythm is an evolutionarily conserved timing system comprising a wide variety of processes including sleep-wake cycles, eat-fast cycles, and activity-rest cycles, coordinating the behavior and physiology of all organs for homeostasis. of the whole body. Acute disruption of the circadian rhythm can cause transient discomfort, while long-term irregular circadian rhythm will result in dysfunction of the body, increasing the risks of numerous diseases, especially cancers.

In mammals, the suprachiasmatic nucleus (SCN) of the hypothalamus holds the "master clock," which it synchronizes with the ambient light cycle by directly coordinating efferent and neuroendocrine signals from the autonomic nervous system. In detail, several proteins involved in the clockwork of the cell are closely associated with positive and negative transcriptional feedback loops.

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Several studies have revealed that shift workers are at increased risk of developing breast and prostate cancer, as shown by a strong correlation between a long period (>20 years) of shift work and increased cancer risk. Furthermore, previous studies have indicated that people in modern society have undergone sub-healthy lifestyle change, including excessive calorie intake at midnight or continuous caloric intake for 24 hours a day, which mimics aspects of work. in turns and potentially promotes the risk of prostate and breast cancer.

Rest/activity rhythm was also identified as a key factor due to its significant impact on the clinical management of patients with metastatic CRC, who have a poor quality of life with erratic rest/activity periods. Dysregulation of sleep-wake cycles, such as prolonged sleep deprivation, disrupts the immune system. In normal sleep-wake cycles it can lead to abnormal inflammatory responses, as evidenced by upregulation of proinflammatory cytokines (especially IL-6 and CRP), which are potential risk factors for several types of cancer, including ovarian cancer.

, brain, breast and colorectal. In particular, hyperphagia and weight gain are closely related to sleep deprivation, being overweight or obese facilitated increased adipokine secretion and macrophage release from adipose tissue, triggering chronic inflammation and subsequent oxidative stress and DNA damage contributing to the promotion of cancer. Chronic disruption of sleep-wake cycles can cause increased DNA damage and decreased DNA repair, constituting a potential risk factor for tumorigenesis.

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**Guillermou**
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Metabolic diseases are the origin of multiple diseases such as Alzheimer's and cancer. Diet and sleep quality are the most important modifying factors of the microbiota-gut-brain axis. Gut microbiota affects the neuro-immuno-endocrine pathways. Communication pathways between the microbiota and the brain include the vagus nerve, intestinal hormonal signaling, the immune system, tryptophan metabolism, short-chain fatty acids. Chronic stress generates tiredness and fatigue that is the cause of insomnia, opposing the production of melatonin. Melatonin represents helps to reestablish mental and physical rhythms, restoring the balance between brain modulators.

Melatonin is produced naturally from tryptophan, a precursor for 5-HTP, which is converted to serotonin. The cerebral pineal gland converts serotonin into melatonin when there are low levels of light, being the basis of our circadian rhythms. For this we also need enough calcium, B6, folate, B12 and D. Prolonged stress levels have been correlated with HPA access hyperactivity, decreased sleep duration, as well as reduced REM sleep and delta power, leading to poorer quality sleep, impaired memory, poorer mood regulation, which can in turn lead to more stress.

Stress also leads to significant changes in the composition of the cecal and fecal microbiota, with alterations in metabolites and immune signaling pathways, which affect sleep quality, depression, neurogenesis, and microglia activation. Stress, including early life stress, is a key risk factor for leaky gut syndrome, with impaired gut-brain axis homeostasis that is strongly related to anxiety, depression, and sleep disturbances. www.sciencedirect.com/.../S2352289516300509 . (2017) www.verywellmind.com/relationship-between-stress-and-sleep-3144945 (2020)

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Sleep deprivation induces damage to the mucosa of the small intestine by inhibiting melatonin secretion. Melatonin supplementation can effectively improve small intestinal mucosal injury caused by sleep deprivation. TM enhancement was caused by inhibition of oxidative stress, inflammation, and activation of the NF-B pathway. www.sciencedirect.com/.../S1567576919320168 (2020) Sleep deprivation and stress have a reciprocal relationship. Disruption of sleep homeostasis is often accompanied by increased activity of the hypothalamic-pituitary-adrenal (HPA) axis, leading to an increase in circulating levels of stress hormones.

These hormones follow a circadian release pattern under unchanged conditions and are involved in sleep regulation. royalsocietypublishing.org/.../rsfs.2019.0092 (2020) Suboptimal sleep increases the risk of developing type 2 diabetes. Additionally, sleep disturbances are a common reality for children and adults living with type 1 or type 2 diabetes, which is disrupted and affected by physiological and psychosocial/behavioral factors. . Regarding the biological pathways (Fig. 1), there seems to be a reciprocal relationship for type 2 diabetes, in which sleep characteristics negatively impact neurological and endocrine systems, promote obesity and type 2 diabetes, in addition to exacerbate glycemic outcomes, while diabetes itself often leads to sleep difficulties.

onlinelibrary.wiley.com/.../dme.14211 (2020) Lack of sleep has been identified as a risk factor for poor glycemic control in people with type 2 diabetes. Sleep characteristics are most strongly associated with glycosylated hemoglobin europepmc.org/.../31719053 (2020)

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Indulin resistance and diabetes are associated with Alzheimer's disease. The problem of insulin deficiency and insulin resistance is well reported in diabetes, but there are many studies that suggest dysregulation of insulin levels as a reason behind the development of Alzheimer's disease. As the link between diabetes and Alzheimer's disease (AD) deepens, there is a need to understand the plausible links between the two. Here we have discussed the emerging role of major factors such as insulin imbalance, advanced glycation end-products and micro-RNAs involved in diabetes and Alzheimer's. onlinelibrary.wiley.com/.../ddr.21579 (2020) Dementias, including the type associated with Alzheimer's disease (AD), are on the rise worldwide.

Likewise, type 2 diabetes mellitus (DM2) is one of the most prevalent chronic diseases worldwide. Although the mechanisms and treatments are well established for DM2, much remains to be discovered. Recent research efforts have further investigated the factors involved in the etiology of AD. As a result, AD has been labeled "type 3 diabetes." In this review, we detail the shared processes that contribute to these two diseases. Insulin resistance, the main component of the pathogenesis of DM2, is also present in AD, causing impaired glucose metabolism in the brain, neurodegeneration, and cognitive impairment.

Dysregulation of insulin receptors and components of the insulin signaling pathway, including protein kinase B, glycogen synthase kinase 3, and the mammalian target of rapamycin, is reported in both diseases. T2DM and AD also show evidence of inflammation, oxidative stress, mitochondrial dysfunction, advanced glycation end products, and amyloid deposition. The impact that changes in neurovascular structure and genetics have on the development of these conditions is also being examined. content.iospress.com/articles/journal-of-alzheimers-disease/jad210612 (2022)

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Sleep disturbances are associated with cognitive decline. In conclusion, the frequency and severity of sleep disorders appear to follow the evolution of cognitive decline. The general results of the objective measures seem more consistent than those highlighted by the subjective measures. the frequency and severity of sleep disturbances seem to follow the course of cognitive decline. Sleep disturbances are common in AD and are involved in impaired memory consolidation and clearance of metabolites from synapses (ie, including -amyloid), which are implicated in AD neurogenesis. Sleep can also play an important role in cognitive reserve and in the restoration of neurobehavioral functions and psychological aspects, for example.

One in four people with AD have severe sleep dysfunction, such as repetitive awakenings or other sleep disorders, i.e. , insomnia, hypersomnia or circadian rhythm disturbances. Some authors identified sleep disorders in the preclinical phases of AD as a predictor of the incidence of dementia. One third of people with mild cognitive impairment have sleep disorders. The most commonly reported sleep disorders are insomnia, sleep-related breathing disorders, restless legs syndrome, and REM sleep behavior disorders. www.mdpi.com/.../htm (2022)

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The cerebral pineal gland converts serotonin into melatonin at low light levels, being the basis of our circadian rhythms. For this we also need enough calcium, zinc, magnesium, B6, folic acid, B12 and D. SAMe, folic acid, B12 , B6 and tryptophan, improve the supply of serotonin and help the production of creatine, glutathione, taurine, L-carnitine, and melatonin An insufficiency of sun and vitamin D is associated with seasonal depression and its ability to control inflammation. Methylation is essential for many functions in the body, including the production of neurotransmitters. Selenium, alpha lipoic acid, and glutathione have synergistic effects with melatonin Ways to Naturally Increase or Lower Melatonin Levels and Drug/Supplement Interactions.

At age 6, melatonin production reaches its maximum levels. At 16 years of age the first sudden drop in melatonin occurs, this decrease is accentuated between 40 and 45 years, melatonin is reduced by half, which accelerates the decline of the body and the manifestations of aging, at 80 years, their levels barely reach 20 percent. This article on the formation of melatonin www.selfhacked.com/.../melatonin-part-2 (2021) Tryptophan as a precursor to serotonin, will be converted directly into the neurotransmitter. 5-HTP is extracted from the African shrub Griffonia simplicifolia and is also good for improving mood.

Antidepressant activity appears to be related to activation rather than suppression of monoaminergic activity; therefore, it is likely the decreased metabolism of monoamines found in some types of depression. Most clinical trials of 5-HTP show beneficial effects for depression, anxiety, panic attacks and sleep disorders and that it is a promising support and can be used for metabolic diseases such as obesity and diabetes. Some studies also indicate its potential in neurodegenerative diseases such as Alzheimer's and Parkinson's disease.

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Many vitamins contribute to the production of serotonin. Vitamin B6 helps convert tryptophan and 5-HTP to serotonin; folic acid and vitamin B12 increase the effectiveness of SAM-e; vitamin C is necessary for the creation of other mood-related neurotransmitters, and vitamin D oversees the efficient synthesis of tryptophan. Also folate and B12. www.mdpi.com/.../htm (2021) file:///C:/Users/gurra/Downloads/H86920210509.pdf (2021) Morinda officinalis oligosaccharides increase serotonin in the brain and ameliorate depression via promoting 5-hydroxytryptophan production in the gut microbiota www.sciencedirect.com/.../S2211383522000983 (2022) In table 1 the melatonin content of food.

Melatonin could regulate human physiological rhythm, insomnia, reduce free radicals, improve immune system, show anti-aging and anti-inflammatory, anti-cancer, neuroprotective effects, control cardiovascular disease, diabetes and obesity. . In particular, pineapples, bananas and oranges increased significantly. Pineapples increased blood levels of 6-sulfatoxymelatonin, an indicator of melatonin, by more than 266%, banana by 180%, and oranges by 47%. www.ncbi.nlm.nih.gov/.../PMC5409706 (2017) Black and green tea without theine can be a good alternative to improve sleep, they contain large amounts of L-theanine.

This amino acid improves serotonin levels, reduces stress levels and puts your brain in a peaceful and meditative state. Also L-theanine competes for receptors with glutamate and is capable of crossing the blood-brain barrier to exert its relaxing effect. www.cambridge.org/core/journals/acta-neuropsychiatrica/article/effects.. ( 2016) www.sciencedirect.com/.../S2213453021001324 (2022) www.sciencedirect.com/.../S2213453021001609 (2022)

Mark as Spam | Posted On 2/17/2023 2:46:12 AM
Like Dislike

**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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1.770 / 5.000 Resultados de traduccin Resultado de traduccin S-adenosylmethionine (SAMe), B vitamins, inositol, and omega-3 fatty acids may be helpful for insomnia related to mood disorders and depression. Magnesium promotes relaxation and may be helpful for people with insomnia. The herb kava can be helpful for anxiety and insomnia as it promotes muscle relaxation and can help promote sleep. Chamomile tea is popular for managing mild insomnia. Stress-induced insomnia is common in people with anxiety. Therefore, in cases of insomnia, kava can treat anxiety, which can then help people sleep better- www.healthline.com/.../kava-kava europepmc.org/.../16021987 www.psychiatrist.com/jcp/depression/evidence-s-adenosyl-l-methionine-s.. (2009) ajp.psychiatryonline.org/doi/full/10.1176/appi.ajp.2016.15091228 (2016) link.springer.com/.../s00213-019-05358-1 (2020) Administration of L-ornithine is known to enhance detoxification of ammonia in the liver.

Recent reports have shown that L-ornithine has a positive effect in animal stress models. Our study suggested that L-ornithine has a positive effect on stress and sleep in healthy workers. Also another study reported on the association of circadian disruption with hepatic metabolism has been widely concerned in basic and clinical research. nutritionj.biomedcentral.com/articles/10.1186/1475-2891-13-53?crsi=662.. (2014) www.sciencedirect.com/science/article/abs/pii/S0006291X2100718X (2021)

Mark as Spam | Posted On 2/17/2023 2:47:17 AM
Like Dislike

**Guillermou**
Joined On 4/7/2015 8:47:48 AM

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Ashwagandha is a powerful adaptogenic herb that helps your body adapt to stress and promote restful sleep. People with insomnia experienced improvement in their sleep patterns when consuming ashwagandha, as it was well tolerated by people with different health conditions and ages. In this study, a 72% increase in self-reported sleep quality was found for the treatment group, compared to the placebo group. The treatment group showed a significant improvement in sleep efficiency, total sleep time, and sleep and wake latency after sleep onset (versus placebo after six weeks. In the ashwagandha group, quality scores of life showed a significant improvement in the physical domains. www.sciencedirect.com/science/article/abs/pii/S1389945720301246 (2020) Adenosine is a naturally occurring chemical found ubiquitously in all cells of the human body.

And it's important: it induces sleep, controls the circadian rhythm and fine-tunes neurotransmitter levels. Adenosine is an endogenous nucleoside found in all cells of the body. One of its key functions is to control the sleep-wake cycle. It has a number of other physiological functions, including improving blood flow, protecting the heart, nerves, and other parts of the body from damage and disease, as well as balancing immune function. Adenosine encodes sleep history, and this signal modulates circadian entrainment by light. Pharmacological and genetic approaches demonstrate that adenosine acts on the circadian clock

Mark as Spam | Posted On 2/17/2023 2:47:56 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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Cordycepin (-deoxyadenosine) is a naturally occurring adenosine analogue and one of the bioactive constituents isolated from Cordyceps militaris/Cordyceps sinensis, species of the fungal genus Cordyceps. It has traditionally been a prized Chinese folk medicine for human well-being. Due to the similarity in chemical structure to adenosine, cordycepin has focused on various central nervous system (CNS) effects, such as sleep regulation. Intense exercise increased adenosine as a result of ATP breakdown. Increases in adenosine due to exercise performed in the morning can improve sleep quality.

Caffeine, found naturally in coffee and many teas, is the most widely used stimulant in the world. Caffeine blocks adenosine, which is why ingesting caffeine can reduce sleepiness. Caffeine works primarily by entering the brain and blocking adenosine receptors, making it an adenosine antagonist. In the human organism, there are several cellular compounds that play essential roles in the production of this energy. One of these is the mitochondria: it is the main place for the synthesis of ATP (adenosine triphosphate), a molecule with a high energy potential that is involved in the vast majority of cellular metabolic pathways.

The best way to support your body's ability to produce ATP is to eat foods that contain: Copper Copper is involved in dozens of metabolic processes and is essential for the synthesis of adenosine triphosphate. Proteins (which provide essential amino acids). CoQ10. L-Carnitine. D-ribose. Omega-3 fatty acids. L methionine (which supports the production of SAMe). www.researchgate.net/profile/Derk-Jan-Dijk/publication/335429598_Sleep.. .----- www.nature.com/.../s41467-021-22179-z (2021) draxe.com/.../adenosine

Mark as Spam | Posted On 2/17/2023 2:48:37 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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The hypothalamic-pituitary-adrenal (HPA) axis interacts with sleep in multiple ways. This article reviews the effects of the HPA axis on sleep and vice versa. Hormones secreted by the hypothalamus and anterior pituitary that interact with the adrenal cortex are discussed, with implications for sleep disorders and insomnia. A dysfunctional HPA and alterations in the rhythm of cortisol production are described as the basis for understanding many cases of insomnia and the use of natural therapies to regulate the HPA axis and cortisol production. Vitamin B6, vitamin B5, and vitamin C are often depleted with prolonged hyperactivity of the adrenal gland and increased cortisol production.

These nutrients play a critical role in optimal adrenal gland function and optimal production of adrenal hormones. Levels of these nutrients can drop during times of stress. Additionally, cortisol feedback mechanisms depend on adequate amounts of calcium, magnesium, potassium, manganese, and zinc. 24 Therefore, supplementation of these nutrients along with other supportive agents, such as L-tyrosine and L-theanine, may help improve some symptoms, as well as support proper function of the HPA axis.

Ashwagandha (Withania somnifera), also known as Indian ginseng, has been shown to reduce corticosterone, a glucocorticoid hormone present in amphibians, reptiles, rodents, and birds that is structurally similar to cortisol. Phosphatidylserine (PS), also known as phosphatidylserine lecithin, is known to reduce the rise in cortisol and ACTH after strenuous training and significantly reduce cortisol and ACTH levels after exposure to physical stress. Phosphatidylserine has also been shown to improve mood. Another approach to improve sleep is to focus on GABA activity.

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Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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One method to support GABA function is to decrease glutamate signaling. Glutamate and GABA activities oppose each other; therefore, decreased glutamate activity will support healthy HPA axis activity. NAC reduces glutamate by increasing the activity of a cystine/glutamate antiporter. Rhodiola rosea is an adaptogenic herb that modulates cortisol. Reduces the release of catecholamines and prevents catecholamine depletion of the adrenal glands. Additionally, research from Russia indicates that it can stimulate opioid receptors, 45 which in turn can reduce excitability. www.naturalmedicinejournal.com/.../role-cortisol-sleep (2014) Chronic sleep deficiency is prevalent in modern society and is associated with increased risk of metabolic and other diseases.

The hypothalamic-pituitary-adrenal (HPA) axis may be an important mediator of these effects. Cortisol, the primary hormone of the HPA axis, exhibits a robust circadian rhythm and is moderately influenced by sleep and wake states and other physiologies. Quantification of long-term changes in the circadian rhythm of low CSR cortisol can alter sleep conditions. In this study, a mathematical model of the HPA axis and the sleep/wake cycle is used to explore the influence of RSE on the circadian rhythm of cortisol.

In qualitative agreement with the experimental findings, the model simulations predict that CSR produces physiologically relevant alterations in the phase and amplitude of the cortisol rhythm. The mathematical model presented in this paper provides a mechanistic framework to further explore how CSR might lead to HPA axis disruption and the subsequent development of chronic metabolic complications. www.mdpi.com/.../htm (2021) From www.naturalmedicinejournal.com/.../role-cortisol-sleep (2014) to funal

Mark as Spam | Posted On 2/17/2023 2:50:26 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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Many traditional botanicals (eg, American ginseng, ashwagandha, Asian ginseng, astragalus, cordyceps, reishi, eleutherococcus, holy basil, rhodiola, schisandra, maca, licorice, and common nutritional supplements (eg, phosphatidylserine, L- theanine, NAC) have been used for their stabilizing effects on the HPA axis.Combination/multi-ingredient formulations are common in a whole system approach to restore HPA axis dysfunction, either by increasing or decreasing cortisol levels. Americans drink an average of 3.8 billion gallons of tea a year. Herbal teas have long been used for relaxation and sleep, and there is scientific evidence supporting herbal teas as a holistic way to reduce fatigue and improve sleep quality. At night these herbal teas are recommended by the SLEEP FOUNDATION www.sleepfoundation.org/best-tea-for-sleep (2022)

Mark as Spam | Posted On 2/17/2023 2:51:06 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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As Dr. Mercola reports in this interesting article, sleep quality plays an important role in health and illness. Sleep is associated with a process of biological and mental regeneration. Circadian rhythms can be altered by aging and the development of many chronic diseases, including sarcopenia. When the sleep hours are not adequate, different capacities such as attention, reaction, memory, problem solving, and the application of force begin to worsen. Appetite, pain system and emotions are also altered. The preservation of the circadian rhythm is very important for the maintenance of cellular physiology, metabolism and function in skeletal muscle. Women have a greater predisposition to insomnia that is between different criteria, frequencies and duration. academic.oup.com/.../2708069 (2006) www.ncbi.nlm.nih.gov/.../PMC4860870 (2016) www.ncbi.nlm.nih.gov/.../31484440 (2019)

In this systematic review with meta-analysis, a direct association between sleep duration and the prevalence of sarcopenia was confirmed in all studies. Sarcopenia due to sleep deprivation in women is associated with the negative effects of menopause, due to estrogen, which also causes muscle contractions that imply a mechanical load on the bone that could promote the rate of bone regeneration. Age-related changes in the functioning of the endocrine system lead to decreased testosterone, growth hormone, and estradiol, or the female sex hormone, and insulin resistance appears. The prevalence of sarcopenia appears to be higher in men than in women. www.ismni.org/.../07SCHOENAU.pdf (2005) www.ncbi.nlm.nih.gov/.../PMC6947616 (2019)

Reply | Mark as Spam | Posted On 3/21/2020 3:48:21 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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In this study it was reported that during a period of caloric restriction that aims at weight loss, the person spent little time in bed (5.5h) instead of the recommended time (8.5h), he experienced a significant loss of muscle mass , and and less fat loss. Sleep reduction decreased the weight fraction lost as fat by 55% and increased fat-free body mass loss by 60%. This was accompanied by markers of greater neuroendocrine adaptation to caloric restriction and increased hunger. www.ncbi.nlm.nih.gov/.../PMC2951287 (2014)

The researchers observed that compared to the group that was able to sleep the recommended hours, the group that reduced their sleep hours to 4 hours also reduced (by approximately 19%) the rate of myofibrillar protein synthesis. No changes were observed in the expression of mRNA or of molecular markers of activation of synthesis patterns and protein degradation. It was also reported that high intensity physical exercise seems to be an adequate therapeutic strategy to mitigate the loss of muscle mass caused by inadequate rest. physoc.onlinelibrary.wiley.com/.../JP278828 (2020)

Dr. Caroline Apoyan, director of the Center for Nutrition and Weight Control at Boston Medical Center, professor at the School of Medicine at Boston University and vice president of The Obesity Society, states that there are several reasons why we gain weight with age . A change in hormones, a more sedentary lifestyle, increased stress, and decreased sleep are some of them. "One of the main reasons for middle-aged weight gain is the natural muscle loss that we all experience," adds the Doctor. Melatonin, in addition to influencing the states of wakefulness and sleep, fibromyalgia, chronic fatigue, Parkinson's, Alzheimer's, muscular dystrophies and in those diseases that occur due to oxidative stress, its incidence in the aging of cells has been verified. and sarcopenia.

Mark as Spam | Posted On 3/21/2020 3:48:46 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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As a consequence, several factors that cause aging converge. Based on the mitochondrial theory of aging, it is concluded that mitochondrial cells, on the one hand, favor providing energy and, on the other, supply harmful elements that deteriorate various cellular components. Over the years this process ends up hurting the cells, causing mitochondrial dysfunction. www.ncbi.nlm.nih.gov/.../29562315 (2018)

The latest evidence of the gut-muscle axis and the influence of exercise and melatonin on the microbiota. This review reinforces the relevance of melatonin as a safe nutraceutical that limits the fragility of skeletal muscle and prolongs physical performance, benefiting mitochondrial function and reducing sarcopenia. Melatonin's mechanisms of action involved mitochondrial signals. catalase; IL-6: interleukin-6; insulin-like growth factor-1; nuclear respiratory factor; reactive oxygen species; SIRT1; superoxide dismutase; mitochondrial transcription factor; TNFα: tumor necrosis factor alpha and other signaling pathways. congresoinvestigadorespts.es/libro/libroresumenes-v4.pdf#page=63 (2019) www.mdpi.com/.../htm (2020)

Mark as Spam | Posted On 3/21/2020 3:49:03 AM

Like Dislike

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**juststeve**
Joined On 1/5/2012 11:13:54 AM
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Hey Gui, quality sleep seems to be a personal problem with quantity a sometimes. Having a homeless person popping in and out who sometimes stays here will get up in the night. Although as quiet as a shadow slipping across the floor, he none the less wakes me up. Sometimes a neighbor leaving extremely early in the morning will do it too. The moon at different times of the year will flood the home and light is a great disturber for me. The years of shift work, the midnights in particular have left their mark.

When quality sleep has occurred, it is so refreshing it feels like the whole world could be taken on. Lately exhaustion with the current situation needing no help from this Covid-19 event has made for hard deep sleep. Gotten a little in the last couple of days, at least a little reprieve from personal and current events there is very little control or influence on. Riding the monster waves and trying to navigate as best as possible, given the situation. Best of health to all, and best wishes. Big hugs, as Gui says.

Mark as Spam | Posted On 3/21/2020 5:34:11 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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JUST, many waves are coming to your home. A lot of mental and cellular stress due to the care of their parents, COPD and the concern that we all have with COVID-19. My admiration because you take good care of your health. According to this study, 27.3% of the participants had insomnia (chronic sleep disorders associated with impaired daytime functioning). Current tobacco users (OR), 2.13) and those with frequent sadness / anxiety (OR, 3.57) were more likely, but oxygen use was associated with lower odds of insomnia. Insomnia patients had poorer quality of life and a higher prevalence of daytime sleepiness. Actigraphy revealed shorter sleep duration and decreased sleep efficiency, and a sleep diary revealed poorer self-reported sleep quality in participants with insomnia. www.ncbi.nlm.nih.gov/.../PMC3274338 . (2016)

Although sleep apnea is not directly caused by COPD, the presence of COPD alone can worsen the severity of symptoms related to sleep apnea. According to the COPD Foundation, it is estimated that between 10% and 15% of COPD patients also have obstructive sleep apnea. With a diagnosis of chronic obstructive pulmonary disease, you have a higher risk of developing mental health problems, such as depression and anxiety, than a healthy person. These mental health problems could be the direct cause of your insomnia. www.1stclassmed.com/blog/insomnia-with-copd-how-to-improve-your-sleep-.. (2016)

Mark as Spam | Posted On 3/21/2020 11:29:21 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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Let's hope that the coronavirus does not bring a greater wave of anguish and depression: the economic crisis. In the last crisis in Spain, a survey placed the stress derived from work concerns and the fear of unemployment as the main cause of the reduction in hours. of sleep, ahead of family conflicts or health. The main consequences of transitory insomnia, not too serious but rather annoying, are fatigue, lethargy or tiredness, feeling of staying in bed too long, anxiety and irritability, itchy eyes, headache and reactions of sadness or depression.

It is a problem with fewer consequences than those caused by chronic insomnia, which according to the latest Insomnia Clinical Practice Guideline in Primary Care affects 10% of the population in Spain, and increases the risk of hypertension, diabetes and depression, among other pathologies reported by Dr. Mercola.

Functional food strategies promote sleep in humans. There are higher functional components in functional foods that promote sleep, including tryptophan, GABA, calcium, potassium, melatonin, pyridoxine, L-ornithine, and hexadecanoic acid; but the neurochemical factors that promote the wake include serotonin, norepinephrine, acetylcholine, histamine, orexin, etc. Factors that promote sleep in humans are functional foods that include barley grass powder, maca, panax, asparagus, lettuce, cherry, kiwi, walnut, schisandra wine and milk; Barley grass powder with higher GABA and calcium as well as potassium is the most ideal functional food to promote sleep, however, sleep duration for modern humans is associated with the dietary structure of ancient humans. www.ingentaconnect.com/content/ben/cst/2014/00000009/00000003/art00006 (2014)

Mark as Spam | Posted On 3/21/2020 11:29:39 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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Barley grass is rich in functional ingredients, such as gamma-aminobutyric acid (GABA), flavonoids, saponarin, lutonarin, superoxide dismutase (SOD), K, Ca, Se, tryptophan, chlorophyll, vitamins (A, B1, C and E ), dietary fiber, polysaccharide, alkaloid, metallothioneins and polyphenols. Barley grass promotes sleep; it has an antidiabetic effect; regulates blood pressure; improves immunity; protects the liver has anti-acne / detoxifying and antidepressant effects; improves gastrointestinal function; it has anti-cancer, anti-inflammatory, antioxidant, hypolipidemic and anti-gout effects; reduces hyperuricemia; prevents hypoxia, cardiovascular disease, fatigue and constipation- www.hindawi.com/journals/omcl/2018/3232080/?fbclid=IwAR1BRGdZ5V8_s1Ypw.. (2018)

Zinc is important for many biological processes in animals at the molecular and physiological level, new evidence indicates that it may also be involved in the regulation of sleep. Recent research has concluded that serum zinc concentration varies with the amount of sleep, while orally administered zinc increases the amount and quality of sleep in mice and humans. www.mdpi.com/.../2334 (2017)

Mark as Spam | Posted On 3/21/2020 11:30:00 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
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Consuming large amounts of zinc (50 mg / day or more) over a period of weeks can interfere with the bioavailability of copper. Iron and zinc compete for absorption pathways. Levels of supplemental iron (38-65 mg / day of elemental iron) but not dietary may decrease zinc absorption. High levels of dietary calcium impair zinc absorption in animals, but it is unclear if this occurs in humans. The bioavailability of dietary folate (vitamin B9) is increased by the action of a zinc-dependent enzyme. Consequently, some studies found that low zinc intake decreased folate absorption.

Zinc and vitamin A interact in several ways. Zinc is a component of the retinol-binding protein, a protein necessary to transport vitamin A in the blood. Zinc is also required for the enzyme that converts retinol (vitamin A) to retinal. Zinc deficiency has been associated with decreased liver vitamin A release, which may contribute to the symptoms of night blindness seen with zinc deficiency. A very complete article on zinc and its interactions lpi.oregonstate.edu/.../zinc

Mark as Spam | Posted On 3/21/2020 1:45:42 PM

Like Dislike

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**Luvvvy**
Joined On 8/31/2015 7:41:46 AM
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If I point my little combo red light / near infra red light at my forehead I can fall asleep within minutes. My reaction is undeniable. It triggers the sleep regulating hormone, Melatonin. Ive been using my lamp for 6 months and love love love it.

Reply | Mark as Spam | Posted On 3/21/2020 11:38:09 AM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
Add as Friend | Send Message

Dear Luvvvy, very useful and interesting your comment. You have hypothyroidism. Some research shows that specialized cells found in the thyroid gland are capable of producing melatonin. This happens under the control of thyroid stimulating hormone (TSH), a process similar to that of T4 production. Melatonin and TSH seem to balance.

Research studies focused on melatonin therapy in autoimmune diseases have been examined in many animal models and in some human clinical trials. Melatonin has been shown to have the potential to reduce the severity of symptoms in most autoimmune conditions. These findings indicate that melatonin treatment may be an important strategy for Hashimoto. Unfortunately, research on this topic is lacking, especially as we are aware of the potential for melatonin's dual role in thyroid function and immune response. www.boostthyroid.com/.../melatonin-and-the-thyroid (2019)

These tips to improve sleep, and increase melatonin you already know:: SLEEP — WHY YOU NEED IT AND 50 WAYS TO IMPROVE IT articles.mercola.com/sites/articles/archive/2018/03/29/why-do-you-need.. 13 Natural & Effective Ways To Help Your Body Produce More Melatonin www.bustle.com/p/13-natural-effective-ways-to-help-your-body-produce-m.. 9 Natural Sleep Aids That Are Backed by Science www.healthline.com/.../sleep-aids

Mark as Spam | Posted On 3/21/2020 12:05:13 PM

Like Dislike

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**Luvvvy**
Joined On 8/31/2015 7:41:46 AM
Add as Friend | Send Message

Thank you Gui for the brilliant and helpful reply. I appreciate knowing that my response makes sense intellectually as well as experientially. As you know, since going to a spa and witnessing visually the positive effect of light therapy on my daughter, I have embraced red light therapy and recommend it to everyone. These days I am also using my red light on my chest and my thyroid to keep everything warm, toasty and healthy! Wishing everyone stays well and true to themselves.

Mark as Spam | Posted On 3/21/2020 1:07:23 PM

Like Dislike

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**Guillermou**
Joined On 4/7/2015 8:47:48 AM
Add as Friend | Send Message

Good awakening dear Luvvvy, after a restful sleep. Some articles with scientific references on red light in sleep therapy: RED LIGHT THERAPY FOR SLEEP: A SCIENCE-BACKED METHOD FOR GOING LIGHTS-OUT IN NO TIME platinumtherapylights.com/.../red-light-for-sleep (2021) .---- RED LIGHT THERAPY FOR SLEEP: THE SAFE AND NATURAL WAY TO BETTER REST global.rougecare.ca/blogs/rouge-red-light-therapy-blog/red-light-thera.. (2021) .---- THE SLEEPING BEAUTY SECRET: THE RED LIGHT THERAPY www.lighttreeventures.com/post/the-sleeping-beauty-secret-the-red-ligh..

Mark as Spam | Posted On 2/17/2023 5:32:18 AM

Like Dislike

**uneamie**
Joined On 2/16/2010 8:25:45 AM
Add as Friend | Send Message

Interesting....I am on the fence about buying a red light only because I do not know enough about it and I like hearing from people who use it. When you point your red light to your forhead do you have a timer on your light to turn it off or do you keep it on all night? Also, can you recommend which red light product that you use. Thanks in advance!

Mark as Spam | Posted On 2/17/2023 10:13:29 AM

Like Dislike

**clanharwood**
Joined On 1/17/2008 7:05:47 PM
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I used to be a very light sleeper, and having 3 kids as well, so good deep sleep was not possible. About 5 years ago (when the kids were much older and now they're away at university) I started using earplugs at night. WHAT A DIFFERENCE ! I do it every single night now -- even take some with me when traveling for business -- and I have never looked back. I also have NO electronic gadgets in my room at night (nope, no phone, no tablet, only my alarm clock that is clear across the room that I put a sheet over to block the light from), my room is extremely dark, I DON'T use LED lights anywhere in my house, I use a grounding sheet on my bed every night and I don't allow my cats in my room at night (door is shut) From what I can gather through talking to loads of people, I get better sleep than most people I know.

Reply | Mark as Spam | Posted On 3/21/2020 7:03:25 AM

Like Dislike

**jud547**
Joined On 7/1/2011 10:29:31 AM
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I tried a grounding sheet but it did nothing for me. What wakes me is my bladder, probably overeactive. Glad you are getting good sleep

Mark as Spam | Posted On 2/17/2023 3:31:12 AM

Like Dislike

**sprakalumer**
Joined On 2/20/2009 9:04:45 AM
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One of the most problematic causes of sleep disturbance among those of us getting on in years would be nocturia, or the need for bathroom visits throughout the night. This is not addressed in the article.

Reply | Mark as Spam | Posted On 2/17/2023 4:15:57 AM

Like Dislike

**020202**
Joined On 1/13/2021 8:23:48 AM
Add as Friend | Send Message

Yup, that is why I am reading this and it is 3AM

Mark as Spam | Posted On 2/17/2023 4:33:44 AM

Like Dislike

**sprakalumer**
Joined On 2/20/2009 9:04:45 AM
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020202 - I did get some relief from multiple nightly bathroom runs with corn silk, powdered in capsules. I am down now to usually 1 trip to the loo and that is around 2 - 3 hours after going to bed. Your mention of a totally blacked out bedroom is something that I also do... no electronics except for a battery operated travel alarm clock that emits no light source. No outside light leaks at all. It really made a difference.

Mark as Spam | Posted On 2/17/2023 5:29:10 AM

Like Dislike

**uneamie**
Joined On 2/16/2010 8:25:45 AM
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Exactly....this is my problem. I wake up at least 3 to 4 times a night due to the pressure on my bladder. I had a radical hysterectomy due to cervical cancer 20 years ago and it left a lot of space for my bladder to drop and land on my pelvic. Consequently, I have not had a full nights sleeps for years. I am very tired during the day and tend to fall asleep or nap a lot. There is no cure for this other than perhaps an operation to lift my bladder and have it held up by a hamock so to speak. There can be issues with this including infection which I am not willing to risk at my age of 74, so I just put up with the nightly ritual. I just hope I will always be fit enough to walk myself into the bathroom till I die or my issue could be a problem. ha!

Mark as Spam | Posted On 2/17/2023 10:20:44 AM

Like Dislike

**PathNotes**
Joined On 12/25/2012 3:44:06 PM
Add as Friend | Send Message

Everyone's bladder fills up during the night. People only notice it if they wake up. Waking in the middle of the night is because of a hypoglycemic event, resulting in an adrenaline/cortisol response to liberate glycogen from the liver to restore a normal blood glucose level. It's the adrenaline and cortisol spike that causes people to snap out of sleep. The solution is to optimize metabolism with diet and lifestyle improvements. Ten years ago, I took 3-4 visits to the bathroom a night. Now I only rarely wake before dawn.

Mark as Spam | Posted On 2/17/2023 10:51:42 AM

Like Dislike

**aclark**
Joined On 5/13/2010 8:29:05 AM
Add as Friend | Send Message

Along with some sleep-inducing herbs, I eat a bit of oven roasted turkey which contains tryptophan. Doing this has greatly improved my sleep.

Reply | Mark as Spam | Posted On 2/17/2023 11:12:11 AM

Like Dislike

**lilitu_adamah**
Joined On 2/1/2021 3:06:08 AM
Add as Friend | Send Message

It is not just about simply sleeping, because animals also sleep, and stones sleep and trees sleep... No one knows exactly if life is a dream or the dream is life itself. They are probably one and the same thing. The idea is that if you become conscious in the dream state, you can become conscious in the everyday state, and this turns everything into what it actually is: into a living reality that you can walk through as if you were swimming in an ocean , and that ocean is yourself, your life, your adventure

Reply | Mark as Spam | Posted On 2/17/2023 5:23:30 AM

Like Dislike

**joyceejohnson**
Joined On 7/23/2018 10:22:07 AM
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I like your take on things, but please change the image you want us to see, which is very negative.

Mark as Spam | Posted On 2/18/2023 8:18:55 AM

Like Dislike

**020202**
Joined On 1/13/2021 8:23:48 AM
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I started taking sleeping pills and only took half of one almost every night. My eyes started to weep all the time, I didn't put the two together until I read that weepy eyes was a side effect of sleeping pills, so I quit taking them and by golly no more crying eyes!

Reply | Mark as Spam | Posted On 2/17/2023 4:24:55 AM

Like Dislike

**Ambereyes**
Joined On 11/29/2015 1:58:45 PM
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Oh,thank youforthe information. I have had this problem recently, and I take somepillsoccasionally. I willstop taking them completely. Let's see what happens. I hope I do not end with dry eyes wide open - awake all the time but with no weepy eyes...

Mark as Spam | Posted On 2/17/2023 5:29:38 AM

Like Dislike

**ianmac**
Joined On 9/10/2007 9:55:48 AM
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All the ways that I've tried to put me to sleep have the opposite effect - I stay awake to check up on whether I'm asleep yet or not.

Reply | Mark as Spam | Posted On 3/21/2020 9:07:56 AM

Like Dislike

**joyceejohnson**
Joined On 7/23/2018 10:22:07 AM
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I was really arrested by the state of sleep where your brain cells shrink and allows spinal fluid to flow in and around better, detoxing the brain. Now that is memorable. QUESTION: does taking melatonin supplements harm anything? All that was mentioned was that melatonin naturally produced harmone in our bodies is a powerful antioxidant and anti dementia, etc. Sleeping pills are dangerous if abused. Got that. Why sometimes does melatonin not work? Anyone?

Reply | Mark as Spam | Posted On 2/18/2023 8:11:47 AM

Like Dislike

**GoldCoaster**
Joined On 4/20/2009 11:20:19 AM
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Dr Mosley is from Australia, but does documentaries for the BBC. The prebiotic he took was inulin. His adult son also has problems with sleep.

Reply | Mark as Spam | Posted On 2/18/2023 3:09:47 AM

Like Dislike

**PathNotes**
Joined On 12/25/2012 3:44:06 PM
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Out of the many things I've done to optimize health and minimize stress for a good night's sleep, what helped the most was added blankets for more weight. I layer three thin but sturdy blankets on top of a linen sheet for best results.

Reply | Mark as Spam | Posted On 2/17/2023 11:05:11 AM

Like Dislike

**billstri**
Joined On 6/8/2008 9:16:45 PM
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"research has shown that half of those sleeping five hours or less per night are in fact obese". I got this quote from this article. It does not seem to prove anything as I had thought that more than 50% of the adult population between ages 30 and 70 are obese. If I am right and I understand the quote right, then those sleeping 5 hours or less per night may have less obesity than those sleeping more than 5 hours per night. Anyway, it is very clear to me that being overweight makes it harder to find a comfortable position for sleep. Or being overweight decreases the options of comfortable positions a person can sleep in.

Reply | Mark as Spam | Posted On 2/17/2023 10:46:59 AM

Like Dislike

**GoldCoaster**
Joined On 4/20/2009 11:20:19 AM
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And obese people probably have more sleep apnea.

Mark as Spam | Posted On 2/18/2023 3:11:46 AM

Like Dislike

**dfarrich**
Joined On 3/28/2016 1:46:04 AM
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That works unless you've taken your Bluetooth-enabled hearing aids out and hear nothing afterward. Just poking at you Doc regarding the Bluetooth ear buds. Having been on call 24/7 for 50 years, I learned to fall asleep quickly. I honestly do not recall closing my eyes. I think I crash within 30 seconds after hitting the pillow and getting settled in my cocoon.

Reply | Mark as Spam | Posted On 2/17/2023 10:26:00 AM

Like Dislike

**epi-cure**
Joined On 5/12/2012 7:02:04 PM
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I wanna horse, I wanna sheep, I wanna get me a good night sleep . . . . . . www.youtube.com/watch

Reply | Mark as Spam | Posted On 3/21/2020 3:21:43 PM

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