

HOW DID YOU SLEEP LAST NIGHT?

THE IMPORTANCE OF GOOD SLEEP

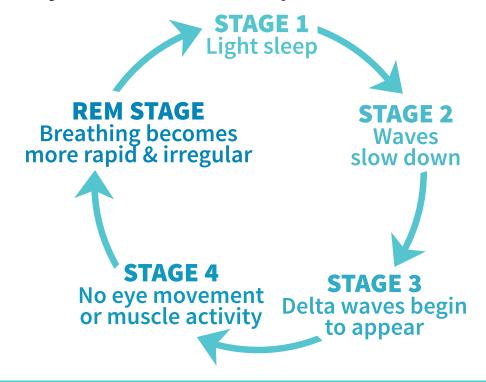
Do you wake up feeling well-rested every day? You should! Sleep makes up approximately 1/3 of one's life, so a poor sleep has a major impact on our happiness and health. However, 43% of men and 55% of women report trouble with falling asleep or staying asleep¹. We know how great it feels to fall asleep easily, get a deep and restful sleep, and wake up feeling refreshed. What you may not realize is how important sleep is for our overall wellbeing.

Think of sleeping like cleaning up your office after everyone else has left for the day. No new information or calls are coming in, and you finally have time to sort through the stack of paperwork on your desk, consolidate and file it properly, and empty the recycling bin. This active tidying-up sets you up for success when you arrive at work the next day. You can make-do with skipping the clean-up for a short period of time, but after a while, it catches up with you. Chronic non-restorative sleep is like having years of paperwork piled up on your desk: paperwork gets lost or takes extra time to

find, the recycling bin is overflowing, and your productivity at work declines.

Sleep is part of our circadian rhythm, which is the light-dark dependant cycle that keeps our body functioning in a healthy way. Melatonin is our "sleep hormone", and it is released in response to darkness. It should be highest at night, promoting a deep, restful sleep, and lowest during the day. In opposition to melatonin is our "stress hormone", cortisol, which inhibits melatonin to promote alertness and wakefulness.

There are five distinct stages of a healthy sleep cycle. Stage 1 is when you are drifting off to sleep. Stage 2 is light sleep where heart rate and brain waves start to slow down. Stage 3 is characterized by very slow delta waves in the brain. Stage 4 is the deepest state of Non-REM (NREM) sleep, and it's when the body undergoes most of its healing. Stage 5 is when we dream, called Rapid Eye Movement (REM) sleep².



THE HEALTH EFFECTS OF POOR SLEEP

We should repeat this cycle 4-6 times during a healthy night's sleep, which requires both sleeping for enough time and repeatedly entering into the deep sleep of Stages 4 and 5². When we face challenges with falling asleep, staying asleep, or entering into a deep sleep state, our overall health is significantly impacted.

When we don't get enough sleep, or get poor quality of sleep, our ability to think clearly, learn, and retain memories is significantly impacted. Our immune system is weakened, causing frequent cold/ flu or difficulty with getting over infections³. Our appetite and blood sugar levels are negatively impacted, linking insomnia to increased risk of weight gain, heart disease, and diabetes¹. When we don't produce enough melatonin, we have an increased amount of cortisol, our stress hormone, which can lead to anxiety, depression, irritability and difficulty coping with stress¹.



SLEEP-GREAT – YOUR SLEEP SOLUTION

SLEEP-GREAT is a complete formulation that helps you fall asleep quickly, stay asleep, and achieve deep, restful sleep. Unlike medications that may assist with falling asleep but limit your body's ability to enter into a deep sleep state, SLEEP-GREAT works by enhancing the body's natural sleep hormone pattern so that you enter all five stages of a healthy sleep, allowing you to wake up feeling refreshed every day. Here's how it works.

Melatonin 1.5mg

- Enhances the body's natural melatonin production to assist with falling asleep and achieving a deep, restful sleep state⁴.
- Helps trigger the body's sleep wake-cycle to assist with jetlag⁴.

L-Theanine 200mg

- Assists with falling asleep and reducing sleep disturbance⁵.
- Reduces stress-related symptoms, improves low mood and anxiety, and improves cognitive function by targeting glutamate receptors in the brain, which stimulates the release of GABA, serotonin and dopamine in the brain⁵.

L-Tryptophan 50mg

- Assists with falling asleep and staying asleep without causing morning grogginess⁶.
- Increases serotonin production in the brain, which reduces anxiety, improves mood and triggers sleep⁶.

GABA 50mg

- A primary inhibitory neurotransmitter in the brain, meaning it promotes feelings of calm and relaxation by taking us out of 'fight or flight' and putting us into a 'rest and digest' nervous system state⁷.
- Improves the ability to fall sleep through its calming action and improves quality of sleep by regulating both NREM and REM deep-sleep states⁷.

5-HTP 50mg

• Crosses the blood brain barrier and readily converts to serotonin in the brain, which improves mood, reduces anxiety and regulates sleep⁸.

Valerian Root 4:1 05% Valerenic Acids (QCE 200mg) 50mg

• Improves sleep quality through increasing GABA in the brain, which promotes relaxation as we fall asleep and regulates NREM and REM cycles to facilitate a deep sleep state¹⁰.

Loquat fruit *Erijobotrya japonica* 15:1, 25% Ursolic Acid (QCE 975mg) 65mg

• Activates GABA receptors to enhance sleep duration, helping us to stay asleep longer⁹.

Skullcap Herb Top 4:1 (QCE 200mg) 50mg

• Reduces stress and anxiety through stimulating GABA receptors in the brain to promote relaxation¹¹.

Passionflower Herb Top 10:1 (QCE 400mg) 40mg

• Gentle sedative effect that significantly improves nervousness and anxiety through boosting GABA levels in the brain¹².



Schisandra Fruit 10:1 (QCE 250mg) 25mg

Acts an adaptogen in the body by supporting our ability with cope stress and promoting relaxation through acting on serotonin pathway¹³.

DR. HILARY'S LIFESTYLE CHANGES TO IMPROVE SLEEP



1. Set A Bedtime

What is your ideal number of hours of sleep per night? Your ideal number should be between six and eight hours. What time do you need to wake up to start your day? Use these parameters to set a

bedtime and stick to it whenever possible.

2. Develop A Bedtime Routine

Turn off all electronics and screens for 30 minutes before your bedtime. Instead find a quiet bedtime routine: get ready for bed, spend time with family, meditate, journal, or read a book. Light from our screens significantly inhibit melatonin production¹⁴, so I suggest giving your body a 30-minute head-start where you engage in calming, screen-free activities before you get into bed.

3. Protect Your Relationship With Your Mattress

When you tuck yourself into bed, your body should know, "this is where we sleep". If you watch tv, work, or even read in bed, your relationship with the mattress can become broken, and that signal to sleep in that space is lost. Keep other activities outside the bedroom, even reading before bed should be done on or near bed, not in bed, to help reconnect your body with the idea that "this is where we sleep".

4. Sleep In A Dark Room

Even a small amount of light inhibits our natural melatonin production¹⁴. I suggest using

a sleep mask nightly to block out ambient light. It takes a few weeks to get used to but stick with it! A mask will also help to re-program your relationship with your mattress, as mentioned above.

5. Balance Blood Sugar

Eating sweet snacks or simple carbs before bed can spike our blood sugar, making it difficult to fall asleep, and causing us to wake up when our blood sugar crashes during the night. Limit snacking after dinner, but if you do reach for a snack, focus on high protein and low sugar snacks such as nuts or unsweetened nut butters.

6. Limit Caffeine, Nicotine And Alcohol

Avoid caffeine, even lightly caffeinated beverages like green tea, after 3:00pm if you experience insomnia. Nicotine dependence causes waking about four hours after your last exposure, so smoking and vaping cessation helps us to sleep through the night. Alcohol may help us fall asleep but prevents us from achieving a deep sleep, so avoiding alcohol is important for waking up feeling well-rested.

7. No Napping

Napping is for babies, toddlers, pregnancy, breastfeeding, and the elderly. Napping might help you feel energized to get through your day, but it undermines getting a deep, restful sleep at night.

8. Additional Screening

Insomnia and fatigue may be indications that another health concern should be addressed. Start with blood work to assess thyroid health and anemia, a sleep study to look for sleep apnea and other sleep disorders, and address underlying concerns like anxiety, depression, frequent urination, and chronic pain.

SLEEP-GREAT = GREAT SLEEP

Sleeping well is one of the most important things we can do to support our overall health. When we don't get a good night's sleep, the body's ability to cope with stress, regulate hormones, repair muscle, strengthen the immune system, and support mental clarity and capacity are profoundly impacted¹. This can result in fatigue, anxiety, depression, weight gain, frequent cold and flu, brain fog, and increased risk of diabetes and heart disease¹.

We should aim for six to eight hours of deep, restful sleep per night. Sleeplessness can be improved by developing a consistent bedtime routine where we avoid screens, sleep in a dark room, avoid stimulants, and keep blood sugar balanced. From time to time, we benefit from additional support to re-set our sleep cycle and achieve a deeper sleep.

SLEEP-GREAT regulates our circadian rhythm through enhancing the brain's natural hormonal pathways. It assists with falling asleep easily, staying asleep, and achieving a deep restful sleep. SLEEP-GREAT is effective without causing the grogginess or poor sleep quality of sedative treatments. It improves both sleep quantity and quality of sleep, allowing you to wake-up feeling refreshed and rejuvenated every day.

REFERENCES

- 1. Chaput JP, Wong SL, Michaud I. Duration and quality of sleep among Canadians aged 17-79. Statistics Canada. Sep 20, 2017. Available at: https://www150.statcan.gc.ca/n1/pub/82-003-x/2017009/article/54857-eng.htm
- 2. Purves D, Augustine GJ, Fitzpatrick D, et al., editors. Neuroscience. 2nd edition. Sunderland (MA): Sinauer Associates; 2001. Stages of Sleep.
- 3. Besedovsky L, Lange T, Born J. Sleep and immune function. Pflugers Arch. 2012;463(1):121–137.
- **4.** Costello RB, Lentino CV, Boyd CC, et al. The effectiveness of melatonin for promoting healthy sleep: a rapid evidence assessment of the literature. Nutr J. 2014;13:106.



- 5. Hidese S, Ogawa S, Ota M, et al. Effects of L-Theanine Administration on Stress-Related Symptoms and Cognitive Functions in Healthy Adults: A Randomized Controlled Trial. Nutrients. 2019;11(10):2362.
- 6. Richard DM, Dawes MA, Mathias CW, Acheson A, Hill-Kapturczak N, Dougherty DM. L-Tryptophan: Basic Metabolic Functions, Behavioral Research and Therapeutic Indications. Int J Tryptophan Res. 2009;2:45–60.
- 7. Byun JI, Shin YY, Chung SE, Shin WC. Safety and Efficacy of Gamma-Aminobutyric Acid from Fermented Rice Germ in Patients with Insomnia Symptoms: A Randomized, Double-Blind Trial. J Clin Neurol. 2018;14(3):291–295.
- 8. Birdsall TC. 5-Hydroxytryptophan: a clinically-effective serotonin precursor. Altern Med Rev. 1998;3(4):271–280.
- 9. Jeon SJ, Park HJ, Gao Q, et al. Ursolic acid enhances pentobarbital-induced sleeping behaviors via GABAergic neurotransmission in mice. Eur J Pharmacol. 2015;762:443–448.

- 10. Bent S, Padula A, Moore D, Patterson M, Mehling W. Valerian for sleep: a systematic review and meta-analysis. Am J Med. 2006;119(12):1005–1012.
- 11. Awad R, Arnason JT, Trudeau V, et al. Phytochemical and biological analysis of skullcap (Scutellaria lateriflora L.): a medicinal plant with anxiolytic properties. Phytomedicine. 2003;10(8):640–649.
- 12. Kim M, Lim HS, Lee HH, Kim TH. Role Identification of Passiflora Incarnata Linnaeus: A Mini Review. J Menopausal Med. 2017;23(3):156–159.
- 13. Szopa A, Ekiert R, Ekiert H. Current knowledge of Schisandra chinensis (Turcz.) Baill. (Chinese magnolia vine) as a medicinal plant species: a review on the bioactive components, pharmacological properties, analytical and biotechnological studies. Phytochem Rev. 2017;16(2):195–218.
- 14. West KE, Jablonski MR, Warfield B, Cecil KS, James M, Ayers MA, et al. Blue light from light-emitting diodes elicits a dose-dependent suppression of melatonin in humans. J Appl Physiol. 2011;110:619–626.





Healthology International Inc. Oakville, Ontario L6H 1A7

Questions? Please visit www.myhealthology.ca

