

IN SEARCH OF SLEEP

**In our ever-present,
on-demand,
24/7 society,
a good night's sleep
is hard to come by.**

by brian luke seaward, ph.d

Kristin doesn't sleep well at night, and she hasn't for years. Over a cup of coffee she confided in me that she takes hours to fall asleep, only to wake up several times in the course of the night staring at the alarm clock, wishing it were morning.

Kristin is not alone in her quest for a good night's sleep. She has joined the ranks of millions of restless Americans who claim a similar disturbance in what should be a most pleasurable experience, one that we spend one third of our lives engaged in. The rebound effect of poor-quality sleep reveals itself in the normal waking hours as poor work productivity, irritability, anxiety, poor communication skills, and several behaviors that are less-than-becoming to one's authentic self. America's addiction to coffee is as much a symptom as a possible cause of the problem.

According to a recent survey by the National Sleep Foundation, more than 60 percent of Americans suffer from poor sleep quality, resulting in everything from falling asleep on the job and absenteeism to marital problems and car accidents. A quick check of the nation's pulse reveals that insomnia in all its many forms (transient, intermittent, or chronic) has become one more in a growing list of national health epidemics. This health issue is evidenced with the proliferation of pharmaceutical ads promising the cure to the newest syndrome of the high tech age. Perhaps most troublesome is the dramatic incidence of insomnia reported in middle school and high school students whose brains are still developing.

For adults and children alike, a succession of restless nights becomes a battle of thought processes



between the conscious mind's inability to turn off and the unconscious mind's inability to communicate through dreams. The result is that both sides claim casualties and neither side is victorious.

Stress and Insomnia

While there are many factors that are known to interrupt a good night's sleep (e.g., menopause, lack of exercise, frequent urination, jet lag, shift work, side effects of prescription medicines, brain chemistry imbalance, chronic pain, cell phone use, and a host of environmental factors) stress, by far, tops the list of reasons why a good night's sleep is so elusive for so many people. A constant barrage of thoughts and responsibilities (mostly financial and work-related) lap the shores of the conscious mind like incessant ocean waves pounding the sand. The result becomes an anxious state of mind where thoughts race around,

ricocheting from brain cell to brain cell, never allowing a pause in the thought processes, let alone the mental stillness for quality sleep. Muscle tension may be the number one symptom of stress, but in our ever-present on-demand, 24/7 society, insomnia runs a close second and its effects during the waking hours are troublesome.

Surely the body's physiology needs to restore itself, yet it appears the mind needs time off even more so.

Insomnia is best defined as poor quality sleep, abnormal wakefulness, or the inability to sleep, and it can affect anyone. Perhaps not surprisingly, 90 percent of those questioned in various surveys admit to emotional stress being the cause of their poor sleeping habits. Not only can stress (mental, emotional, physical or spiritual) affect quality and quantity of sleep, but the rebound effect of poor sleep can, in turn, affect one's stress levels, making one become more irritable, apathetic, cynical, or anxious during normal waking hours. Left unresolved, the link between stress and insomnia can become a vicious, unbroken cycle. While many people seek medical help and are often given a prescription for a quick fix, because of their numerous side effects, drugs should be considered as a last resort. (Medications address symptoms, not causes). Conversely, many (if not all) techniques for stress management, including cardiovascular exercise, meditation, muscle massage, diaphragmatic breathing, T'ai chi, and Hatha yoga, have proven to be effective in

promoting a good night's sleep by promoting mind-body-spirit homeostasis.

The Anatomy of Sleep

Sleep researchers have been studying various aspects of sleep in earnest for more than half a century. Despite their best efforts they still come up empty-handed when asked to fully explain the importance of sleep. Surely the body's physiology needs to restore itself, yet it appears the mind needs time off even more so. Various studies reveal that people who are purposely deprived of this essential human drive show signs of psychosis—which reverses itself when full sleep patterns are restored.

Some of the best research about sleep comes to us from the world of extreme sports where bicyclists who race across America (RAAM) have determined the minimal amount of sleep needed for peak performance is one complete REM (rapid eye movement) cycle, the last phase in an undisturbed two-hour segment where the mind moves from alpha waves to delta waves (in which REM is observed). While these extreme athletes have learned to lock in on this magic period, the coveted REM cycle seems ever elusive to millions of restless Americans tossing and turning all night. Dreams, which are known to occur mostly during REM cycles, also appear to be an essential factor for mental equilibrium during the waking hours of a busy day—even if you don't remember them.

Before the advent of electricity (and utility bills), it was believed that the average person slept a solid ten hours each night. Sleep experts suggest that eight hours is the golden standard, yet they often confide that some people can excel on six hours while others would do best with the "pre-Edison" ten-hour quota. It appears that the real key to a good night's sleep is to get at least one (hopefully several) full cycles of REM/ delta wave activity.

Melatonin: The ZZZZ Hormone

Smack in the center of your brain is an organ called the pineal gland. In the days of the European Renaissance, René Descartes referred to it as the "seat of the soul." Today neurophysiologists know that the pineal gland produces melatonin, the hormone essential for quality sleep. Current research



suggests that the production of melatonin requires exposure to direct sunlight (some indicate directly through the eye's retina). The average American gets less than ten minutes of direct sunlight exposure, suggesting this is the weakest link in the chain to promote deep sleep. There are others, including the delicate balance between melatonin and the neurotransmitter serotonin (a lack of serotonin is now associated with depression).

Circadian Rhythms

When left to its own devices, the (unplugged) body operates on a 24-hour (circadian) clock, meaning that various physiological functions (e.g., hunger, sleep, bowel movements, etc.) fall into a regular and predictable timed sequence. The use of artificial light, television, some foods, and an array of electrical devices are known to throw off these rhythms. When these cycles are derailed, various aspects of health are jeopardized, including gastrointestinal-tract problems, immune function, and sleep patterns. Those who study circadian rhythms as a component of good health suggest that by going to bed the same time every night and waking up the same time (even on weekends) is ideal to calibrate the body's sleep clock. But going to bed at a set time isn't enough. Several factors must coalesce to form a strong foundation for a good night's sleep, including the food you eat and one's bedroom ambience.

The Essence of Good Sleep Hygiene

Stress plays a big role in the quality of sleep (or lack thereof) but there are many other aspects that contribute to what sleep experts call "sleep hygiene," also known as the ambience of your bedroom. For example, room temperature plays a big role in the quality of sleep. Body core temperature drops in the evening hours as the body prepares to shut down in the sleep mode. A room with an elevated temperature doesn't allow one's body core temp to do its job (note: this may explain the relationship between menopausal hot flashes and poor sleep quality).

Secondly, good sleep hygiene requires darkness. Night-lights, bright alarm-clock lights, full moon radiance, as well as outside streetlights are registered by the pineal gland, even when your eyes are shut, and

this will affect the production and secretion of melatonin.

Noise will certainly affect the quality of one's sleep hygiene as well. Noises include everything from your partner's snoring or teeth grinding (TMJ is a sign of latent anger) to a blaring television, as well as pets self-grooming on the bed or street noise. Any disturbance to the five senses that impedes quality sleep is called a "sleep stealer."

Current research suggests that the number-one sleep stealer is the television set in the bedroom. All aspects of good sleep hygiene require the recognition and enforcement of healthy boundaries. The following are some time-honored suggestions that, when combined together, provide the ideal conditions for a good night's sleep.

Tips to Improve Your Sleep Hygiene:

1. Keep a Regular Sleep Cycle. Make a habit of going to bed at the same time every night (within 15 minutes) and waking up about the same time each morning (even weekends). You also might consider honoring your circadian rhythms by eating your dinner at approximately the same time each night as well. Many sleep experts note that one should not eat a big meal before falling asleep as this will interfere with one's sleep cycles (REM).



2. Create an Ideal Sleep Ambience! Create a sleep-friendly environment where bright lights, noise, and all other sensory distractions are minimized, if not completely eliminated. Additionally, invest in a good bed and bedding. For a place in which people spend one-third of their lives, consider the best options to promote quality sleep. Remember, there is a reason why the exclusive hotels around the world furnish their

first-class beds with Italian or Egyptian cotton sheets, down pillows, and comforters. Start with a good mattress, but don't end there. Continue with a superior mattress pad, the highest quality sheets (higher thread counts equals a softness that lulls you into la-la land), and goose down pillows.

3. Get Out and Exercise! Daily cardiovascular exercise such as walking, swimming, jogging, or cycling acts to reset one's physiology for optimal balance by flushing out stress hormones (e.g., cortisol, aldosterone, and vasopressin) produced in the course of a hectic day. The bottom line is that exercise, specifically cardiovascular exercise, is essential for quality sleep. Consider a daily 20-30 minute walk before dinner.

4. Decrease Your Caffeine Consumption. Caffeine is a drug, a stimulant. This is a poor choice of beverages to consume if you have problems sleeping. Consider avoiding drinking any beverages with caffeine (coffee, tea, sodas, even chocolate) after 6:00 p.m. as the effects of caffeine on the nervous system promote a stress response (arousal) rather than a relaxation effect (sleep). Herbal teas are a great alternative, as is filtered water.

5. Learn to Meditate. Meditation is a simple practice to discipline the mind for clear thinking. The best definition I have come across for meditation is "increased concentration that leads to increased awareness." Meditation can be as simple as 1) finding a comfortable spot to sit quietly, 2) closing your eyes, and 3) focusing entirely on your breathing. When interrupting thoughts enter your mind, let them go as you exhale. Start with sitting still for five minutes and work your way up to 15 minutes over a few weeks. People who meditate not only sleep better in the evening; they are more grounded and present in the waking hours.

6. Throw Out Your TV! Avoid watching television right before you go to bed. Instead, try reading to induce a sense of drowsiness. If your television is in your bedroom, move it out. If your children have a TV in their bedroom, do the same. If you cannot bear to throw out your television, create healthy boundaries with your TV habits.

7. Stop Using Your Cell Phone After 6:00 p.m. One study suggests that the microwaves radiating from cell phone use decreases the production of melatonin, the sleep hormone necessary for quality sleep. Extremely Low Frequency (ELFs) vibrations are known to be a health hazard (just ask any policeman who uses a radar gun). It's best to curtail cell phone use hours before you plan to fall asleep. Once again, establish healthy boundaries with your cell phone.

8. Avoid Alcohol and Nicotine. Constituents found in both alcohol and nicotine excite the central nervous system, thus causing a disturbance in brain chemistry required for a good night's sleep (by the way, milk contains the neuropeptide tryptophan which is known to help induce sleep).

9. Clear Your Late Night Mind: Make a to-do list right before you go to bed to cleanse your mind of racing thoughts. Keep the pad of paper by your bed in the event you think of more things as your head hits the pillow. By placing items and responsibilities on paper you won't be as inclined to obsess about them during coveted sleep hours.

10. Your Bed is For Sleeping. In this 24/7 society, beds have become second home offices (e.g., balancing checkbooks, grading papers, reviewing taxes, etc.) Beds have also become recliners for watching TV and even a second dinner table. Good sleeping requires healthy boundaries. In this case remove all non-sleep activities from your bedroom. Keep your bed as a vehicle for sleep (and sex) and leave it at that.

Sleep Well

Insomnia is a clear message that mind, body, and spirit are out of balance. Attempts to restore balance serve as the precursors to getting a good night's sleep on a regular basis. Start with one or two proactive sleep behaviors that simplify your life and the sandman will become your best friend. L

Resources:

- National Sleep Foundation (202) 347-3471
www.sleepfoundation.org
- Krugman, Michael, *The Insomnia Solution*, New York. Warner Books. 2005.
- Glovinski, Paul. *The Insomnia Answer*, New York. Perigree Books. 2006.
- Mass, James, *Power Sleep*. New York. Quill Books. 1999.



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