

Natural Approaches for Insomnia and Sleep Disorders

- By Dave Siever

Introduction

An estimated 50 to 70 million American adults have a sleep or wakefulness disorder. Data from the 2009 Behavioral Risk Factor Surveillance System (BRFSS) survey were used to assess the prevalence of unhealthy sleep behaviors by selected socio-demographic factors and geographic variations in 12 states. The analysis determined that, among 74,571 adult respondents in 12 states, 35.3% reported less than seven hours of sleep during a typical 24-hour period, 48.0% reported snoring, 37.9% reported unintentionally falling asleep during the day at least once in the preceding month, and 4.7% reported nodding off or falling asleep while driving at least once in the preceding month. The National Institutes of Health suggests that school-age children need at least 10 hours of sleep daily, teens need 9 to 10.5 hours, and adults need 7 to 8 hours. According to data from the National Health Interview Survey, nearly 30% of adults reported an average of 6 hours or less sleep per day. A study conducted in the US in 2009 reported only 31% of high school students reported getting at least eight hours of sleep on an average school night. Emerging research shows a connection with poor sleep and early onset of Alzheimer's Disease.

There are two main kinds of sleep problems: sleep onset latency (SOL) where one has trouble falling asleep and; middle-of-the-night (MOTN) awakenings. The SOL problems are often a result of stress or over-arousal from having too much activity in one's life. MOTN type of sleep disturbances also result from stress and busyness, but are more typically brought on by neurochemical imbalances such as low serotonin or GABA. They can also be the result of a noisy environment or from sleep apnea.

ADHD is more commonly reported near airports and in lower-cost housing and inner-city apartments. Many of these buildings are of wood construction where noise easily travels through adjacent suites. As a result, its occupants are frequently partially woken up. This is also often a major problem when a partner snores. It is well known that when people have sleep disruptions, their brain waves slow down, they get foggy-headed and can't focus or concentrate and become moody and impulsive. One of the simplest remedies for this type of sleep disturbance is to wear earplugs.

Many adults have sleep apnea (pauses in breathing during sleep), particularly at risk if they are overweight, have allergies and enlarged tonsils. Some of those with sleep apnea wake up as often as 10 to 20 times per hour – and by morning time, they are exhausted. If you suspect that you may have sleep apnea, get tested to see if you need a CPAP device.

Another cause of poor sleep may be a simple lack of exercise. We need to move and get plenty of exercise (aerobic exercise is preferred).

Aside from noise, stress and apnea, MOTN awakenings are usually related to poor nutrition and imbalances in hormones and/or neurotransmitters. Both audio-visual entrainment (AVE) and cranio-electro stimulation (CES) naturally help with MOTN type of sleep disorder when it is caused from stress, anxiety and noise, as AVE and CES release serotonin, which gets converted into melatonin, one of the neurotransmitters involved in sleep. GABA, vitamin D, hormones, neurotransmitters and minerals such as magnesium, all play a role in sleep. An imbalance in any one of these can cause MOTN (non-stress related) awakenings and neither AVE nor CES will help very much when insomnia is a result of these factors. Ask yourself this, when you wake up, is there a theme in your mind or just random, noisy thoughts. If your thoughts have a theme relating to something in your life that is distressing, then your sleep issue is most likely related to life issues. If your thoughts are random and you seem to be fairly relaxed physically, but just awake, then consider that your awakenings might be caused by a factor other than stress or a hectic lifestyle.

When neurotechnology isn't helping much for overall sleep quality and feelings of being well rested and energized in the morning, then nutritional/supplement enhancers may need to be considered.

Psychometric Testing

There are many sleep questionnaires and wearable technology that measure night time movements to help identify quality of sleep. The questionnaire we recommend is the Symptom Check List-90 Revised (SCL-90-R). This is a 90-question mental-health checklist. Always begin with a baseline first. After using supplements and/or treatment, redo the questionnaire. Do not look at your original questionnaire until completing your base questionnaire.

Vitamin D and Sun-tanning

Low levels of vitamin D level are often associated with sleep disorders. Vitamin D can make great improvements in sleep. Even in the summer, anyone with an indoor job can be deficient in vitamin D. It's important to use liquid vitamin D. My favorite brands are: Pure Encapsulations, D-Drop and CanPrev. Vitamin D is very dose dependent where a fairly specific amount is needed for the best sleep. Too little or too much may produce insomnia. I see many clients taking way too much vitamin D. When I cut them down to 3000 to 4000 IU/day, their sleep improves dramatically. Oral vitamin D also loses its effectiveness over time and after a few months, tanning will likely be the most important way to improve sleep and vitality.

I also suggest putting one to two drops (1000 IU/drop) of vitamin D oil on the chest and rub it in at bedtime. This will usually put a person into a deep sleep in about 20 minutes and last for three to six hours. For MOTN awakenings, put another drop of vitamin D on the chest, which will usually suffice until morning. Be sure to not exceed 4000 IU/day for men and 3000 IU/day for women as overdosing on vitamin D will trigger insomnia. Also reduce oral vitamin D when full-body sun tanning, as the sunshine form of vitamin D will have already supplied the body with an optimum dose.

Tanning is the best way of acquiring vitamin D because tanning actually makes vitamin D sulfate – a water soluble form of vitamin D, that is far more active and effective than oral D. Sun-based vitamin D mimics testosterone and affects over 1000 metabolic processes in the body. It settles down neurons and also releases serotonin within the brain. Think about the times when you felt mellow and relaxed after being outside and getting some sun. Find a tanning salon with low-pressure bulbs with a minimum ultra-violet B (UVB) content of 5%. Be sure the tanning salon has a bulb replacement program of about 500 hours. Otherwise, the quality of emitted light will deteriorate. Start at four to five minutes and tan without clothing, so you can make as much vitamin D as possible. Do not use any creams or skin conditioners and certainly do not use sunscreen. You will need to increase your time to 10 to 15 minutes over the next few months. Many people are worried that tanning causes cancer. I can assure that I have researched tanning extensively and if done properly, is very safe.

Meditation Breathing

Breathing properly is the most important skill to learn for helping to return to sleep. We recommend HeartMath's emWave PC or our Breathe app to teach yourself meditative breathing. Because the out-breath is parasympathetic, you can put yourself back to sleep with breathing. When going back to sleep, use a breathing rhythm where your in-breath is about three seconds long and your out-breath is about seven seconds long. This way the brain and body will be mostly parasympathetic and will assist in putting you back to sleep.

Supplements

St. John's Wort works by increasing serotonin within the brain. Serotonin has a calming effect on the brain and is further broken down into melatonin, an important neurotransmitter for having a good night's sleep. Serotonin is available in most drug and health food stores and generally sold as 5HTP. In some people, it binds with serotonin receptors in the gut and can produce extreme diarrhea. If this happens to you, discontinue use. We have found "St. Francis", "Flora" and "A. Vogel" brands quite effective.

GABA (gamma amino-butyric acid) enhances the important delta (sleep) brain waves. However, long-term stress, especially childhood stress, strips out the GABA receptors of the amygdala (the emotional and fear center). As a result, a person with GABA issues is always revved up and cannot find deep relaxation.

Tryptophan is the pre-cursor to serotonin. Tryptophan is high in free-range animals (as grass is high in tryptophan). Tryptophan was very popular for treating both depression and insomnia. Studies show that tryptophan in an initial dose of 1-10 grams is fine and subsequent doses made be much smaller for helping improve both sleep onset and maintained sleep. The downside to tryptophan is that some people experience diarrhea when using it.

Myo-Inositol is sometimes referred to as vitamin B8. It is helpful for people who don't have good methylation of food. Methylation is a vital biochemical process that is essential for optimal function of almost all of your body's systems. It occurs continuously as it helps repair DNA, controls homocysteine (an unhealthy compound that can damage blood vessels) and helps recycle molecules needed for detoxification. It plays an important role in boosting mood, reducing anxiety and improving sleep.

Melatonin is a further processed form of serotonin and is essential for sleep. It may be taken in pill form or intra-orally and is absorbed through the oral mucosa (skin in the mouth). The "Jamieson" brand has a two-part, 10 mg tablet with one part as quick release and the other part is timed release. The technique will help a person fall asleep and stay asleep. I know people who take 5 to 10 mg of melatonin every night without any undesirable side-effects. However, many people cannot tolerate more than 1 to 2 mg daily.

Audio-Visual Entrainment

AVE has been shown to help a lot with certain types of sleep issues. AVE is dissociative and reduces the chatter related to a busy day and is quite effective for helping get to sleep when the mind is racing. AVE increases serotonin levels, which aids asleep.

Assuming that nutrition and hormones are doing fairly well, AVE works well for stress-related sleep problems. If you find that you are generally thinking about the same thing much of the time (work, family, health, news events, a particular relationship or something that you have done and feel bad about) and it is causing stress, then AVE might be well suited for you. Also, if your day is just too busy and you lay in bed with dozens of random thoughts and you cannot fall asleep, then AVE might work well for you. An AVE study of eight insomniacs, spanning the ages from 22 to 76 years old was completed in 1998. It was an ABA design, with a three-week baseline, a two-month treatment period using theta stimulation, followed by a three-week follow up had the following results:

	Pre	Post	
Sleep Onset Latency	40	23	minutes
Wakenings after Sleep Onset	65	40	minutes
Frequency of Night Awakenings	1.9	1.6	nights
Feeling upon Awakening	2.5	3.7	(1-5) Self-rated
Quality of Sleep	2.8	4.1	(1-5) Self-rated
Beck Depression Scale	15.5	9.8	(10 and above indicates depression)
Somatic Causes (pain)	2.2	1.7	(1-5) Self-rated
Cognitive Causes (noisy brain)	3.5	2	(1-5) Self-rated

As mentioned, AVE doesn't generally work well for non-stress related, middle-of-the-night awakenings (MONA). If you do feel the need to use AVE during the night, then using the blue color on a dim setting is the preferred approach. Sometimes sub-delta is the best session to use at this time. Using the Depression session during the day can help improve sleep.

Cranio-electro Stimulation

Given that the lights with AVE are often found to be annoying during a MONA, CES is a good alternative. Because CES also increases serotonin, it is helpful for sleep. To date, sleep studies on CES, span almost 20 studies and 700 participants, with average improvement in sleep by about 67%. CES at 100 Hz or in the alpha/theta range work best.

Conclusion

Sleep issues and insomnia are very complicated. There is not a one-size-fits-all solution. Hormones, stress, neurotransmitters, and nutrition are some of the factors that can affect sleep. We suggest several natural approaches to try out:

- 1) Keep your stress down. Leave your work at work.
- 2) Practice HRV breathing.
- 3) Exercise every day (something as simple as a 30-minute walk will be helpful)
- 4) Use supplements: melatonin, GABA, St. John's Wort, Vitamin D
- 5) Use AVE
- 6) Use CES

Testimonials

"My sleep was deteriorating over the years to the point of needing sleeping pills, which I have been taking quite a bit over the past three years. I noticed that sometimes when I awoke, I could hear my wife snoring, but only on occasion. I finally bought some ear plugs to see if they would make any difference and to my surprise, the snoring must have been more interfering than I had realized because ever since I have been using ear plugs my sleep is great – and I have rarely used sleeping pills since". – DR (Authors note: at night, as we relax, the stapes muscle relaxes and quits attenuating the ear. As a result, noises are several times louder in the middle of the night than during the day).

"With my indoor job, I can get deficient in vitamin D, even in August! When I wake up in the night, night I find that putting two drops (2000 IU) of vitamin D oil on my chest and then rubbing it in with my finger, will put me into deep sleep in about 20 minutes and last for 3 to 4 hours.

I love the sun and I sleep great in the summer. But in winter, I really struggle with poor sleep, often waking up at 3:00 am and feeling exhausted by morning. I began sun tanning at a local suntan spa this winter and after two weeks of tanning, I was sleeping like a baby! I also use a little melatonin sometimes, which helps". - BK

"My job gets really busy with hundreds of things to do during the day. Then when I get home, I still have to rush dinner and get my kids to soccer, music and whatever other events they are into. My mind is all racy when I try to sleep, so I have been using sleeping pills to get me relaxed enough to fall asleep. After I began using the DAVID products with the blue lights, my mind easily clears itself and before I know it I'm waking up in the morning feeling all refreshed. I don't even remember falling asleep!" - JS

"I play soccer in an office sports league. Our play times are typically between 9:00 and 11:00 pm. Even though we mainly play for fun, I found that I was so wound up after a game that I often could not get to sleep until 3:00 am. After learning to breathe with the HeartMath program, I now breathe for 10 minutes following a game – and that really calms me down. Then, when I get home, I use the Schumann Resonance program on the DAVID – and it knocks me right out. Now I can play and sleep well when I get home". - JS