

THE HUB

INTEGRATED HEALTH HUB

clinic profile

BREAKING THE CYCLE FERTILITYCARE, ON

IHPMAGAZINE.COM

tech profile

OFF THE SHELF NEWAVE SENSOR SOLUTIONS, ON

IHRMAGAZINE.COM

exclusive study

TREATING PMS WITH ZINC SULFATE

IHPMAGAZINE.COM

CONTINUING EDUCATION

THE ROLE OF FIBRE IN DIABETES

IHRMAGAZINE.COM



WWW.INTEGRATEDHEALTHHUB.NET

CHFA SPECIAL 2017



SUMMARY

With 40 per cent of adult Canadians experiencing symptoms of insomnia, many of whom remain undiagnosed, the need for non-pharmaceutical therapies is evident.

Recent research has outlined several natural ingredients and their effects on insomnia. The objective of this article is to outline those key natural ingredients and how they can combat insomnia. Based on their review, the authors found magnesium, L-theanine, melatonin, and Gamma-aminobutyric Acid (GABA) can all aid in maintaining quality sleep. Magnesium and melatonin were found to increase the quality of sleep, while L-theanine and GABA were found to combat stress and anxiety, which can induce poor sleep.

REST EASY

Treat insomnia with these scientifically-proven natural ingredients

BY ANNA O'BYRNE AND LAURA YOUNG

According to 2011 research conducted at Université Laval, 40 per cent of adult Canadians experience symptoms of insomnia at least three times a week. Yet, only 13.4 per cent of those surveyed displayed all symptoms required to diagnose insomnia¹.

Insomnia is characterized by delayed sleep onset and difficulty with sleep maintenance, including nocturnal wakefulness and waking earlier than planned². The causes of insomnia are varied and include poor sleep hygiene, existing psychiatric or medical conditions, certain substances, stress, and sleep disorders.

A number of sleep disorders are caused by circadian rhythm disruptions. The more common of these include delayed sleep-wake phase disorder, shift work disturbances, and travel-related jetlag. What is now deemed “social jet lag” occurs with “self-selected modifications to the natural light/dark cycle” and resultant variations between sleep time on weekdays and weekends³.

EFFECTS AND TREATMENT OPTIONS

Poor sleep and lack of sleep is associated

with a range of psychological, psychiatric and medical conditions. Insomnia affects cognitive, emotional and social functioning. A vast body of research exists investigating the relationship between poor sleep and health-related quality of life.

In most cases, pharmacological treatments are considered less than ideal. Most sleep inducers are sedatives and are often associated with addiction and other side effects. Non-pharmacological treatments include stimulus control therapy, sleep restriction, relaxation, sleep hygiene, and cognitive therapy. In the quest for safer, more effective insomnia solutions, alternative medicine is becoming a more popular option.

NATURAL SUPPLEMENTS FOR SLEEP SUPPORT

Magnesium

Magnesium “plays a critical role in nerve transmission, cardiac excitability, neuromuscular conduction, muscular contraction, vasomotor tone, blood pressure” and more⁴.

As early as 1980, researchers demonstrated the effects of magnesium on sleep. In a polygraphic study of newborns, sleep

behaviour positively correlated to serum magnesium levels. An increase in magnesium resulted in an increase of quiet sleep and a decrease in active sleep⁵.

More recently, a double-blind, randomized, placebo-controlled study of older patients with insomnia found daily magnesium supplementation to induce statistically significant increases in sleep time and sleep efficiency. A significant decrease in insomnia severity scores and sleep onset latency, among other positive indicators, were further reported⁶.

Magnesium is a gamma-aminobutyric acid (GABA) agonist, and plays a great role in the regulation of sleep and endocrine systems. A 2002 study investigated the effect of magnesium supplementation on age-related neuroendocrine and sleep EEG changes in a placebo-controlled, randomized cross-over study⁷. The results demonstrated that magnesium supplementation may lead to a significant increase in slow wave sleep. Further, they suggest that magnesium partially reverses sleep EEG and nocturnal neuroendocrine changes that occur during aging.

TARGET YOUR AUDIENCE

Consumers are now, more than ever, questioning the products they use. This means that there is a space up for grabs in most medicine cabinets. The question is, how can you convince them to use a new product?

First off, you need to know how you plan to market it in your store. If you organize your product by health issue, find out if the product has benefits for more than one problem. Then, see which issue has the most research behind it, and place it in that section. If you aren't sure how much space to allot a new product, ask your customers! Find out if they experience any symptoms of insomnia, and whether they are willing to try a product that will combat the symptoms. If you get a great response, stock up. Otherwise, make a little room to test the water.

Even before the product hits the shelves, continue to talk to your customers about it. Let them know you'll be bringing in a new product. Without the product in your hand, you will come across as more approachable.

As well, because brands and manufacturers have been getting heat to be more transparent, it's important that you are transparent with your customers. You are responsible for what is on your shelves, and customers want to know that you have their best interests in mind. This can mean anything from knowing more about the company whose product you are selling, to knowing what the benefits of the product actually are. You don't need to be an expert, but staying informed is a greater sales tactic than any other.

On top of that, knowing what your product does and where it comes from gives you more opportunity to begin a conversation—especially when a product has more than one ingredient proven to be effective. Magnesium on its own is essential to human health, so if you know customers are already taking a magnesium supplement, you can ask them whether they are experiencing any issues with stress, anxiety or sleep.

Don't forget to take the conversation online. Post new products on your social media. If you have a nutritionist on staff, have them do live video streams about the product and its benefits.

L-theanine

Primarily found in the green tea plant, this amino acid is often used to treat stress, anxiety, and high blood pressure. L-theanine has a chemical structure similar to that of glutamate, an amino acid that naturally occurs in the body. Glutamate helps to transmit nerve impulses in the brain, and is an excitatory, or stimulating, neurotransmitter. On the other hand, L-theanine inhibits brain overactivity, creating a sense of calm and relaxation within the mind. Due to its chemical similarity to glutamate, L-theanine is able to block its tonic effects, reducing stress and anxiety levels.

A 2016 study found that L-theanine was able to significantly reduce subjective stress responses in individuals who had been exposed to a multitasking cognitive stressor⁸. Moreover, in a 2017 review of acute psychoactive effects, L-theanine taken alone was found to improve self-reported relaxation, tension and calmness⁹.

As a treatment for sleep disorders, a review published in the Journal of the American College of Nutrition noted that L-theanine is a “safe natural sleep aid”¹⁰. It was also found to “promote relaxation without drowsiness,” promoting excellent sleep quality through anxiolysis.

Melatonin

Melatonin is a chief secretory product of

the pineal gland, with a well-established relationship to sleep. The production of melatonin is triggered by low-light conditions; exposure to artificial light at night suppresses its production, throwing off the body's sleep-wake cycle.

Strategically-timed melatonin administration is recommended for the treatment of intrinsic circadian rhythm sleep-wake disorders. Melatonin, aside from phase-shifting these rhythms, “may have direct soporific effects, particularly at higher doses”¹¹. Studies suggest that timing of melatonin for these disorders is more important than dosing, at least insofar as the phase-shifting effects are concerned.

Randomized, double-blind clinical trials have demonstrated positive results with the use of melatonin for patients aged 55 or older with primary insomnia. Melatonin treatment demonstrated significant improvements relative to placebo in many sleep and daytime parameters, including sleep quality and latency, morning alertness, and health-related quality of life. Over the short and long-term, melatonin treatment was not associated with dependence, tolerance, rebound insomnia, or withdrawal symptoms¹². Similar positive results and positive carryover effects were reported in a study which investigated patients with insomnia related to chronic use of beta-blocker medications, which may suppress melatonin¹³.

Age is a consideration in use of melatonin, and as a supplement, it is currently recommended only for those aged 18 to 80. A 2011 double-blind, placebo-controlled study evaluated this age limit, finding short and long-term efficacy of melatonin for patients in this cohort who experienced insomnia, with particularly strong results for those aged 55 and over¹⁴. In all age cohorts, sleep improvements were maintained over the long-term, with no signs of tolerance, no withdrawal symptoms, or rebound insomnia. Most adverse events were mild with no significant differences in safety outcomes between the melatonin and placebo groups¹⁵.

Individuals under 18 may be recommended melatonin for certain conditions. A 2012 study investigated melatonin and cognitive behavioural therapy for persistent insomnia presenting in children with autism. The study reported that melatonin was found to elicit significant improvements across all outcome measures including sleep latency, total sleep time, wake after sleep onset, and number of awakenings. Melatonin therapy reduced insomnia symptoms, and was most effective in combination with cognitive-behavioural therapy¹⁶.

Gamma-aminobutyric Acid (GABA)

GABA is the chief inhibitory neurotransmitter in the brain. It is synthesized via a process that converts glutamate, an

excitatory neurotransmitter, into an inhibitory neurotransmitter.

Marketed as an amino acid supplement, GABA is purported to relax the nervous system and reduce anxiety. The research on GABA for sleep is preliminary, but promising; studies have reported a close association between sleep and the GABAergic system⁷.

Two studies published in *Biofactors* demonstrated the natural relaxant and anti-anxiety effects of orally administered GABA. The first study evaluated the effect of GABA intake via electroencephalograms (EEG), and showed that GABA significantly increased alpha waves, which are dominant in meditative states, and decreased beta waves, which occur during cognitive, fast-paced tasks. As such, researchers concluded that GABA not only induces relaxation, but also reduces anxiety¹⁶.

Another investigation looked at cortical GABA and glutamate in post-traumatic stress disorder (PTSD). Self-reported sleep quality revealed a correlation between poor sleep quality and GABA levels. Those with PTSD had lower cortical GABA levels, as well as higher depressive, anxiety, and insomnia scores¹⁷.

CONCLUSIONS

Studies suggest that non-pharmacological products may significantly reduce symptoms of insomnia, with high levels of safety. Various clinical studies have demonstrated the efficacy of magnesium, L-theanine, melatonin, and GABA in improving sleep quality. **H**



For the full list of references, please download The HUB digital app on Google Play or iTunes.

COMMENTARY BY: EVE VAN CAUTER, PHD

Although some of us wish we could bypass the 7-9 inactive hours of our day, sleep is undoubtedly one of the most important factors in maintaining mental, emotional, and physical health. Lack of sleep—or poor sleep quality—can wreak havoc on the body and mind, leaving us unable to function during our waking hours.

Eve Van Cauter, PhD, a professor of medicine at the University of Chicago, notes that chronic sleep loss can hasten the onset and increase the severity of “diabetes, hypertension, obesity, and memory loss.” In addition, lack of sleep is associated with depression, anxiety, and accelerated aging. Because insomnia is a catalyst for a variety of health issues, it is extremely important to treat it from the source.

There are two forms of insomnia: primary and secondary. Primary insomnia is not directly associated with any other health issue, while secondary insomnia is caused by a pre-existing condition, such as asthma, depression, arthritis, cancer, or heartburn; pain; medication; or substance use.

There are also variations in the frequency and duration of insomnia. Acute insomnia may last from one night to two weeks, and may be caused by significant stress, illness, physical or emotional pain, environmental factors, medications, or interferences in the sleep schedule. Chronic insomnia lasts at least three nights a week for a month or longer, and may stem from depression, anxiety, chronic stress, or chronic pain.

In some cases, prescription drugs are used to treat insomnia. These include zolpidem, eszopiclone, ramelteon, zaleplon, doxepine, and benzodiazepines. However, these drugs may cause dependence, drowsiness, potential overdose, allergic reactions, and complex sleep-related behaviours. As such, they may not be safe for continuous, long-term use.

Various cognitive and behavioural treatments are also available for insomnia. A major key in this is relaxation training, which teaches patients to systematically tense and relax muscles in the body to induce sleep, control their breathing, practice mindfulness, or meditate. Stimulus control is also popular; this method limits activities allowed in the bedroom, breaking an unhealthy association between the bedroom and wakefulness. Finally, cognitive behavioural therapy seeks to challenge unhealthy actions and thoughts around sleeping, teaching rational, positive thinking.

Alternative, natural remedies, including melatonin, GABA, L-theanine, and magnesium are available for insomnia patients. With minimal to no side effects, these options are much more effective and safe for long-term use, especially when paired with lifestyle changes.

COMMENTARY BY: DR. CHRIS HABIB, ND, CLINIC SUPERVISOR AT THE ROBERT SCHAD NATUROPATHIC CLINIC

“Pharmacological therapies are prescribed in 95 per cent of insomnia cases and include sedative drugs, antidepressant drugs, pain suppressors, and antipsychotic drugs ... The pharmacological route oftentimes suppresses the cause of insomnia rather than treating it.”