



ADVANCED
ORTHOMOLECULAR RESEARCH

AOR CODE: AOR04186

Premium

Ortho Sleep

\$40.45 CAD

A Natural Solution to Promote Restful Sleep

The most comprehensive, natural sleep formula available



Helps one fall asleep, stay asleep, and wake up feeling refreshed

Bronze winner of the 2013 Optimyz Best of the Best Awards

 Gluten Free  Vegan  Non-GMO Sleep

AOR Code	Variant	Price
AOR04186	60 VEGI-CAPS	\$40.45

Details

Did you know that irregular sleep patterns are being called the new silent killer, being as detrimental to health as stress and poor diet? Studies show that those who chronically get less sleep than the “golden” 7-8 hours are at a higher risk for a number of diseases, are prone to weight gain, and are less able to deal with the effects of stress. People suffering from insomnia spend less time in deeper levels of sleep, wake up more often, and experience a reduction in REM sleep. In addition to stress, insomnia can be caused by a variety of other factors, including anxiety, poor diet, or a disruption of the body's internal clock - such as jet lag, all-night study sessions, or changing work hours.

Ortho Sleep™ is an award winning premium sleep and relaxation formula. The most important neurotransmitters known to regulate the sleep-wake cycle have been combined with the most powerful herbs traditionally used to promote sleep, yielding a natural sleep remedy like no other. Ortho Sleep contains a carefully formulated blend of nutrients and compounds that have been shown to be effective in combating insomnia, restoring a proper circadian rhythm and promoting healthy, restful sleep. These include relaxing neurotransmitters GABA and melatonin, as well as 5-HTP, a serotonin precursor to reduce feelings of worry especially when trying to fall asleep. The formula further includes the amino acid L-theanine as well as valerian root, passionflower extract, and lemon

balm, all of which possess relaxing properties and work to increase the activity of GABA in the brain.

Ortho Sleep is perfect for those who have difficulty falling asleep, staying asleep, or feeling rested upon waking. Ortho Sleep may help in cases of jet-lag, shift work or insomnia. If you have used the individual ingredients found in the formula with no success, Ortho Sleep may offer a more powerful natural solution.

Label Info

Discussion

Ortho•Sleep™ is the most comprehensive natural sleep aid available. Its ingredients have been clinically proven to help increase total sleep time, reduce the time it takes to fall asleep, and help to re-set the body's sleep-wake cycle. This formula is ideal for those with altered sleep schedules such as shift-workers and people suffering from jet lag.

Product Variation

Product Code	Size
AOR04186	60 VEGI-CAPS

Supplements Facts

Serving Size: 2 Capsules	Amount	% Daily
GABA (gamma-aminobutyric acid)	100 mg	
L-Theanine	200 mg	
L-5-Hydroxytryptophan (griffonia seed)	100 mg	
Melatonin	3 mg	
Valerian root extract (0.8% valerenic acid)	150 mg	
Passionflower extract (aerial parts)	32 mg	
Lemon balm extract* (aerial parts)	300 mg	

*Cyracos is a registered trademark of Naturex, Inc.

sodium stearyl fumarate and microcrystalline cellulose.
Capsule: hypromellose.

Guarantees

AOR™ guarantees that all ingredients have been declared on the label. Contains no wheat, gluten, nuts, peanuts, sesame seeds, sulphites, mustard, soy, dairy, eggs, fish, shellfish or any animal byproduct.

Adult Dosage

Take 1-2 capsules before bedtime with/without food, or as directed by a qualified health care practitioner.

Cautions

Consult a health care practitioner prior to use if taking carbidopa or drugs/supplements with

serotonergic activity. These may include, but are not limited to, L-tryptophan, S-adenosylmethionine (SAME), St. John's Wort, antidepressants, pain killers, cough/cold medication containing dextromethorphan, anti-nausea, anti-blood pressure and anti-migraine medication. Discontinue use and consult a health care practitioner if you show signs of weakness, oral ulcers, or abdominal pain accompanied by severe muscle pain or if you experience skin changes. Some people may experience gastrointestinal disturbances such as diarrhea, nausea, vomiting and abdominal pain as well as drowsiness. Do not use if you have scleroderma. Hypersensitivity (e.g. allergy) has been known to occur; in which case, discontinue use. Do not drive or use machinery for 5 hours after taking Ortho•Sleep™. Exercise caution if engaging in activities requiring mental alertness. Do not use if you are pregnant, breastfeeding, trying to conceive, or taking immunosuppressive drugs. Not to be used by individuals under the age of 18 or those with a medical condition such as a hormonal disorder, diabetes, liver or kidney disease, cerebral palsy, seizure disorders, migraine, depression and or hypertension. Consult a health care practitioner if sleeplessness persists continuously for more than 3 weeks (chronic insomnia). Consult a health care practitioner if symptoms persist or worsen. Consumption with alcohol, other medications or health products with sedative properties is not recommended.

Source

Natural botanical extracts

Pharmaceutical synthesis

Main Application

Insomnia

Sleep & relaxation

Disclaimer

The information and product descriptions appearing on this website are for information purposes only, and are not intended to provide or replace medical advice to individuals from a qualified health care professional. Consult with your physician if you have any health concerns, and before initiating any new diet, exercise, supplement, or other lifestyle changes.

Research

Background

Sleep – Essential but Neglected

Many people have trouble sleeping or have disrupted sleep patterns. People suffering from insomnia spend less time in deeper levels of sleep, wake up more often, and experience a reduction in REM sleep. In addition to stress, insomnia can be caused by a variety of other factors, including anxiety, poor diet, or a disruption of the body's internal clock – such as jet lag, all-night study sessions, or changing work hours.

Ortho•Sleep contains a carefully formulated blend of nutrients and compounds that have been shown to be effective in combating insomnia and promoting healthy, restful sleep. These include

neurotransmitters like GABA and melatonin, as well as 5-HTP, a serotonin precursor. The formula further includes the amino acid L-theanine as well as valerian root, passionflower extract, and lemon balm, all of which possess relaxing properties, and work to increase the activity of GABA in the brain.

L-Theanine

L-Theanine is a non-essential amino acid found in green tea, and is responsible for the attribute known as 'relaxed alertness' that is associated with this famous eastern beverage. It can act directly on the brain, influencing brain wave patterns in a similar fashion to GABA, and also indirectly by stimulating GABA production. Supplemental L-theanine is also known to reduce anxiety by increasing α -brain waves, which the brain produces in significant quantities only in states of effortless and relaxed alertness. This is precisely the kind of state that precedes stage I sleep.

GABA

Neurotransmitters are the key to sleep regulation. These chemicals are like tiny messengers in the brain, transmitting signals from one neuron to another and modulating a huge number of functions in the human body, including sleep. Gamma-aminobutyric acid (or GABA) is the most important inhibitory neurotransmitter in the brain. GABA acts like a "brake" during times of stress or anxiety, regulating brain excitability and inducing relaxation. GABA receptors are highly concentrated in the hypothalamus; the region of the brain associated with sleep. GABA is effective against insomnia, and has been shown to affect the brain directly, increasing α -brain waves (those associated with relaxation) and reducing β -brain waves (those associated with anxiety and stress).

Melatonin

Melatonin and serotonin are also key neurotransmitters. Melatonin is produced by the pineal gland in the brain, and it controls the body's internal clock. Melatonin has been shown to increase sleep time and reduce the time it takes to fall asleep. It can also help to reset the body's sleep-wake cycle, a benefit to those suffering from jet lag or a similar disruption.

Serotonin

Serotonin is essential for sleep modulation in its own right, and can also be converted by the body into melatonin. 5-HTP is (L)5-hydroxytryptophan, a metabolite of the amino acid tryptophan and a precursor to serotonin and melatonin. 5-HTP boosts serotonin levels, and can also increase REM and deep sleep phases, making sleep more restful.

Valerian

Valerian root (from the genus *Valeriana* with sub-species located worldwide) has been used for millennia in the traditional folk remedies of a wide range of cultures (from ancient China to ancient Greece) to promote calmness, relaxation and sleep. Valerian root contains essential oils which provide most of its sedative effect, while fractions known as valepotriates add a regulatory inhibiting effect on the central nervous system. There are about 150 other constituents of Valerian, a great many of which act synergistically to account for Valerian's overall efficacy, which includes the stimulation of GABA.

Passionflower

Passionflower, or *Passiflora incarnate* L., is officially listed as a sleep aid in the monographs of the European Medicines Agency (an EU organization) as well as the National Health Products Directorate (a division within Health Canada). Curiously, this is in spite of the fact that clinical studies with this product pertain mainly to anxiety and only in combination with other substances. Its ability to achieve such prominent recognition in spite of this is testament to the strength of passionflower's reputation in traditional medicine and preventative health circles.

Lemon Balm

Melissa officinalis L, commonly known as lemon balm, is classified as a sleep aid in the monographs of the British, European (EU) and German Commission E Pharmacopeias as well as in the compendium of the Natural Health Products Directorate of Health Canada. With roots originating in the folk medicine traditions of southern Europe, lemon balm – like passionflower – has demonstrated its greatest efficacy when used with other herbal extracts.

Sleeping is Like Your Job

Rest is just as important as work. No one can achieve their full potential at work or school if the resources upon which that potential relies cannot replenish themselves. Even the benefits of a healthy diet and exercise are severely compromised (and the latter can even become detrimental) without the re-charging of the biological batteries that only quality sleep can provide. However, insomnia – as a symptom of modern stress – plagues about one in seven people at any given time, and most people will endure at least a temporary bout of some type of sleep disorder at least once in their lifetime. In addition to impaired cognitive and physical performance, insomnia can also lead to depression, increased accident risk and even heart disease.

Stages of Sleep

Sleep is regulated by the body's internal clock, which keeps track of light levels, the time of day and other important cues for sleep and awakening. There are two primary types of sleep; REM (Rapid Eye Movement) sleep, which is dreaming sleep, and Non-REM sleep, which consists of four stages of progressively deeper sleep, all of which precede REM sleep. While all sleep stages are important, stages III and IV of deep sleep and REM sleep are especially vital.

Research

Neurotransmitter #1: GABA

In a small, unpublished study, GABA supplementation reduced sleep latency (transition time from wakefulness to stage I of Non-REM sleep) by 20%, and increased the time spent in late-stage deep sleep by another 20%.

Neurotransmitter #2: Melatonin

Supplemental melatonin's effects on sleep are extensive and well documented. One study with delayed sleep-phase insomniacs reduced sleep latency times by an average of 115 minutes.

Supplemental melatonin is particularly well-researched with respect to dealing with disruptions in the body's internal clock, such as jet lag and shift work, with no fewer than 10 clinical studies demonstrating its ability to resynchronize the body's altered circadian rhythms governing sleep.

Neurotransmitter #3: Serotonin

Supplemental 5-HTP has been successfully studied for the treatment of a number of conditions, including mood balance, chronic fatigue, and migraines. Studies examining its positive effects on sleep go back to the early 1970's, and a recent study revealed that 5-HTP supplementation was able to reduce the number of sleep-terror episodes in children by nearly 84%.

Valerian

There are several placebo-controlled human studies attesting to Valerian's effectiveness against insomnia, particularly via the reduction of sleep latency and the improvement in sleep quality. These studies were also fairly large and spanned a wide range of age groups from both genders, with one study conducted among 128 test subjects where the greatest benefit was for self-described "poor sleepers".

Passionflower

In one non-randomized clinical trial, 20 patients with psychosomatic disorders were administered with either a passionflower/valerian root combination or the neuroleptic drug Propaphenin®. While the latter required six weeks to reduce cranial hyperactivity (using EEG brain mapping), the passionflower/valerian root extract combination did so in two. This led the scientists to conclude that "the combination product containing P. incarnata was more efficient than Propaphenin®" and "has a remarkable position as an 'herbal sedative' in the OTC market." These observations can easily be carried over to have a clear effect on reducing sleep latency and to a lesser extent on improving sleep quality.

Lemon Balm

At least half a dozen human studies, mainly in combination with valerian root, have examined lemon balm's effects on various sleep disorders – with consistently positive results. In one multicentre, double-blind, placebo-controlled study among 98 healthy volunteers with minor sleep disorders, 33.3% of the study group reported an improvement in sleep quality vs. 9.4% of the placebo group. In another multicentre trial (this one being open), 225 patients with difficulties falling asleep, staying asleep, and experiencing states of nervous agitation participated. After taking the lemon balm-containing combination for 2 weeks, 89% saw improvements in falling asleep, 80% saw improvements in staying asleep, and 82% experienced ameliorations in nervous agitation.

Market Trends

Sleep problems are not uncommon for many people; they can have a dramatic negative impact on one's quality of life. Some people resort to medications to help them sleep such as Zopiclone, Lunesta, Ambian or Ativan. Alternatively, there are also natural relaxants and sleep aids that can be used to aid in the management of chronic sleep problems.

AOR Advantage

Ortho-Sleep™ was specifically formulated to be the most comprehensively powerful natural sleep aid available. Its potency is designed to effectively address short-term sleep disorders due to anxiety, stress, and/or a disruption of the body's internal clock due to such factors as shift work and/or jetlag. Due to its unprecedented potency, Ortho-Sleep™ must only be used as directed.

References

Brendler T, et al. Lemon Balm (Melissa officinalis L.): An Evidence-Based Systematic Review by the Natural Standard Research Collaboration. Journal of Herbal Pharmacotherapy; 2005, Vol. 5; Issue 4, p71-114.

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Dhawan K, Dhawan S, Sharma A. Passiflora: a review update. J Ethnopharmacol. 2004 Sep;94(1):1-23.

Gamma-aminobutyric acid (GABA), Monograph. Altern Med Rev. 2007 Sep;12(3):274-9.

Ito K, Nagato Y, Aoi N, et al. Effects of L-theanine on the release of alpha-brain waves in human volunteers. Nippon Nogeikagaku Kaishi 1998;72:153-157.

Melatonin. Monograph. Altern Med Rev. 2005 Dec;10(4):326-36.

Monograph. Valeriana officinalis. Altern Med Rev. 2004 Dec;9(4):438-41.

Abstract

Gamma-aminobutyric acid (GABA) Monograph.
Altern Med Rev. 2007 Sep;12(3):274-9.

Gamma-aminobutyric acid (GABA) is a major neurotransmitter widely distributed throughout the central nervous system (CNS). Because too much excitation can lead to irritability, restlessness, insomnia, seizures, and movement disorders, it must be balanced with inhibition. GABA – the most important inhibitory neurotransmitter in the brain – provides this inhibition, acting like a brake during times of runaway stress. Medications for anxiety, such as benzodiazepines, stimulate GABA receptors and induce relaxation. Either low GABA levels or decreased GABA function in the brain is associated with several psychiatric and neurological disorders, including anxiety, depression, insomnia, and epilepsy. Studies indicate GABA can improve relaxation and enhance sleep. Both synthetic and natural GABA are available as dietary supplements in the United States. Natural GABA is produced via a fermentation process that utilizes *Lactobacillus hilgardii* – the bacteria used to ferment vegetables in the preparation of the traditional Korean dish known as kimchi.

A combination of valerian and lemon balm is effective in the treatment of restlessness and dyssomnia in children. Phytomedicine 2006; 13(6):383 – 387.
Müller S and Klement S

Efficacy and tolerability of a combined valerian/lemon balm preparation¹ were investigated in an open, multicentre study in children less than 12 years suffering from restlessness and nervous dyskoimesis. Patients were dosed individually by the investigators. In total, 918 children were evaluated for therapeutic efficacy and tolerability. A distinct and convincing reduction in severity was found for all symptoms in the investigators' and parents' ratings. The core symptoms dyssomnia and restlessness were reduced from "moderate/severe" to "mild" or "absent" in most of the patients. In total, 80.9% of the patients who suffered from dyssomnia experienced an improvement for this symptom and 70.4% of the patients with restlessness improved clearly. For the other listed symptoms the total improvement was 37.8% on average. Both, parents and investigators assessed efficacy as to be "very good" or "good" (60.5% and 67.7%, respectively). The tolerability of Euvegal® forte was considered as "good" (in 96.7% of the patients it was judged to be "very good" or "good"). No study medication-related adverse events occurred.

Effects of L-theanine on the release of alpha-brain waves in human volunteers.

Nippon Nogeikagaku Kaishi 1998;72:153-157.

Ito K, Nagato Y, Aoi N, et al

L-Theanine is an amino acid found in green tea leaf and in its infusion, and is known to control excitement caused by caffeine. It is also known that the oral administration of L-theanine to rats results in a decrease of serotonin and increase of catecholamines in their brain. L-Theanine has been confirmed to be safe in animal experiments. We found recently that oral intake of L-theanine caused a feeling of relaxation among the human volunteers examined. These observations led us to do experiments on the effects of administration of L-theanine on the brain electric waves. Eight female university students were selected as volunteers. Four of them were ranked to be Grade I (the highest anxiety) and the remaining four, Grade V (the lowest anxiety) in an investigation done by the manifest anxiety scale method. A dose of oral administration of 200 mg of L-theanine dissolved in 100 ml of water resulted in the generation of alpha-electric waves in the occipital and parietal regions of the brains of the subjects. The emission intensity of alpha-brain waves (integrated as a function of investigation times and area) was significantly greater in the group of Grade I than that of Grade V. These results indicate the possibility for L-theanine to be applied to foods and beverages as a new type of functional food ingredient for its relaxation effect.

Sleep-inducing effects of low doses of melatonin ingested in the evening. C

lin Pharmacol Ther. 1995 May;57(5):552-8.

Zhdanova IV, Wurtman RJ, Lynch HJ, Ives JR, Dollins AB, Morabito C, Matheson JK, Schomer DL

We previously observed that low oral doses of melatonin given at noon increase blood melatonin concentrations to those normally occurring nocturnally and facilitate sleep onset, as assessed using and involuntary muscle relaxation test. In this study we examined the induction of polysomnographically recorded sleep by similar doses given later in the evening, close to the times of endogenous melatonin release and habitual sleep onset. Volunteers received the hormone (oral doses of 0.3 or 1.0 mg) or placebo at 6, 8, or 9 PM. Latencies to sleep onset, to stage 2 sleep, and to rapid eye movement (REM) sleep were measured polysomnographically. Either dose given at any of the three time points decreased sleep onset latency and latency to stage 2 sleep. Melatonin did not suppress REM sleep or delay its onset. Most volunteers could clearly distinguish between the effects of melatonin and those of placebo when the hormone was tested at 6 or 8 PM. Neither melatonin dose induced "hangover" effects, as assessed with mood and performance tests administered on the

morning after treatment. These data provide new evidence that nocturnal melatonin secretion may be involved in physiologic sleep onset and that exogenous melatonin may be useful in treating insomnia.