



Your Monthly Update

Dear Colleague

Welcome to the May 2012 newsletter from Pure Bio Ltd.

STOP PRESS!!

We are thrilled to announce that we now have in stock a re-formulated Antioxidant Formula, to fall in line with EU regulations!

As promised, we are working hard with Pure Encapsulations to re-formulate a number of products and to provide you with a comprehensive range of alternative products subsequent to the various EU legislative changes, so that your choices for both yourself and your patients will remain largely uncompromised.

We always welcome feedback and suggestions.

Insomnia

Protocol Summary

Ranking	Nutritional Supplements	Botanical Medicine
Primary	I-Tryptophan	Valerian
Secondary	5-HTP	Hops Lavender Tart Cherry
Other	Magnesium Vitamin B12	Passion flower American skullcap Bitter orange Catnip Lemon balm

Primary – Reliable and relatively consistent scientific data showing a substantial health benefit.

Secondary – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.

Other – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.

Definition

Insomnia is a relatively common sleeping disorder, affecting about one-third of the adult population worldwide. Insomnia is more common in women, but quality of sleep often decreases equally in both women and men as we age.

There are a variety of factors that can cause insomnia: stress (including anxiety about not being able to sleep), extreme temperature fluctuations, environmental noise or changes, medication side effects, hormones, or disruption to the regular sleep pattern. Depression, chronic pain, a variety of health issues and sleep apnea can also contribute to insomnia.

Causes

Psychological Causes

- **Anxiety**
- **Stress**, or how effectively a person copes with any emotional, physical, social or economic change
- **Depression**

In addition, a lack of a good night's sleep can lead to these very same psychological problems, and a vicious cycle can develop.

Physical Causes

- **Hormonal changes in women.** These include premenstrual syndrome, menstruation, pregnancy, and menopause.
- **Decreased melatonin** - levels of melatonin decrease as a person ages. By age 60, the body produces very little melatonin.
- **Medical conditions** - including allergies, arthritis, asthma, heart disease, high blood pressure, hyperthyroidism, and Parkinson's disease.
- **Pain** - pain and discomfort from a medical illness or injury often interfere with sleep.
- **Genetics** - problems with insomnia do seem to be familial, although researchers have yet to identify how genetics play a role.
- **Other sleep disorders** - these include **sleep apnea** (in which one temporarily stops breathing during sleep) and periodic leg and arm movements during sleep (in which one's muscles excessively twitch or jerk).

Temporary Events or Factors

- **Adjustment sleep disorder** - this form of sleeplessness is a reaction to change or stress. It may be caused by a traumatic event such as an illness or loss of a loved one, or a minor event such as a change in the weather or an argument with someone.
- **Jet lag** - air travel across time zones often causes brief bouts of insomnia.
- **Working night shifts or long shifts** - individuals who work at night and those who work long shifts may have trouble adjusting their sleep habits.
- **Medications** - insomnia can be a side effect of various medications, both prescription and over-the-counter.
- **Overuse of caffeine and alcohol** - caffeine most commonly disrupts sleep. While a drink or two before bed may help a person relax, more than that can lead to fragmented sleep and wakefulness a few hours later.
- **Environmental noise, extreme temperature changes**

Effects of Insomnia

- **Impaired mental functioning** - insomnia can affect concentration and memory, and can affect one's ability to perform daily tasks.
- **Accidents** - insomnia endangers public safety by contributing to traffic and industrial accidents. Various studies have shown that fatigue plays a major role in automobile and machinery accidents. As many as 100,000 automobile accidents, accounting for 1,500 deaths, are caused by sleepiness.
- **Stress and depression** - insomnia increases the activity of the hormones and pathways in the brain that cause stress, and changes in sleeping patterns have been shown to have significant effects on mood. Ongoing insomnia may be a sign of anxiety and depression.
- **Heart disease** - one study reported that people with chronic insomnia had signs of heart and nervous system activity that might put them at risk for heart disease.
- **Headaches** - headaches that occur during the night or early in the morning may be related to a sleep disorder.
- **Economic effects** - Insomnia costs the U.S. an estimated \$100 billion each year in medical costs and decreased productivity.

Lifestyle Modification

- A steady sleeping and eating schedule combined with caffeine avoidance and counselling sessions using behavioural therapy has reduced insomnia for some people, as has listening to relaxation tapes.
- The effect of exercise on sleep has not been well studied. However, some healthcare practitioners recommend daily exercise as a way to reduce stress, which in turn can help with insomnia.
- A naturopathic therapy for insomnia is to take a 15- to 20-minute hot Epsom-salts bath before bed. One or two cups of Epsom salts (magnesium sulfate) in a hot bath are thought to act as a muscle relaxant.
- Smokers are more likely to have insomnia than nonsmokers.
- Practice daily breathing exercises, and the relaxing breath when falling asleep.

- Take a warm bath before bedtime – heat increases the production of melatonin and can induce a state of sleepiness.

Holistic Options

Acupuncture may be helpful for insomnia, possibly by increasing production of calming neurotransmitters such as serotonin. A preliminary trial found one acupuncture treatment daily for seven to ten days resulted in complete recovery of normal sleep in 59% of patients and partial recovery in 21%. A controlled trial treated patients with either acupuncture or fake acupuncture (insertion of needles at non-acupuncture points). The patients receiving true acupuncture had significant improvements in a laboratory measure of sleep quality compared to the placebo group. The treatment of insomnia with auricular (ear) acupuncture may provide similar benefits to people with insomnia, according to a preliminary trial.

Relaxation techniques are one of the most effective ways to increase sleep time, fall asleep faster, and feel more rested in the morning. They require a minimum of 20 minutes before going to bed. There are many different techniques:

- Visualization
- Relaxation Response - A mind/body technique based on the principles of Transcendental Meditation.
- Mindfulness - A type of meditation that essentially involves focusing on your mind on the present.
- Yoga - combines deep breathing, meditation, and stretching. A Harvard study found that daily yoga for eight weeks improved total sleep time, as well as the time it took to fall asleep.
- Progressive Muscle Relaxation

Dietary Modification

Practitioners will sometimes recommend eating a high-carbohydrate food before bed, such as a slice of bread or some crackers. Eating carbohydrates can significantly increase levels of serotonin, which is known to reduce anxiety and promote sleep.

Caffeine is a stimulant. The effects of caffeine can last up to 20 hours, so some people will have disturbed sleep patterns even when their last cup of coffee was in the morning. Besides regular coffee, black tea, green tea, cocoa, chocolate, some soft drinks, and many over-the-counter pharmaceuticals also contain caffeine.

Food allergy may also contribute to insomnia. In a trial involving eight infants, chronic insomnia was traced to an allergy to cow's milk. Avoidance of milk resulted in a normalization of sleep patterns.

Although sugar can give a burst of energy, this is short-lived and can cause uneven blood sugar levels. This can disrupt sleep in the middle of the night as blood sugar levels fall.

Magnesium is a natural sedative. Deficiency of magnesium can result in difficulty

sleeping, constipation, muscle tremors or cramps, anxiety, irritability, and pain. It has also been used for people with restless leg syndrome. Foods rich in magnesium are legumes and seeds, dark leafy green vegetables, wheat bran, almonds, cashews, blackstrap molasses, brewer's yeast, and whole grains.

Nutritional Supplement Treatment Options

L-Tryptophan – 1 – 2 g HS. The amino acid, L-tryptophan, a serotonin precursor, taken in amounts of 1 to 4 grams HS, has been used successfully for people with insomnia in many studies, including double-blind trials. Some research indicates that people with more severe forms of insomnia may need to take L-tryptophan for several nights before improvement in sleep is noticed. One controlled trial found that newborns receiving a bottle feeding in which 420 mg of L-tryptophan per 2.2 lbs of body weight had been added entered quiet sleep sooner and slept for a longer time.

5-HTP - Adults: 200 mg two hours HS and 400 mg HS; children: 3 mg per 1 kg body weight. 5-HTP is converted into serotonin and is therefore helpful for insomnia. In a double-blind study of people without insomnia, supplementation with 5-HTP (200 mg at 9:15 p.m. and 400 mg at 11:15 p.m.) increased rapid-eye-movement (REM) sleep, presumably indicating improved sleep quality. In a preliminary study of people with fibromyalgia, supplementing with 100 mg of 5-HTP TID improved sleep quality. In a preliminary study, 5-HTP was also found to be an effective treatment for "sleep terrors," a common problem in children that causes sudden awakening with persistent fear or terror, screaming, sweating, confusion, and increased heart rate.

Magnesium – 300mg HS for 4 – 6 weeks. Some people have difficulty sleeping because of a problem known as period limb movements during sleep (PLMS) or another condition called restless legs syndrome (RLS). In a preliminary trial, people with PLMS or RLS who suffered from insomnia had a significant improvement in sleep efficiency after supplementing with magnesium.

Vitamin B12 - 1,500 to 3,000 mcg per day. In two small preliminary trials, people with insomnia resulting from disorders of the sleep-wake rhythm improved after supplementing with vitamin B12

Botanical Treatment Options

Valerian - 300 - 600 mg of a concentrated root extract 30 minutes HS. In modern herbal medicine, the leading herb for insomnia is valerian. Valerian root makes getting to sleep easier and increases deep sleep and dreaming. Valerian does not cause a morning "hangover," a side effect common to prescription sleep drugs in some people. A double-blind trial found that valerian extract (600 mg 30 minutes HS for 28 days) is comparable in efficacy to oxazepam, a commonly prescribed drug for insomnia. In a separate double-blind trial, the same amount of valerian extract was found to improve subjective assessments of sleep quality and certain aspects of brain function during sleep as well. A concentrated (4–5:1) valerian root supplement at a dose of 300–600 mg can be taken 30 minutes HS. Alternately, 2 to 3 grams of the dried root in a capsule or 5 ml tincture can be taken 30 minutes HS.

A combination of valerian and lemon balm has been tested for improving sleep. A double-blind trial found that a combination of valerian and lemon balm, taken over a two-week period, was effective in improving quality of sleep. Another double-blind trial found a combination of 360 mg valerian and 240 mg lemon balm taken HS improved reported sleep quality in one-third of the participants.

Combining valerian root with other mildly sedating herbs is common practice. **Chamomile, hops, passion flower, lemon balm, American scullcap,** and **catnip** are commonly recommended by practitioners. These herbs can also be used alone as mild sedatives for those suffering from insomnia or nervous exhaustion. Chamomile is a particularly good choice for younger children whose insomnia may be related to gastrointestinal upset. Hops and lemon balm are approved by the German government for relieving sleep disturbances.

Hops - In a double-blind trial, the combination of valerian root and hops was significantly more effective than valerian root alone for treating insomnia.

Lavender - The volatile oil of lavender contains many medicinal components, including perillyl alcohol, linalool, and geraniol. The oil's aroma is known to be calming and thus may be helpful in some cases of insomnia. One study of elderly people with sleeping troubles found that inhaling lavender oil was as effective as some commonly prescribed sleep medications. Similar results were seen in another trial that included young and middle aged people with insomnia. Teas made from lavender flowers or from the oil (1 to 4 drops) are approved for internal use by the German Commission E for people with insomnia. Internal use of essential oils can be dangerous and should be done only with the supervision of a trained herbalist or healthcare professional.

Tart Cherry - 1–8 ounces up to BID for seven days. Tart cherries contain a small amount of the sleep-regulating hormone melatonin. In a double-blind trial, healthy young people took one ounce daily of a tart cherry juice concentrate, estimated to contain the equivalent of 90-100 tart cherries, for seven days, which resulted in increased urine levels of melatonin and improvement in several measures of sleep quality. In a double-blind study of older people with insomnia, drinking eight ounces BID of a cherry-apple juice blend [note: ratio not given], estimated to be equivalent to 100 cherries per day, for seven days resulted in small improvements in some measures of sleep quality.

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