

# Finally, Some Shut Eye

## Naturopathic Treatments for Insomnia and Sleep Disturbance



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### Insomnia and Sleep Disturbance

Most people, at some point or another, have experienced poor sleep; feeling too warm, tossing and turning before a big event, thoughts buzzing through the mind after an argument with a loved one, or maybe restless legs. Sleep issues can present in a number of different ways and can be the result of a number of different, sometimes compounded, underlying factors. Although poor sleep has been associated with a number of health concerns, at the very least, it compromises our mood, energy, focus, and performance.

Insomnia is generally described as a disturbance to initiating or maintaining sleep, and may include restlessness and/or nonrestorative sleep. This sleep disturbance occurs despite sufficient opportunity for sleep, and is associated with distress and/or impaired daytime functioning.<sup>[1]</sup>

Insomnia can be categorized as transient or persistent, and can be caused by the following of factors:<sup>[1]</sup>

- › Transient
  - Stress
  - Illness
  - Travel (time-zone changes)
  - Ambient/environmental factors (temperature, noise, light, sleeping partner, etc.)
- » Persistent
  - Primary insomnia (not related to other medical disorder or substance/medication use)
  - Mood disorders (anxiety, depression, PTSD, mania, etc.)
  - Breathing disorders (sleep apnea, increased upper airway resistance, etc.)
  - Circadian rhythm disorders (shift work, jet lag, delayed sleep phase, advanced sleep phase, etc.)
  - Substance abuse (drug, alcohol)
  - Restless legs syndrome

- Neurodegenerative disorders (Alzheimer's disease, Parkinson's disease, etc.)
- Medical (pain, acid reflux, urination at night, shortness of breath upon laying down, etc.)
- Medications (antidepressants, antihypertensives, nicotine, stimulants [amphetamines, methylphenidate, caffeine, cocaine, decongestants, appetite suppressants, bronchodilators], corticosteroids, anticonvulsants, levodopa, quinidine, hormones)

Before effective treatment can be initiated, an assessment needs to be carried out to identify the underlying root cause. This will generally include a medical history, sleep diary, questionnaires, laboratory tests, and potentially polysomnography (sleep study for those with suspected sleep-related breathing or movement disorders).<sup>[1]</sup>

Once the assessment is complete, patients may be offered conventional treatments, which include:<sup>[1][2]</sup>

- » Medications
  - Benzodiazepines
    - › Effective, but concern of daytime drowsiness or developing tolerance (decreased effect over time), dependence, and withdrawal symptoms in long-term use (over several weeks)
  - Zopiclone
    - › Effective, with less tolerance, dependence, and daytime drowsiness than benzodiazepines; risk of suicidal ideation, aggression, and worsening of preexisting depression
  - Antihistamines
  - Sedating antidepressants
- » Nonpharmacological
  - Sleep hygiene
  - Relaxation techniques
  - Sleep restriction
  - Sleep diary
  - Increased aerobic exercise (not late in evening or night)
  - Cognitive behaviour therapy for insomnia
- » Modifying disruptive behaviours, medication use, and/or substance use
- » Treating underlying medical conditions that may be contributing to sleep disturbance

Many of the conventional pharmacological treatments can be very effective for short-term benefit. Unfortunately, they are also accompanied with side-effect risks that are less than desirable and make it challenging for them to be used long-term. Additionally, the nonpharmacological treatments can be particularly helpful as long-term strategies, but

do not necessarily impart an immediate effect (as they require changes to behaviour).

This is where new research and understanding into integrative herbal and nutraceutical alternatives for acute and lasting relief is gaining attention. Some of these treatment considerations will be explored below, but it is important to remember that just because a supplement is considered “natural” does not mean it is inherently safe. Some herbs and nutrients are contraindicated in certain medical conditions, and/or may interact with medications. Always speak with your naturopathic doctor before taking any supplement.

## **Naturopathic Treatment Options for Sleep-Onset Insomnia**

When the primary concern is difficulty falling asleep, there are several treatment options.

### **Melatonin**

Exposure to light and darkness stimulates pathways that influence sleep/wake cycles. As you can imagine, exposure to light stimulates wakefulness, and the absence of light induces sleepiness. Melatonin is the key hormone that gets stimulated by the absence of light between 7 and 9 p.m., and stays elevated for around 12 hours until dawn, when levels decrease. As melatonin rises, we feel more tired and less alert, prompting the transition to sleep. Shifting time zones (jet lag), shift work, exposure to bright light, and hormonal irregularities are some of the reasons that melatonin cycles/levels may be off.

Melatonin, taken orally 30–60 minutes before bed, has been found to be most helpful in reducing the time to fall asleep in those with primary sleep-onset insomnia. Some people experience nightmares, morning grogginess, gastrointestinal issues, libido changes, and/or gynecomastia. Melatonin should not be used during pregnancy, and can interact with various medications.<sup>[3][4]</sup>

### **Passionflower**

Passionflower has traditionally been used as a calming and sedating agent for stress and anxiety. When passionflower extract was taken alone and in combination with a benzodiazepine, subjects from both groups experienced a significant reduction in anxiety after four weeks. The group taking both substances experienced a more rapid benefit (likely attributed to the rapid action of benzodiazepines), but the passionflower-only group experienced benefits shortly after and would be spared from potential complications of benzodiazepine use.<sup>[5]</sup> Based on these findings, in circumstances where stress and anxiety are impacting the ability to fall asleep (rumination, restlessness, etc.), passionflower may be a consideration.

Passionflower is typically consumed as a tea or a tincture, often used throughout the

day and/or before bed. It should not be used during pregnancy, and can interact with various medications.<sup>[6]</sup>

## **GABA/Valerian/Magnesium**

GABA is an inhibitory neurotransmitter with antianxiety and sedating effects. However, when taken by mouth, this supplement does not cross into the brain well and does not induce the desired response as well as taking supplements that increase the body's internal production of GABA or influence GABA receptors.<sup>[7]</sup>

Valerian is a traditional sleep aid, well-known for its off-putting smell. Valerian can influence GABA levels and reduces the time it takes to fall asleep. Studies have found that valerian use improved sleep quality by 1.4–1.8 times and reduced time to fall asleep by 14–17 minutes.<sup>[8][9]</sup> For best results, the dried herb or tincture should be taken two hours before bed. Safety in long-term use is unknown, and this substance should be avoided in pregnancy and lactation.<sup>[10]</sup>

Magnesium is a fundamental nutrient involved in a number of body processes. Like valerian, it also influences GABA levels and has been found to be beneficial in sleep-onset insomnia in elderly individuals.<sup>[11]</sup>

## **Other Substances**

There are numerous additional substances that have been traditionally used as sleep aids in sleep-onset insomnia, including lemon balm, L-theanine, 5-HTP (a precursor to serotonin), and chamomile. Many of these are found in combination products, as there may be a synergistic or complementary effect to using them together. Your naturopath will be able to match your case with the right remedy, or combination of herbs/nutrients, to maximize benefit and minimize risk.

## **Naturopathic Treatment Options for Sleep-Maintenance Insomnia**

Sleep-maintenance insomnia refers to difficulty staying asleep. This can be due to stress and the subsequent disruption to hormone regulation, pain, medical conditions, drug/substance use... and the list goes on.

There are several techniques that can be helpful in addressing sleep-maintenance insomnia. Cognitive behavioral therapy for insomnia uses a structured counseling protocol to identify and modify thought patterns and beliefs that are negatively impacting sleep. For example, some individuals who consider themselves to be poor sleepers have unrealistic views and expectations about the amount of sleep they need to function well. There are variations in the amount of sleep each person requires, and as we age, the amount of required sleep decreases. By reframing our perceptions about sleep

habits and requirements, stress and anxiety can be reduced, and effort can be directed to improving sleep quality without this barrier.<sup>[12][13]</sup>

Further, the use of a sleep diary and sleep restriction can be an effective strategy. This technique limits the time spent in bed to the amount of time actually spent sleeping. Initially, this causes mild sleep deprivation, but over time, the sleep time is extended by 15-minute intervals as sleep efficiency increases.<sup>[14]</sup>

Lastly, acupuncture has been found to be an effective treatment for insomnia, with minimal risk of adverse effects.<sup>[15]</sup> Your naturopathic doctor can personalize your acupuncture protocol based on your specific needs and goals, and can combine this therapy with other strategies.

## General Sleep-Supportive Considerations

We can all benefit from restful and restorative sleep. Here are a few simple and cost-effective strategies that can be done without supervision that everyone can incorporate for sound sleep:

- » Sleep Hygiene<sup>[16]</sup>
  - › Reduce caffeine, alcohol, and/or tobacco late in the day or evening
  - › Avoid heavy meals at night
  - › Increase daytime physical activity
  - › Increase daytime exposure to natural light
  - › Avoid daytime napping
  - › Create a bedtime ritual (take warm bath, listen to calming music, have a cup of calming tea, dim the lights, avoid screens, engage in relaxation techniques, etc.)
  - › Bedroom should be dark and cool
  - › Restrict bed to sleep and intercourse (avoid eating, watching TV, studying, etc.)
  - › Get out of bed if not asleep after 30 minutes and return when drowsy
  - › Maintain regular sleep and wake times
  - › Go to bed with calm and peaceful mind (resolve conflicts earlier in day)

Of particular importance is avoiding exposure to room light and backlit screens (TV, computer, phone, tablet, etc.) in the evening. Blue light emitted from these screens suppresses melatonin production, which compromises the sleep/wake cycle and can contribute to various diseases.<sup>[17]</sup> Additionally, this trend is also seen when exposed to standard room light as opposed to dim light.<sup>[18]</sup> These light sources make the brain think that it is daytime, and suppresses melatonin release to promote alertness. To remedy this, complete avoidance of electronic devices and dimming the lights in the

home at least two hours before bedtime would be ideal. However, for those of us glued to electronics, there are also apps (e.g. F.lux) and glasses that block blue light which show promise in preserving normal melatonin function.<sup>[19]</sup>

## Relaxation Techniques

Guided body scan, deep breathing, and visualization are some examples of relaxation techniques that can help the body reduce stress and tension and promote restorative sleep. A simple starting point is to engage in deep breathing (three seconds in through the nose, hold for three seconds, three seconds out through the mouth, repeated three times) as part of the bedtime ritual.<sup>[20]</sup>

As you can see, there are a number of causes and treatment approaches to sleep disturbance. Your naturopath will work with you to identify the cause(s) and implement the right strategy for you. In the meantime, sleep hygiene and relaxation techniques are a great start for the majority of us to get some shut eye.

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