Herbal Solutions For Short-Term Sleep Support

Sleep is essential for our overall health and wellbeing.[1,2] Getting enough sleep can help support healthy mood, cognitive and workplace performance, quality of life, healthy metabolism, immune system health and the healthy functioning of some body systems.[1,3] Conversely, inadequate sleep or poor quality sleep can affect our quality of life and have short-term effects, as well as increasing the risk of some chronic health conditions.[1,2] The Australian Institute of Health and Welfare (AIHW) estimates, however, that 66% of Australian adults have at least 1 sleep problem, while 48% have at least 2 sleep problems*.[1]

POTENTIAL CONTRIBUTING FACTORS THAT CAN INTERFERE WITH HEALTHY SLEEP PATTERNS INCLUDE:

Circadian Rhythm Dysregulation[4-6]

- Our circadian rhythm cycle is regulated by both cortisol and melatonin, with both hormones being influenced by light. During the day, light exposure results in production and release of cortisol and signals that generate alertness and that help keep us awake and active. Darkness on the other hand, signals the production and release of melatonin, which promotes sleep onset and keeps transmitting signals that help us to stay asleep through the night.
- Circadian rhythms thus align our sleep and wakefulness with day and night to create a stable cycle of restorative rest that enables increased daytime activity.
- Sleep-wake cycles can become disturbed and fall out of balance at times, for example with changing time zones, when doing shift work, or due to other factors that alter our sleep schedule.

Emotional Factors[3,7]

- Mild anxiety and nervous tension are commonly associated with sleep disturbances. Management of both conditions may help restore both healthy sleep patterns and support nervous system relaxation.
- Strong emotions such as anger or sadness before sleep can reduce sleep quality.
- Fear of not sleeping again, following a few nights of sleep difficulty, often perpetuates more disturbed sleep.
- Consistently high cortisol levels may interfere with the ability to both fall asleep and to stay asleep.

Environmental Factors[3,7]

- Changes to an individual's environment, such as a new partner, new house or sleeping in a hotel room can affect both the ability to fall asleep and to stay asleep.
- A disruptive environment can impair sleep, such as loud music, a snoring partner, noisy neighbours, a crying baby, mobile phone alerts, too much light or an uncomfortable or inconsistent room temperature.
- Being overstimulated prior to bed may delay sleep onset.

Physiological Factors[3,7,8]

- Pain and discomfort can affect sleep quality in some individuals.
- Hormonal changes or imbalances can interfere with sleep patterns in some individuals.
- A high BMI has been associated with an increased risk of sleep difficulties.
- Age-related sleep disturbances.
- Some other health conditions may also have an impact on healthy sleep patterns.

Alcohol, Caffeine, Drugs and Some Medications[3,7]

- Alcohol can cause sleep disturbances and impair sleep quality.
- Excess caffeine intake can impair the ability to fall asleep and sleep quality, especially if taken later in the day.
- Certain pharmaceutical medications, as well as recreational drugs, can impair normal sleep patterns.

Sleep Support Strategies:[2,3]

- Lifestyle and behavioural changes to support heathy sleep patterns.
- Regulation of light exposure to promote healthy sleep-wake cycles.
- Identify and reduce any factors that may be contributing to the sleep disturbances.
- Short-term use of supplements, if required, to support healthy sleep patterns.
- Some individuals may also need occasional use of pharmaceuticals.

Hops

Hops is used traditionally to induce sleep and to relieve disturbed and restless sleep. It is also used in traditional Western herbal medicine as a nervous system relaxant and to relieve symptoms of mild anxiety.[9-12]

The sedative and calming effects of hops are attributed mainly to alpha-bitter acids in the hops fruit (strobile).[9,10] Based on animal research data, hops appears to:

- Increase the activity of the neurotransmitter GABA which inhibits the CNS.[15]
- It also appears to increase GABA receptor function.[16,17] Activation of GABA receptors promotes sleep and is a primary mechanism of action for several pharmaceutical hypnotic drugs.[18]
- Hops may also exert a sleep-inducing effect via activation of melatonin receptors.[19]

Phytomelatonin

Phytomelatonin, a compound found naturally in plants such as alfalfa and chlorella, has several physiological properties and functions that support the health of the plant. These include regulation of plant growth, a modulatory effect on plant hormone levels, antioxidant activity, ability to ameliorate the effect of stress on the plant as well as influencing photosynthesis and plant defence mechanisms.[20-23]

Another important characteristic of phytomelatonin is that it responds to environmental light cues and co-ordinates the plant's biological clock. This has led to interest in the use of phytomelatonin as nutraceutical for human health.[20,21]

Human research suggests that ingestion of phytomelatonin-rich plants may help modulate sleep-circadian rhythms, support sleep quality and provide antioxidant activity.[20,21]

Some proprietary plant-based compounds are formulated to provide standardised amounts of phytomelatonin, to support healthy sleep patterns.[24,25]

**AIHW describes 'sleep problems' broadly, encompassing a wide range of sleeping difficulties and disturbances, including trouble falling asleep, waking frequently during the night, snoring and waking feeling unrefreshed, certain sleep-related health conditions, as well as daytime symptoms of poor sleep such as sleepiness, fatigue, irritability or moodiness.[1]*

***References available on request.*