

Live well and live longer!

Insomnia

Definition

Insomnia is defined as the persistent difficulty or the inability to fall and/or stay asleep. This condition may have no apparent etiology, but is often a symptom of an underlying medical or psychological condition. Insomnia is generally not considered a disease, but rather a *symptom* of other pathologies (e.g., anxiety, depression or pain). Ongoing sleep impairment interferes with normal daytime function. The amount of sleep required by adults is slightly longer than 8 hours. Insomnia is classified as chronic if it persists for 4 weeks or longer.

There are two common types of insomnia:

- Delayed sleep onset (i.e., difficulty getting to sleep) – possibly associated with serotonin deficiency.
- Frequent awakenings and/or early morning arousal (i.e., difficulty staying asleep) – possibly associated with dopamine imbalances.

Aetiology / Risk Factors

Major causative factors and risk factors that can contribute to the incidence of insomnia in adults include the following:

- **Substance abuse:** caffeine, alcohol, recreational drugs, long-term sedative use, stimulants; nicotine can cause restlessness, while quitting smoking can cause transient insomnia.
- **Disruption of circadian rhythms:** shift work; travel across time zones; visual loss; circadian rhythms—regulated, in part, by release of endogenous melatonin. Teenage insomnia is for the most part considered to be a disruption in circadian rhythms caused by hormone changes.
- **Menopause:** insomnia is present in 30-40% of menopausal women. It may be due to hot flashes and night sweats, anxiety, and/or change in progesterone levels.
- **Hormonal fluctuations:** hypercortisolaemia; hyperthyroidism; hypoprogesteronaemia – progesterone promotes sleep.

- **Advanced age:** normal decrease in depth, length, and continuity of sleep. Many factors are responsible for age-related insomnia, including the biological changes of ageing, existence of underlying medical conditions, increased sensitivity to environmental factors, more medications leading to greater potential for side effects, neurologic disorders that may cause confusion and disorientation, increased likelihood of depression, anxiety, and grief.
- **Medical conditions:** gastro-oesophageal reflux disease, fibromyalgia and other chronic pain syndromes, hyperthyroidism, arthritis, heart disease, attention deficit hyperactivity disorder, obstructive sleep apnoea.
- **Psychiatric and neurologic disorders:** stress, anxiety, depression, bipolar disorder, dementia, Parkinson's disease, restless leg syndrome, post traumatic stress disorder.
- **Certain medications:** decongestants and bronchodilators, and beta-blockers may lead to a variety of sleep disorders including mild, transient insomnia.
- **Other:** high fat diet, lack of exercise, food sensitivities and blood sugar disorders have all been linked to insomnia.

Symptoms & Signs

The consequences of lack of sleep, particularly when prolonged, include:

- Decreased concentration
- Diminished memory
- Impaired task performance
- Less enjoyment of activities and social interaction
- Increased likelihood of alcohol and other substance abuse
- Headaches
- Irritability
- Mood disorders
- Dissatisfying sleep or not feeling refreshed in the morning: patients may also report not being able to sleep despite feeling tired.
- Daytime drowsiness and impaired functioning
- Anticipatory anxiety; insomnia can become a vicious cycle with bed and bedtime coming to represent restlessness and anxiety.

Diet and Lifestyle

Dietary and lifestyle guidelines may assist in the management of insomnia:

- Cognitive-behavioural therapies and other mind/body techniques such as relaxation and biofeedback are the treatments of choice for chronic insomnia.
- Acupuncture and acupressure have been shown to help resolve insomnia.
- Timed exposures to bright light can change the sleep-wake cycle and may be beneficial for treating circadian rhythm sleep disorders such as delayed sleep phase syndrome, jet lag, and sleeplessness caused by night shift work.
- Exposure to late afternoon sun, which stimulates release of endogenous melatonin: melatonin does not induce sleep but it does help regulate the circadian rhythm.
- Avoid caffeine (especially after noon).
- Practice of stress reduction techniques such as yoga, meditation, or deep relaxation.
- Limiting the use of nicotine, and alcohol.
- Maintaining consistent bedtimes and wake-times, including on weekends and vacations.
- Establishing the bedroom as a place for sleep and sexual activity only, not reading, watching television, working, or other activities.
- Avoiding naps, particularly in the evening.
- Exercising regularly, which can help regulate circadian rhythms, preferably performed prior to dinner: exercising too close to bedtime may worsen insomnia.
- Taking a hot bath 1-2 hours prior to bed; this affects core temperature and may induce sleep.
- Keeping the bedroom cool, well-ventilated, quiet and dark.
- Avoiding looking at the clock, which promotes anxiety.
- Avoiding fluids prior to bed.
- Do not watch television just prior to bedtime.
- Get up if sleep does not occur within the first 15-30 minutes in bed. Go into another room with dim lighting (again, avoiding television).
- Eliminate inflammatory foods such as refined foods, sugar, saturated fats (meat and dairy products), alcohol, and caffeine.
- Eat whole foods such as vegetables, whole grains, fruits, protein, and essential fatty acids (cold-water fish, nuts, and seeds).