CENTRE FOR SLEEP™
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the science of sleep
...for the art of living.

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INSOMNIA

INTRODUCTION

Insomnia is the most common sleep disorder and while 10% of Canadians suffer from this, it typically remains untreated. It can be due to many factors - both psychological and physiological. Insomnia may exist on its own (primary insomnia) or, most commonly, with other medical and psychiatric disorders (comorbid). A key indicator for insomnia is daytime fatigue NOT sleepiness. Sleep physicians and behavioural sleep specialists are the most qualified to treat insomnia because of their training in sleep disorders and the science of sleep.

Acute Insomnia

Acute insomnia is a brief episode of sleep difficulty and is almost always related to an acute trigger which usually resolves. However, acute insomnia is a risk factor for chronic insomnia, so it needs to be monitored. Sometimes judicious use of sedatives if necessary and appropriate.

Chronic Insomnia

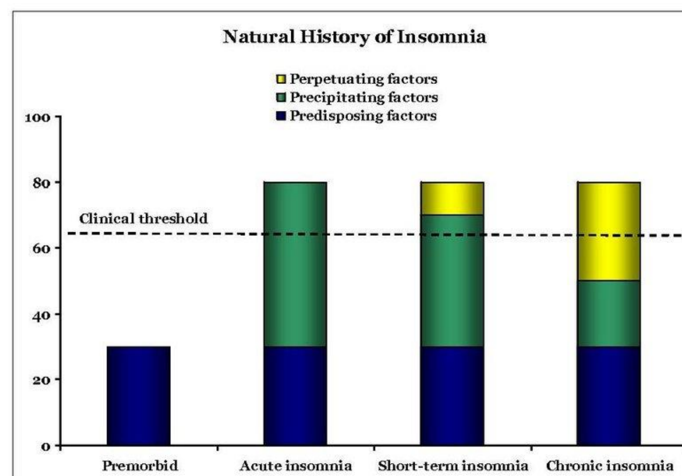
Chronic insomnia has a negative impact on health, quality of life, and healthcare burden and has been associated with anxiety, depression, high blood pressure, diabetes, and chronic pain. It is defined as follows:

- Difficulty initiating and maintaining sleep or early morning awakening with inability to return to sleep despite adequate opportunity for sleep.
- Concern about or dissatisfaction with sleep,
- Associated distress or daytime functioning impairment:
    - Poor concentration and memory.
    - Decreased mood; Irritability, reduced motivation.
    - Muscle pain, headaches, and stomach/digestive problems.
    - Fatigue, “tired but wired”.
- Lasts **3 or more months** for **at least 3 nights per week** and is not better explained by another sleep disorder.

SPIELMAN’S 3P MODEL OF INSOMNIA

Three factors are involved in insomnia: predisposing factors, precipitating factors, and perpetuating factors. Effective management of chronic insomnia must directly target both **predisposing and perpetuating factors**.

The figure below adapted from Spielman & Glovinsky, 1991 shows how acute insomnia can turn into chronic insomnia.



Reference: Charles M. Morin and Geneviève Belleville (2008), Scholarpedia, 3(4):3314.

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Predisposing Factors

We are all vulnerable to developing insomnia depending our "predisposing factors". Different factors may trigger insomnia, even among those with little vulnerability. The following psychological or biological characteristics make us more susceptible to sleep difficulties. These factors do not cause insomnia, but they do increase the risk of developing sleep problems.

- **Being female**
- **Perfectionistic tendencies**
- **Higher core body temperature**
- **Hyperarousal:** an abnormal state of increased responsiveness to stimuli that is marked by various physiological and psychological symptoms, i.e. increased alertness and anxiety, elevated heart rate and respiration.

Precipitating Factors

These are stressful life events and medical, environmental, or psychological factors that can trigger insomnia, **e.g. divorce, death of a loved one, illness, surgery, medication, and family or job stress.** Once the initial "event" fades away, most people return to normal sleep.

Perpetuating Factors

For those at greater risk for insomnia, sleep problems can continue even after the initial stressful event has been resolved. For these people, insomnia takes on a "life of its own" and several psychological and behavioural factors contribute to perpetuate the sleep problems over time. **To cope with sleeplessness, these behaviours include spending too much time in bed, "trying" to sleep, napping for too long or too close to bedtime, hyper-focusing on a fear of sleeplessness, or worrying about daytime performance.** Although some of these maladaptive behaviours can help in the short-term, in the long run, they have the opposite effect and they tend to maintain or worsen our sleep problems. The importance of events that triggered the insomnia and factors that perpetuate insomnia may change over time; the initial trigger may become irrelevant as the months go by and a person's "conditioned hyperarousal" plays a more important role.

COGNITIVE BEHAVIOURAL THERAPY FOR INSOMNIA (CBT-I)

Cognitive behavioral therapy (CBT-I) is the most effective first-line treatment for chronic insomnia. It is also an excellent alternative for patients who wish to taper off or reduce their sleep medication. This therapy guides patients to identify and replace thoughts and behaviors that contribute to insomnia with effective strategies that optimize sleep, help re-gain confidence in sleeping, and to re-frame trouble sleeping in a constructive way. CBT-I addresses three factors that contribute to chronic insomnia:

- Overall **emotional, physiologic and conditioned hyperarousal** and their underlying factors present throughout the 24-hour sleep/wake period.
- **Maladaptive habits** that were aimed to improve insomnia but have become ineffective.
- **Sleep related worry** and other causes of increased arousal.

REFERENCES

National Institute of Health
Canadian sleep society

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