Insomnia

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"No wonder you have insomnia ... lying there awake all night."
Overview

- Definition
- Further breakdown in the classification of insomnia
- Prevalence
- When to order a polysomnogram
- Treatment
- New research and how it will affect you
Several definitions

- Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV).
- International Classification of Diseases, 10th edition (ICD-10).
- International Classification of Sleep Disorders (ICSD).
DSM-IV criteria

- Difficulty initiating or maintaining sleep, or suffering from nonrestorative sleep, for at least 1 month.
- Sleep disturbance (or associated daytime fatigue) causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- Cannot occur exclusively during the course of narcolepsy, breathing-related sleep disorder, circadian rhythm sleep disorder, or a parasomnia.
- Cannot occur exclusively during the course of another mental disorder (eg, major depressive disorder, generalized anxiety disorder, a delirium).
- The disturbance not be due to the direct physiological effects of a substance (eg, drug abuse, medication) or a general medical condition. (1)
ICD 10 definition

- A condition of unsatisfactory quantity and/or quality of sleep
- Persists for a considerable period of time,
- including difficulty falling asleep, difficulty staying asleep, or early final wakening.
- Insomnia is a common symptom of many mental and physical disorders, and should be classified here in addition to the basic disorder only if it dominates the clinical picture. (2)
ICSD-2 General Criteria for Insomnia

- A complaint of difficulty initiating sleep, difficulty maintaining sleep, or waking up too early or sleep that is chronically un-restorativ e or poor in quality. In children, the sleep difficulty is often reported by the caretaker and may consist of observed bedtime resistance or inability to sleep independently.
- The above sleep difficulty occurs despite adequate opportunity and circumstances for sleep.

- At least one of the following forms of daytime impairment related to the nighttime sleep difficulty is reported by the patient: fatigue or malaise; attention, concentration, or memory impairment; social or vocational dysfunction or poor school performance; mood disturbance or irritability; daytime sleepiness; motivation, energy, or initiative reduction; proneness for errors or accidents at work or while driving; tension, headaches, or gastrointestinal symptoms in response to sleep loss; concerns or worries about sleep. (3)
ICSD-2 Insomnia Categories

- Adjustment insomnia (acute insomnia)
- Psychophysiological insomnia
- Paradoxical insomnia
ICSD-2 Insomnia Categories

- Idiopathic insomnia
- Insomnia due to mental disorder
- Inadequate sleep hygiene
ICSD-2 Insomnia Categories

- Behavioral insomnia of childhood
- Insomnia due to drug or substance
- Insomnia due to medical condition
ICSD-2 Insomnia Categories

- Insomnia not due to substance or known physiological conditions, unspecified (Nonorganic insomnia NOS)

- Physiological (organic) insomnia, unspecified (3)
Prevalence

- 10-40% depending on definition (4)
Risk Factors

- Female sex
- Advanced age
- Depressed mood
- Snoring
- Low levels of physical activity
- Comorbid medical conditions
- Nocturnal micturation
- Regular hypnotic use
- Onset of menses
- Previous insomnia complaints
- High level of perceived stress (4)
Cost of Insomnia

- The total annual cost of insomnia in the province of Quebec was estimated at $6.6 billion (Cdn$).
- Direct costs associated with insomnia-motivated health-care consultations ($191.2 million) and transportation for these consultations ($36.6 million),
- Prescription medications ($16.5 million),
- Over the-counter products ($1.8 million)
- Alcohol used as a sleep aid ($339.8 million).
- Annual indirect costs associated with insomnia-related absenteeism were estimated at $970.6 million, with insomnia-related productivity losses estimated at $5.0 billion. (5)
Cost of Insomnia

- The average annual per-person costs (direct and indirect combined) were $5,010 for individuals with insomnia syndrome.
- $1,431 for individuals presenting with symptoms.
- $421 for good sleepers. (5)
Pathophysiology

- Thought to be a state of hyperarousal
Pathophysiology

- Higher rates of depression and anxiety (6)
- Higher scores on scales of arousal (7)
- Increased 24-hour metabolic rates (8)
- More encephalographic beta activity (9)
- Increased global glucose consumption during the transition from waking to sleep onset, on positron emission tomography of the brain (10)
Spielman’s 3P Model of Insomnia

- Predisposing factors
- Precipitating factors
- Perpetuating factors
Predisposing factors

- Some psychological or biological characteristics increase vulnerability, or predisposition, to sleep difficulties.
- These factors are not a direct cause of insomnia, but they increase the risk that an individual will develop sleep difficulties.
Precipitating factors

- These are the life events and the medical, environmental or psychological factors that trigger insomnia

- divorce, death of a significant other, illness, medication, familial or occupational stress
Perpetuating factors

- These elements maintain or exacerbate sleep difficulties.
- They are typically behaviors (e.g., extending time spend in bed to try to sleep more, naps) and/or beliefs and thoughts (fear of sleeplessness, excessive worries about daytime consequences) that people adopt in order to cope with sleeplessness.
- Although some of these behaviors (bed resting) can be useful in the short term, in the long run they have the opposite effect and tend to perpetuate insomnia.
Natural History of Insomnia

When to order polysomnogram?

- Polysomnography and daytime multiple sleep latency testing (MSLT) are not indicated in the routine evaluation of chronic insomnia, including insomnia due to psychiatric or neuropsychiatric disorders. (Standard)

- Polysomnography is indicated when there is reasonable clinical suspicion of breathing (sleep apnea) or movement disorders, when initial diagnosis is uncertain, treatment fails (behavioral or pharmacologic), or precipitous arousals occur with violent or injurious behavior. (Guideline) (11)
Treatment

Regardless of the therapy type, primary treatment goals are:

- to improve sleep quality and quantity
- to improve insomnia related daytime impairments.
Psychological and behavioral interventions are effective and recommended in the treatment of chronic primary and comorbid (secondary) insomnia. (Standard)

- These treatments are effective for adults of all ages, including older adults, and chronic hypnotic users. (Standard)
- These treatments should be utilized as an initial intervention when appropriate and when conditions permit. (Consensus) (11)
Initial approaches to treatment should include at least one behavioral intervention:

- stimulus control therapy
- relaxation therapy
- the combination of cognitive therapy, stimulus control therapy, sleep restriction therapy with or without relaxation therapy—otherwise known as cognitive behavioral therapy for insomnia (CBT-I). (Standard) (11)
Sleep Hygiene

Although all patients with chronic insomnia should adhere to rules of good sleep hygiene, there is insufficient evidence to indicate that sleep hygiene alone is effective in the treatment of chronic insomnia. It should be used in combination with other therapies. (Consensus)
Short-term hypnotic treatment should be supplemented with behavioral and cognitive therapies when possible. (Consensus) (11)
What to use?

- Short-intermediate acting benzodiazepine receptor agonists (BZD or newer BzRAs) or ramelteon: examples include zolpidem, eszopiclone, zaleplon, and temazepam
- Alternate short-intermediate acting BzRAs or ramelteon if the initial agent has been unsuccessful
- Sedating antidepressants, especially when used in conjunction with treating comorbid depression/anxiety: examples of these include trazodone, amitriptyline, doxepin, and mirtazapine
- Combined BzRA or ramelteon and sedating antidepressant
- Other sedating agents: examples include anti-epilepsy medications (gabapentin, tiagabine) and atypical antipsychotics (quetiapine and olanzapine)
  - These medications may only be suitable for patients with comorbid insomnia who may benefit from the primary action of these drugs as well as from the sedating effect. (11)
What does the future hold?

- Sleep retraining
Intensive Sleep Retraining

- 79 volunteers
- Randomized to Intensive Sleep Retraining
- Stimulus Control Therapy
- Both
- Sleep Hygiene
Protocol

- Restrict time in bed to 5 hours night prior
- Arrived at 21:00
- Treatment began at 22:30
- Given 50 half hour opportunities to fall asleep
- Completed Stanford Sleepiness Scale
- Given 20 minutes to sleep
- Allowed to sleep for 3 minutes
- Rated their perception of sleep
- Informed if sleep was obtained
Results
Summary

- You are on the front lines
- The things you do make a huge difference
- You may see more insomnia in the future

I'm being unable to sleep during the meetings
References


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References


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