

Review Article

An Overview of Insomnia

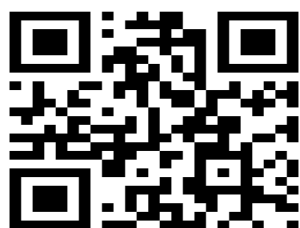
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ABSTRACT

Adequate quality sleep is essential for good health and quality of life. Nevertheless, the prevalence of insomnia disorder, which can be acute (short-term) or chronic, is increasing globally. This article provides an overview of insomnia and its management. The main causes of and risk factors for insomnia are described, and the criteria for making an accurate diagnosis. The management of insomnia, which is commonly a combination of cognitive behavioral therapy and non pharmacological treatment, is discussed as well as the important role physician can play, not only in the management of insomnia but also in identifying the underlying cause/s of sleep disturbances.

Keywords: Insomnia, homoeopathy, management, underlying cause



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INTRODUCTION

Sleep is an essential biological function, which is crucial for neural development, learning and memory, emotional regulation, cardiovascular and metabolic function, as well as cellular toxin removal.

Quality sleep is necessary for good health and overall quality of life.

Studies have shown that sleep deprivation and circadian clock disruption may lead to altered immune function as well as an increased risk for cardiovascular disease and metabolic disorders such as weight gain, insulin resistance and diabetes.

An increase in the prevalence of insomnia and other sleep disorders, which, in practice, are often under diagnosed and undertreated, is a global concern.

The aim of the present article is understanding the utility of Insomnia for selection of Similimum.

Definition and types of insomnia

Insomnia is defined as difficulties initiating or maintaining sleep, or early morning awakening, associated with impaired daytime functioning, for example, reduced cognitive performance, fatigue or mood disturbances.

The Third Edition of the International Classification of Sleep Disorders (ICSD-3) identifies three distinct types of insomnia namely short-term insomnia, chronic insomnia, and other insomnia (when the patient has insomnia symptoms but does not meet the criteria for the other two types of insomnia).

Unlike prior editions of the ICSD, the ICSD-3 classification system no longer contains psycho physiological insomnia, idiopathic insomnia, inadequate sleep hygiene and paradoxical insomnia as sub-classifications

because they were deemed to be unreliable in terms of reproducibility in clinical practice.

Epidemiology

Insomnia is a widely prevalent condition that can affect anyone, including children, adults and the elderly.

Approximately one third of the adult population occasionally report sleep problems and 6–10% report symptoms that meet the diagnostic criteria for insomnia disorder.

Insomnia is more prevalent among women, middle-aged and older adults, and individuals with poor physical or psychological health.

Approximately 50% of women experience insomnia as a result of hot flushes and night sweats due to menopause.

There is also a higher prevalence of insomnia among those who are unemployed, disabled, divorced, widowed, separated, or persons of lower socioeconomic status and those working irregular shifts.

Insomnia co-morbid with a psychiatric disorder is the most common diagnosis for patients with insomnia, occurring in approximately 3% of the general population. Insomnia co-morbid with substance abuse is estimated to occur in about 0.2% of the general population, while insomnia co-morbid with a medical condition occurs in about 0.5% of people.

The prevalence of insomnia is inconsistently reported in the scientific literature, due to different perceptions of insomnia and its treatment amongst patients and clinicians.

Patients generally describe insomnia in terms of its daytime impairments extending the experience beyond night-time sleep difficulties.

On the contrary, clinicians tend to place emphasis on the quantitative descriptors of insomnia, standard diagnostic criteria and subsequent medical treatment, rather than on the patient's qualitative description and subjective experience of insomnia.

Main Causes and Risk Factors

Risk factors for developing insomnia include a previous episode of insomnia, a family history of insomnia and predisposition toward being more easily aroused from sleep.

Environmental causes of insomnia include noise, temperature; light, electronic devices and uncomfortable sleeping positions.⁹ Substance abuse and dependence on cocaine, alcohol, nicotine and caffeine contribute to insomnia.

Aging is one of the most significant factors associated with changes in sleep.

Insomnia is prevalent in pregnant women possibly due to discomfort, depression and other pregnancy-related complications.

Medical conditions e.g. cancer, gastrointestinal problems, respiratory conditions, cardiovascular disease, neurological diseases and certain medicines used in the management of these conditions can impair sleep, leading to insomnia.

Clinical Features and Diagnosis

Diagnosis of Insomnia

Insomnia is an important public health problem that requires accurate diagnosis and effective treatment.¹⁹ Insomnia is primarily a clinical diagnosis and is most frequently diagnosed using data obtained from patient histories and sleep diaries. The ICSD-3 is the most widely used classification system for sleep disorders, with diagnostic criteria for insomnia disorder summarised in following.

To meet the diagnostic criteria for chronic insomnia disorder, the patient should have symptoms at least three times per week over duration of three or more months.

A diagnosis of short-term insomnia must meet the same criteria as chronic insomnia except that the symptoms have been present for less than three months.

Short-term insomnia is often aggravated by stressful situations and is therefore usually resolved when the underlying cause is resolved or when the patient develops coping mechanisms.

However, in some cases this may evolve into chronic insomnia.

The classification referred to as 'other insomnia disorder' includes patients who complain of the typical insomnia features but do not meet the full criteria for either chronic insomnia disorder or short term insomnia disorder.

Diagnosis Criteria for Insomnia Disorder

The following criteria (A–F) must be met for the diagnosis of insomnia Disorder:

A. The patient reports, or the patient's parent or caregiver observes one or more of the following:

1. Difficulty initiating sleep
2. Difficulty maintaining sleep
3. Waking up earlier than desired
4. Resistance to going to bed on appropriate schedule
5. Difficulty sleeping without parent or caregiver intervention

B. The patient reports, or the patient's parent or caregiver observes, one or more of the following related to the night-time sleep difficulty:

1. Fatigue/malaise
2. Attention, concentration or memory impairment
3. Impaired social, family, occupational or academic performance
4. Mood disturbance/irritability
5. Daytime sleepiness
6. Behavioral problems (e.g. hyperactivity, impulsivity, aggression)
7. Reduced motivation/energy/initiative
8. Proneness for errors/accidents
9. Concerns about or dissatisfaction with sleep

C. The reported sleep/wake complaints cannot be explained purely by inadequate opportunity (i.e. enough time is allotted for sleep) or inadequate circumstances (i.e. the environment is safe, dark, quiet and comfortable) for sleep.

D. The sleep disturbance and associated daytime symptoms occur at least three times per week.

E. The sleep disturbance and associated daytime symptoms have been present for at least three months.

F. The sleep/wake difficulty is not better explained by another sleep disorder.

Clinical features

The most common symptoms of insomnia are fatigue, irritability, social dysfunction, problems with concentration or memory, reduced motivation, aggression and worry about sleep leading to impaired daytime functioning and possibly accidents or errors. Complaints of headaches, gastrointestinal distress, anxiety and depression may often result in absenteeism, poor work ability and social isolation.

Patients with chronic insomnia frequently report a sense of reduced alertness and a desire for sleep, but inability to sleep and achieve the relief they seek.

Co-morbidities

Insomnia commonly coexists with psychiatric or medical disorders, other sleep disorders or use of certain medicines or substances.

Addressing and optimizing the management of an underlying medical, psychiatric or environmental condition often leads to an improvement in insomnia.

In some cases, treatment with cognitive behavioral therapy for insomnia has offered improvement to co-morbid conditions e.g. depression or chronic pain.

Examples of conditions and disorders that may coexist with insomnia are shown in Table1.

Common co-morbid conditions and disorders associated with Insomnia	
Types of condition	Examples of condition or disorders
Cardiovascular	Angina, congestive heart failure, dysrhythmias
Endocrine	Diabetes mellitus, hyperthyroidism, hypothyroidism
Renal and urinary	Incontinence, nocturia, enuresis, chronic kidney disorders
Psychiatric	Depression, generalised anxiety disorder, panic disorder, post-traumatic stress disorder, schizophrenia, Alzheimer's disease, attention-deficit hyperactivity disorder
Musculoskeletal	Rheumatoid arthritis, osteoarthritis, fibromyalgia
Neurological	Stroke, dementia, Parkinson's disease, seizure, headache, traumatic brain injury, peripheral neuropathy, chronic pain disorders, neuromuscular disorders
Reproductive	Pregnancy, menopause
Sleep	Sleep apnoea, restless legs syndrome, circadian rhythm sleep disorders, parasomnias
Other	Allergies, rhinitis, sinusitis, chronic obstructive pulmonary disorder

Management of insomnia

The goal of insomnia treatment includes improving the quality and quantity of sleep, reduction of distress and anxiety that occurs with insufficient sleep, as well as an improvement in daytime functioning.

A common approach to the management of insomnia is a combination of cognitive behavioral therapy.

In all patients, the cause/s of insomnia and possible coexisting disorders should be identified as part of the management strategy.

The choice of treatment for insomnia furthermore depends on the symptoms presented and their severity, the expected duration of treatment, accompanying disorders, the willingness of the patient to engage in behavioural therapies, and the vulnerability of the patient to any adverse effects of medication.

Non-pharmacological management: cognitive behavioral therapy

The non-pharmacological management of insomnia is considered the first-line therapy for patients in whom insomnia persists, and has been shown to be effective.

Cognitive behavioral therapy for insomnia improves sleep outcomes with minimal adverse effects and is preferred by patients to drug therapy.

Cognitive behavioral therapy addresses dysfunctional beliefs and behaviors that embed insomnia and is recommended for chronic insomnia, including those with comorbidities.

Therapy usually consists of six to eight individual or group sessions.

It is however associated with limitations that may include access difficulties as well as challenges with the availability of suitably qualified facilitators.

An alternative to face-to-face Cognitive behavioral therapy is internet-based Cognitive behavioral therapy, which may be effective.

Cognitive behavioral therapy components include sleep hygiene education, cognitive therapy, relaxation therapy, stimulus-control therapy and sleep restriction therapy.

Sleep diaries are usually kept throughout therapy, as they are useful for the patient and

the treating therapist to identify improvements.¹⁸ Research has shown that Cognitive behavioral therapy outperforms hypnotic medication and has fewer side effects.

It is important that when Cognitive behavioral therapy is used, it should be combined with appropriate management of underlying medical and psychiatric disorders, to maximize improvements in sleep.

Because Cognitive behavioural therapy is recommended as first-line therapy for insomnia, future challenges include increasing its awareness and access for patients. (Table 2)

Patient Counseling and the Role of the Physician

Insomnia affects the quality of life of patients and is often under diagnosed and undertreated in the practice environment.

Research evidence has shown the importance of considering the patient's subjective experience of insomnia, prior experience and perceptions of treatment options, when tailoring insomnia management interventions.

Physicians are in the ideal position to identify co-morbidities and medicines that are associated with, or may exacerbate, insomnia.

From a public health perspective, physician should also be concerned about how much sleep patients are getting per night, considering the increased risks of developing non-communicable diseases such as type-2 diabetes, cardiovascular diseases and cancers that accompany six or fewer hours of sleep per night.

Furthermore, physician can assist patients in identifying other causes of sleep disturbances, and provide counseling to help patients make informed choices regarding the management and treatment of insomnia.

A checklist for insomnia-producing behaviors, shown in following is a useful tool that can be used by the physician to identify underlying causes of insomnia.

Changing any behavior confirmed on the checklist, should be the first step in terms of addressing the patient's sleep disorder.

Components of cognitive behavioral therapy for Insomnia	
Intervention	Implementation
Sleep hygiene	<p>Recommendations to improve sleep hygiene include the following:</p> <ul style="list-style-type: none"> • Reduce alcohol, nicotine and caffeine intake and avoid, especially four to six hours before bedtime. Caffeine and nicotine are stimulants. • Alcohol disrupts sleep due to processing of the alcohol. • Avoid rich or fatty foods close to bedtime, as well as spicy, carbonated and citrus foods. • Avoid extreme temperatures and noise. • Bedroom should be well ventilated, quiet and dark. • Exercise regularly but not close to bedtime. • Drinking large volumes of fluids should be avoided before bedtime to avoid interruptions due to the need for restroom use. • Use dim nightlights in bathroom as bright light can make it difficult to go back to sleep. • Remove bedroom clock from sight.
Stimulus control	<p>Stimulus control may be achieved by application of the following measures:</p> <ul style="list-style-type: none"> • Establish a regular sleep timetable and go to bed only when feeling sleepy. • Get out of bed if unable to sleep. • Daytime naps should be avoided. • Use the bed only for sleep and intimacy; avoid reading and television watching in bed.
Relaxation techniques	Relaxation techniques involve progressive muscle relaxation to decrease somatic tension.
Sleep restriction	Sleep restriction involves limiting the amount of time spent in bed to the actual time spent sleeping.
Paradoxical intention	This technique is suitable for sleep-initiation insomnia. The patient is advised to remain passively awake with the aim of eliminating anxiety to perform.
Cognitive therapy	Cognitive therapy is directed towards anxiety. Insomnia-related concerns increase insomnia, causing excitation and further exacerbate sleep problems. Changing negative thoughts can reduce concerns about the lack of sleep and break the vicious circle leading to excitation and insomnia.

A sleep diary can help patients to keep track of their morning and end-of-day activities to record the time it takes to fall asleep, how many times they wake up at night, and how they felt when they woke up.

The sleep diary can also be used to record other activities e.g. exercise, caffeine and medication intake, and when the patient had supper.

Once the underlying cause/s of insomnia has been identified, physician can play a very important role in setting treatment goals and suggesting non-pharmacological measures to address sleep disturbances and improve sleep patterns.

Patients with co-morbid conditions such as

anxiety or depression may require special considerations with respect to pharmacological management.

Those on antidepressants should be counseled about the duration it might take for the antidepressants to have a full effect.

For all patients on pharmacological treatment for insomnia, whether prescription or non-prescription medicines, the physician should provide counseling on the potential adverse effects, drug interactions, contraindications, and special precautions.

Patients should always be advised to adhere to the recommended dosage, avoid the use of alcohol, and avoid driving or operating machinery until their response to the

treatment is known.

Checklist for Insomnia Producing Behaviors

Checklist for Insomnia producing behaviors	
Insomnia producing behaviors	Reason and explanation
Going to bed and getting up at a different time every day.	Establishing a regular schedule helps to regulate the body's inner clock.
Taking naps during the daytime or in the evenings.	Falling asleep in front of the television at 19h00 will make it more difficult to sleep later that night.
Drinking coffee, tea or soft drinks after 15h00 in the afternoon.	Many soft drinks, coffee and tea, contain caffeine, a powerful stimulant. Certain medicines also contain caffeine and should be avoided before bedtime.
Smoking cigarette, pipe or cigar before retiring.	The nicotine in tobacco is also a stimulant and can keep one awake.
Sleeping in a noisy bedroom.	If outside noise cannot be blocked, "cover" it with a familiar noise like the steady hum of a fan.
Sleeping in a room with a lot of light.	If street lights shine in the room, or if you must sleep during the day, buy special room-darkening shades.
Drinking alcohol in the evenings.	Although a glass of wine can be relaxing, too much alcohol will lead to disturbed sleep. Periods of wakefulness and/or nightmares might be experienced when the alcohol wears off during the night.
Getting into heated arguments with a partner or doing work or assignments right before bedtime.	Stirring up strong emotions or feeling stressed before bedtime will make it much more difficult to fall asleep. Instead, try watching a mindless TV show or reading a light novel.
Using electronic devices, such as a cell phone, for the purpose of bedtime reading.	Electronic devices can stimulate the brain to stay awake because of the light emission.
Using the bedroom for working or watching TV.	The bedroom should be associated with sleep.
Sharing a bed with a snoring, cover-stealing or restless partner.	If you do, make temporary sleeping arrangements until you establish a satisfactory sleep pattern.

CONCLUSION

In conclusion, the burden of insomnia is high and may have negative consequences on an individual's well-being.

Despite its high prevalence, insomnia remains an under diagnosed and undertreated condition.

Chronic insomnia has been associated with a higher risk of developing chronic diseases

and therefore the underlying causes should be identified and treated.

The management of insomnia includes pharmacological therapy, cognitive behavioural therapy and treating co-morbid conditions.

The main goal of therapy is to improve sleep quality and duration, improve daytime

function and reduce anxiety.

Depending on the severity of insomnia, cognitive behavioural therapy and pharmacological treatment selection of similimum medicine may be used individually or in combination, although behavioural therapy is usually recommended as initial therapy.

The patient's preferences and values should be considered when selecting treatment options similimum medicine.

Hypnotics should be used for the shortest possible period, at the lowest possible dose to avoid developing dependence and tolerance.

It is important for the physician to provide information and counseling on the treatment available for insomnia, as well as the side-effects patients may experience.

The physician can also play a role in identify underlying causes of insomnia and provide valuable advice that may help with improving sleep habits.

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