Treatment of chronic insomnia in adults

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Clinical question

What is the evidence-based approach for treating a patient with chronic insomnia, and what should I do if they use sedatives to treat chronic insomnia?

Bottom line

Chronic insomnia is prevalent among adults and can exert deleterious effects on a patient's physical, emotional, cognitive, and social well-being. Cognitive behavioural therapy for insomnia (CBT-I) is an effective but underused first-line treatment for chronic insomnia. Cognitive behavioural therapy for insomnia is effective both in person and remotely via telemedicine, apps, or the Internet. Despite guidelines recommending nonpharmacologic methods as the primary strategy to treat chronic insomnia, medications are frequently prioritized as first-line treatment. Patients often use sedatives to help them sleep; however, sedatives can cause harm including falls, hip fractures, cognitive deficits, dependency, and mortality from overdose. Clinicians should prioritize the use of CBT-I and initiate conversations about minimizing the use of sedatives for chronic insomnia.

Evidence

Scope and impact of chronic insomnia. Insomnia may manifest as 1 or more sleep disturbances, including difficulty initiating or maintaining sleep and early waking with difficulty falling asleep again. Insomnia is considered to be chronic if sleep concerns are present 3 or more times per week for 3 months or longer.[1] Individuals with chronic insomnia often have decreased quality of life, depressed mood, and decreased ability to function in the workplace and in society. Societal impacts of chronic insomnia include increased rates of disability and increased health care use.[2] Insomnia is one of the most common health concerns in Canada, with a prevalence of 18.1% in men and 29.5% in women.[3] The economic impact of insomnia is substantial, with $1.9 billion in direct costs in Canada in 2021 alone.[3]

Risk factors for insomnia include common chronic conditions such as chronic pain, heart failure, chronic obstructive pulmonary disease, and mental illness.[4-7] Successful sleep management can occur only with optimization of comorbid conditions that contribute to insomnia.

Cognitive behavioural therapy for insomnia. Nonpharmacologic approaches are evidence-based first-line therapy for treatment of chronic insomnia. Additionally, these approaches improve sleep profiles and reduce the need for potentially harmful sedative use. Cognitive behavioural therapy for insomnia is widely recognized as an effective nonpharmacologic option for the treatment of chronic insomnia. The 5 components of CBT-I are stimulus control, sleep restriction, cognitive therapy, sleep hygiene, and relaxation therapy. Although each component of CBT-I is effective for the treatment of chronic insomnia, larger and more sustained benefits are expected when components are combined.[8-10] A meta-analysis published in 2018 demonstrated that improvements in sleep measures occurred when at least 1 component of CBT-I was used, compared with placebo.[11]

Use of potentially inappropriate pharmacologic agents to treat insomnia. Despite several guidelines recommending nonpharmacologic methods (including cognitive behavioural therapy) for first-line treatment of chronic insomnia,[12-15] sedative medications are typically prioritized. In Canada 1 in 10 individuals 65 years and older use benzodiazepines on a regular basis.[16] Sedative medications available commercially include benzodiazepine receptor agonists (eg, zolpidem, zaleplon, eszopiclone), melatonin receptor agonists (eg, ramelteon), and dual orexin receptor antagonists (eg, suvorexant, lemborexant).[17] Numerous sedating medications are used off-label to treat insomnia (eg, diphenhydramine, quetiapine, trazodone).

Negative impact of pharmacologic agents. Potentially serious adverse effects of sedative medications have been well documented, including falls and hip fracture (adjusted odds ratio of 1.95, 95% CI 1.09 to 3.51), adverse psychomotor events (2.61 times more common compared with placebo; $P<.05$), adverse cognitive effects (odds ratio of 4.78, 95% CI 1.47 to 15.47; $P<.01$), physiologic dependence, and increased mortality (alcohol or sedatives are involved in 92% of opioid-related deaths).[17-20]

Owing to concerns about the increased use of sedatives and their numerous potential adverse effects,[19,21] many professional societies—including the Canadian International Chapter of the Society of Hospital Medicine, the Canadian Academy of Geriatric Psychiatry, the Canadian Geriatrics Society, the Canadian Pharmacists Association, the Canadian Society of Hospital Pharmacists, and the American Geriatrics Society—recommend that sedatives not be used as first-line treatment for insomnia.[22-27]

Approach

Recommend first-line therapy for chronic insomnia. Several professional societies (eg, the American College of Physicians, the British Association for Psychopharmacology, and the American Academy of Sleep Medicine) and

scientific guidelines (eg, the European Insomnia Guideline) endorse CBT-I as first-line treatment for chronic insomnia.[12-15] These guidelines explicitly recommend not using a pharmacologic approach when working with adults who have chronic insomnia. Guidelines prioritize CBT-I but also recommend other options such as biofeedback, relaxation training, stimulus control therapy, and multicomponent therapy. Clinicians may specifically prescribe nonpharmacologic treatment for insomnia.[28] Choosing Wisely Quebec has produced a "nonpharmacologic prescription pad" for insomnia, available in English and in French.[29]

Identify and optimize management of comorbid conditions contributing to insomnia. Clinicians should actively screen and treat patients for comorbid conditions contributing to insomnia such as delirium, infection, pain, heart failure, and exacerbation of chronic obstructive pulmonary disease. A detailed and careful medication review should also be conducted to identify medications that can contribute to poor sleep (**Table 1**). Any nonessential medication may be deprescribed or replaced with an alternative that does not impair sleep.

Acknowledge limitations of CBT-I. Despite the demonstrated efficacy of CBT-I for treatment of chronic insomnia, its widespread use has been limited by clinician, systemic, and patient barriers.[15] Some actions clinicians can take to reduce barriers to CBT-I use include enhancing their knowledge about the health consequences of chronic insomnia and inappropriate sedative use, learning about CBT-I modalities and efficacy, and recommending CBT-I to patients.

Systemic barriers can be reduced by improving access to CBT-I providers (eg, by increasing insurance coverage for this treatment modality) and by delivering CBT-I in a format that it is more easily accessible to patients (eg, Internet-based, telemedicine, virtual formats).

Barriers to receiving CBT-I can be reduced as patients gain familiarity with its precepts and its demonstrated efficacy. A patient's willingness to engage in CBT-I should increase as factors that affect their participation (eg, clinic hours, insurance coverage, availability of transportation, delivery format of CBT-I) are addressed appropriately. Patients need to be aware of the time commitment for CBT-I (ie, 8 to 12 weeks) and that results will not be seen immediately.

Implementation

The following steps may be considered to optimize evidence-based management of sleep while reducing or deprescribing potentially inappropriate sedative use.

Acknowledge the impact and effects of chronic insomnia. Clinicians should advise affected patients about insomnia's potential to adversely affect their health and the need to initiate effective evidence-based treatment.

Table 1. Medications that may affect sleep

MEDICATION CLASS	COMMON EXAMPLES
Anticholinergics	Dimenhydrinate, diphenhydramine, meclizine
Sedating antidepressants	Amitriptyline, desipramine, nortriptyline, paroxetine
Benzodiazepines	Alprazolam, lorazepam, oxazepam, temazepam
Benzodiazepine receptor agonist "z drugs"	Zopiclone, zolpidem
Diuretics	Furosemide, indapamide
Muscle relaxants	Baclofen, cyclobenzaprine
Opioids	Morphine, hydromorphone, codeine
Steroids	Dexamethasone, prednisone

Clinicians should inquire about patients' use of sedatives to treat insomnia.

Offer CBT-I as first-line treatment. All patients should be offered CBT-I as first-line treatment for chronic insomnia. Clinicians should explore barriers to successful CBT-I use, paying close attention to health system and patient factors. Ensuring equitable access to treatment and counselling patients to address concerns and set expectations will enable successful adoption of CBT-I strategies. Once CBT-I has been initiated, provide close monitoring such as check-in visits or telephone calls scheduled every 1 to 2 weeks to start (eg, over the first 4 weeks) to support adherence and efficacy.

Deprescribe sedatives. Given the numerous adverse effects of sedatives that have been documented, these medications should be used with caution for treatment of chronic insomnia. However, a small group of patients may require adjunct sedative use in addition to nonpharmacologic therapy following the adage "start low and taper fast." For select patients it may be appropriate to have a contract whereby you prescribe a sedative at a low dose for a limited duration with a clear plan for discontinuation. For patients who have been taking sedatives on a long-term basis, plan to initiate deprescribing conversations and address any underlying fears and concerns; a patient handout is available from Deprescribing.org.[30] These patients will need to taper off sedatives gradually with medical supervision to avoid withdrawal or worsening insomnia symptoms. A useful evidence-based guide for deprescribing sedatives was published in 2018 and its deprescribing algorithm is available as a separate handout from Deprescribing.org.[31,32]

Provide education materials. Offer patients educational materials about the health consequences of chronic insomnia and effective treatment methods.

Several evidence-based patient resources are available on the Sleepwell website, a not-for-profit initiative led by researchers at Dalhousie University in Halifax, NS.[33]

Follow up. Insomnia management requires an approach similar to chronic disease management. Frequent patient follow-up will help address sleep concerns affecting quality of life and any associated risk factors or contributors to the problem.

Conclusion

Nonpharmacologic approaches are recommended as first-line therapy for chronic insomnia, yet medications such as sedatives are often chosen as the primary treatment strategy by both clinicians and patients. Cognitive behavioural therapy for insomnia should be offered as first-line treatment for chronic insomnia. This article highlights considerations that may support CBT-I success as well as opportunities to minimize or avoid the use of sedatives and other medications that may be contributing to chronic insomnia.

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Competing interests
None declared

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Cet article se trouve aussi en français à la **page 179**.

Choosing Wisely Canada is a campaign designed to help clinicians and patients engage in conversations about unnecessary tests, treatments, and procedures and to help physicians and patients make smart and effective choices to ensure high-quality care is provided. To date there have been 13 family medicine recommendations, but many of the recommendations from other specialties are relevant to family medicine. Articles produced by Choosing Wisely Canada in *Canadian Family Physician* are on topics related to family practice where tools and strategies have been used to implement one of the recommendations and to engage in shared decision making with patients. If you are a primary care provider or trainee who has used Choosing Wisely recommendations or tools in your practice and you would like to share your experience, please contact us at **info@choosingwiselycanada.org**.