Insomnia ROUNDS

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# Treating Chronic Insomnia in Primary Care – Early Recognition and Management

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**Chronic insomnia – ie, insomnia of at least 1 month's duration – is a frequent problem in the primary-care office. Family physicians are best suited to identify the patient's insomnia and initiate early treatment. This issue of *Insomnia Rounds* outlines how to recognize and effectively treat chronic insomnia in adults.**

The family physician is the health professional who hears first about a patient's sleep difficulties. It is estimated that 52%-64% of primary-care patients have sleep complaints, and 10%-14% have severe insomnia that interferes with daytime functioning.[1,2] Insomnia tends not to resolve by itself,[3] and many people endure it for years without effective help. The consequences of persistent insomnia for the patient's quality of life, functioning, psychiatric risk, workplace disability, and healthcare utilization are considerable, as described by Morin in the first article in this series.[4] Primary care is the ideal place to treat insomnia when it occurs, and thereby prevent these sequelae.

## Defining Chronic Insomnia

Based on the main diagnostic classification systems,[5,6] the essential aspects of insomnia are: a complaint of difficulty initiating or maintaining sleep or nonrestorative sleep despite adequate opportunity for sleep, with associated distress or impairment of daytime functioning. "Chronic" insomnia applies to insomnia that has lasted at least 1 month.[5]

## Diagnosing Chronic Insomnia

### *Ask about sleep*

Routinely asking patients about their sleep is an ideal way to identify sleep problems in their early stages. This promotes recognition of the importance of sleep, allows for early treatment, and can identify some of the roughly 50% of people with persistent insomnia who do not report it to their healthcare provider.[7] Patients may be reluctant to report insomnia for various reasons, including the notion that the doctor would not attribute importance to it, or would merely prescribe sleeping pills.[8]

### *Identify insomnia*

Make sure that the sleep difficulty is, in fact, insomnia and not another condition presenting as insomnia. Similar sleep complaints can occur with: medications (eg, corticosteroids), a medical condition (eg, hyperthyroidism), or another sleep disorder (eg, restless legs syndrome, periodic limb movement disorder, sleep apnea, delayed phase sleep). Insomnia is usually accompanied by *fatigue*, not sleepiness. Patients who are sleepy are more likely to have a sleep disorder other than insomnia. Referral to a sleep laboratory is not appropriate for the investigation of insomnia, unless another sleep disorder is suspected.

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**Consider whether the sleep problem is likely due to a sleep disorder other than insomnia.** Inquire about situations in which the patient is likely to fall asleep during the daytime. If he/she rarely, or never, falls asleep during the day, this increases the diagnostic likelihood of insomnia. Easily falling asleep, or drifting off to sleep in inappropriate situations (eg, while eating, talking, or driving), suggests another sleep disorder.

### *Recognize comorbid insomnia*

Chronic insomnia can co-occur with anxiety, depression, other sleep disorders, and various medical conditions. An advance in the conceptualization of insomnia has been the shift away from the term "secondary insomnia" to the term "comorbid insomnia".[6,9] A key point is that comorbid insomnia requires early intervention, just as insomnia without comorbidities does. There is no need to postpone the insomnia treatment until the other condition has resolved. As described in the next section, the treatment of choice for chronic insomnia is cognitive behavioural therapy for insomnia (CBT-I). This treatment improves sleep for people with insomnia comorbid with various medical and psychiatric problems, including chronic pain, depression, cancer, heart disease and others.[10] CBT-I can also lead to improvements in some comorbid conditions, notably chronic pain and depression.[11,12]

**Designation of chronic insomnia as "primary" or "secondary" is no longer needed.** When it comes to insomnia in the presence of a medical or psychiatric condition, it is usually difficult to say which came first – the insomnia or the other condition – and they have reciprocal effects. The recommended treatment for chronic insomnia is the same regardless of comorbidities.

## Treating Chronic Insomnia

Unlike acute insomnia, chronic insomnia is likely to be sustained by factors that are distinct from the initial triggers for the sleep difficulty. Although stressful life events are usually present when insomnia begins, the pattern of hyperarousal and sleep difficulty are believed to be maintained by behavioural and cognitive factors. These factors are the focus of effective interventions to reverse chronic insomnia.

## Cognitive Behavioural Therapy for Insomnia

### *What is CBT-I?*

CBT-I, the recommended first-line treatment for chronic insomnia,[13-15] entails a set of strategies that patients learn in order to allow their biological sleep processes – homeostatic and circadian – to operate without interference. It involves restrictive scheduling of time in bed (sleep restriction therapy), associating the bed and bedroom with sleep (stimulus control therapy), and cognitive and behavioural techniques to allow de-arousal (relaxation techniques and sleep-specific cognitive therapy). Professionals who are trained in behavioural sleep medicine offer CBT-I in 1-on-1 or group sessions. These professionals usually are psychologists, but the techniques can be carried out by physicians, nurse-practitioners, nurses, and other health-care professionals. Randomized, controlled trials have shown that CBT-I is efficacious for adults, including elderly patients and patients with comorbid conditions.[16] Longitudinal studies (up to 2 years) show enduring benefit.[17] There are some patients for whom CBT-I is not realistic or appropriate, particularly those who are not well enough to carry out the procedures.

### *Can CBT-I be conducted in primary care?*

As shown in a Scottish study by Espie et al,[18] CBT-I is effective when delivered by nurses in family medicine centres. In Canada, family health teams, primary-care networks, and community health centres are ideal settings to provide CBT-I. Having a behavioural sleep medicine specialist on the team is ideal, but this is not always possible.

**CBT-I is *more than* sleep hygiene.** By the time insomnia becomes chronic, most patients are already closely following guidelines for good sleep hygiene (eg, avoiding caffeine, making the bedroom dark and the bed comfortable, and exercising but not too late in the day). This is not enough. Sleep hygiene, on its own, as a treatment for chronic insomnia is not supported by evidence.[14]

### *What if I cannot offer CBT-I?*

Family physicians can learn CBT-I, but they often do not have time to offer this in the office. In this case, it is reasonable to offer some brief behavioural advice that is based on the principles of CBT-I. In addition to providing these points in writing, it is best to offer some rationale so patients understand how it works, and to support the patient in trying these strategies, which appear simple but require some effort (Table 1).

In addition to this advice, a sleep diary can be useful (see the example of the "consensus sleep diary" in the first issue of *Insomnia Rounds*).[4] This allows patients to see how their sleep responds to these sleep strategies. It is helpful to have the patient complete a "baseline" sleep diary for a

**Table 1. Strategies from cognitive behavioural therapy for insomnia (CBT-I) and the rationale for their use**

| CBT-I Strategy | Rationale |
|---|---|
| Don't go to bed too early. Stay up late. | • Helps build up the homeostatic sleep drive, and counters the unproductive strategy of going to bed early in an attempt to gain more sleep |
| Keep a constant rise time 7 days a week, regardless of how little sleep you have had. | • Strengthens the circadian rhythm of sleep regulation |
| Your bed is for sleep. Get out of bed when not sleeping. Go to another room. Return when sleepy. | • Strengthens the association of the bed and bedroom with sleep and sleepiness |
| Do something with racing thoughts. Use relaxation techniques or visual imagery. | • Reduces hyperarousal and makes it easier for sleep to arrive<br>• Relaxation exercises should be done in the early evening, not in bed<br>• Visual imagery can be used in bed to take the mind away from worry or racing thoughts |

week. Examine the sleep diary for variation in bedtimes and rise times so you can tailor your advice on these points accordingly. Subsequent sleep diaries can then be compared to the baseline one.

You can help patients figure out an appropriate initial bedtime and rise time by first estimating how much sleep per night they are getting at baseline. Ask them to choose a representative night from their baseline sleep diary. For that night, estimate the total time in bed (time from bedtime to rise time) and subtract the time awake. This is an estimate of the time asleep; you then suggest that the patient be in bed for only this amount of time + 30 minutes ("initial sleep window"). Do not set this number below 5 hours. Patients choose a rise time that can be maintained 7 days a week and the bedtime is then set according to the initial sleep window. Send patients home with blank sleep diaries and the strategies above, and arrange a follow-up appointment in 1 week to review progress. Warn about possible excessive sleepiness that can occur in the early days of using this procedure and caution them against drowsy driving.

Between 2 and 4 follow-up appointments may be needed, with adjustment of the sleep window according to the patient's progress with sleep consolidation, or "sleep efficiency" (ie, time asleep as a percentage of time in bed). The rise time usually remains constant and the bedtime is adjusted earlier as sleep efficiency rises. Table 2 lists the conventional "prescription" guidelines for adjusting time in bed. Basically, as sleep becomes more solid, the sleep window is widened, usually by 15 minutes at a time. This continues until solid sleep is long enough to allow the patient to feel rested and to function well during the day. Once patients see their sleep improving, and feel confident with their ability to sleep well, they are usually motivated to maintain their good sleep through the use of these strategies, without further help.

## Pharmacotherapy

Pharmacotherapy is a treatment option for acute, situational insomnia. However, acute insomnia sometimes progresses to a chronic condition and the patient continues to rely on the medication. Although primary-care physicians are aware of the problems with the long-term use of benzodiazepine (BDZ) receptor agonists and encourage initiatives to reduce the need for them,[19] they are sometimes without alternatives. This section covers those medications that show some potential for use for insomnia that has become chronic, and strategies to help patients discontinue long-term hypnotic medication.

### *BDZ receptor agonists*

As discussed by MacFarlane,[20] the BDZ receptor agonists are currently the standard medications for insomnia. This group includes the traditional BDZs and the "Z-drugs": zopiclone (available for several years), zolpidem (recently available in a sublingual form), zaleplon (no longer available in Canada), and eszopiclone (not available in Canada). There is some debate about whether any BDZ receptor agonist should be used for more than 4 weeks. Outcome studies indicate continued efficacy of the Z-drugs, particularly eszopiclone, after 6 months of nightly use without physical dependence.[21]

An important issue with any BDZ receptor agonist is safety. Adverse events can include dizziness, drowsiness,

**Table 2. Prescribing adjustments to time in bed based on sleep efficiency**

| Sleep Efficiency | Adjustment to Bedtime |
|---|---|
| <85% | 15 minutes later |
| 85%–89% | No change |
| 90%–94% | 15 minutes earlier |
| ≥95% | 30 minutes earlier |

After the patient has restricted his/her time in bed to his/her initial sleep window for 1 week, the bedtime is adjusted based on the sleep efficiency attained.

amnesia, gastrointestinal symptoms, balance problems, and road accidents.[15] Such adverse events are especially likely with the long-acting BDZs. Serious safety concerns exist for older patients who take any type of BDZ receptor agonist. The associated cognitive and psychomotor impairment puts elderly patients at high risk of falls, ataxia, and memory problems. In a meta-analysis by Glass et al,[22] sedative hypnotic use significantly improved sleep quality, total sleep time, and the number of awakenings compared with placebo in individuals aged ≥60 years; however, the associated increases with sedative use in adverse cognitive events, adverse psychomotor events, and daytime fatigue called into question the risk:benefit ratio. Z-drug use has been linked to sleepwalking and other complex behaviours during sleep, especially at higher doses, or in combination with other central nervous system depressants.[23]

Some case studies have raised the issue of abuse potential of the Z-drugs.[24] Although they can be abused, behavioural studies of people with insomnia suggest that these medications do not promote abuse;[23] and they appear to have a lower risk of dependence than the traditional benzodiazepine hypnotics.[15,25] Although the Z-drugs are probably associated with less tolerance and dependence than the BDZs, it is wise to use the same precautions for both classes.

### *What about intermittent use?*

Non-nightly use of Z-drugs may be a valuable strategy in primary care for patients who, for various reasons, are not able to use behavioural strategies, or those who have insomnia sporadically. Several randomized, controlled trials of non-nightly use of zolpidem (eg, taken 3-5 nights per week) have shown sleep improvements superior to placebo and comparable to nightly use of zolpidem.[26,27] These strategies are not associated with rebound insomnia between doses, nor with escalation of use. When research participants with insomnia are given a guideline for the number of pills they can take per week, they almost always take fewer than this number.[28] Patients can use behavioural strategies for the nights without medication. Studies of intermittent use of other Z-drugs are not available, and there does not appear to be any long-term study (past 6 months) of non-nightly use of any hypnotic medication.

### *Sedating antidepressants*

Safety concerns exist for the use of sedating antidepressants, such as trazodone, doxepin, amitriptyline and mirtazapine, even at low doses. There is a paucity of research on dose-related efficacy and safety of these medications in nondepressed patients. Adverse events can include drowsiness, dizziness, confusion, anticholinergic effects, orthostatic hypotension, weight gain, cardiac conduction abnormalities, and priapism.[23] In general, these medications are believed to be riskier for patients with insomnia than the BDZ receptor agonists,[9] and are associated with higher drop-out rates.[15]

### *Other agents*

Patients often take over-the-counter preparations such as dimenhydrinate, or antihistamine-based sleep aids containing diphenhydramine or doxylamine. These may cause some drowsiness, but there is little evidence that they are useful for chronic insomnia.[29] Prolonged-release melatonin may be helpful and safe for insomnia, although few long-term studies with patients of various ages are available,[30] and it is unavailable in this formulation in Canada. Standard (immediate-release) melatonin, if carefully timed, can reduce eastbound jet lag, and help night-shift workers sleep during the day;[31] however it has generally not been found to be useful for chronic insomnia. Ramelteon is a melatonin-receptor agonist that shows promise in the treatment of chronic sleep-onset insomnia;[32] however, it is not available in Canada.

### *Tapering hypnotic medication*

Patients sometimes end up on sleeping medications for decades. For BDZ receptor agonist withdrawal, a slow tapering off of the medication is important to prevent rebound insomnia. This is especially true for the BDZs. The tapering is best done in conjunction with CBT-I, or at least behavioural advice, so patients know what to do for their sleep

during and after the withdrawal period. Morin et al[33] concluded that a structured, time-limited approach is effective in helping patients reduce the quantity and frequency of BDZ use. A medication tapering schedule combined with CBT-I was more beneficial than either component alone: 85% of patients receiving both medication taper and CBT-I had successfully discontinued their BDZ compared with 48% who received medication taper alone and 54% who underwent CBT-I alone.

### Case Study from a Family Health Team

"Susan", age 59, arrived at the office of her new family doctor with a complaint of insomnia and the wish to be able to fall asleep without medications. She could not remember when the sleep problem started; however, she had been taking temazepam (60 mg) and alprazolam (1 mg) for about 22 years. Susan also had a chronic pain condition and was taking oxycodone.

The family physician and the team pharmacist provided education about the BDZs and gave Susan a day-by-day schedule for slowly tapering off the BDZs. The agent with the shorter half-life (temazepam) was tapered first over 8 weeks until it was discontinued entirely. Then the alprazolam was tapered over 8 weeks to discontinuation. Susan was supported with behavioural sleep advice, including recommendations to maintain a constant rise time and to get out of bed when not sleeping. Towards the end of the taper schedule, Susan participated in a 6-session group CBT-I program. She was sleeping well by the end of the program and maintained her good sleep without sleep medication at 6-month follow-up.

The hypnotic medication withdrawal program run by our family health team involves the patient, the family doctor, the psychologist, and the pharmacist. We have found that the program has excellent success, but only when the patient engages in behavioural (CBT-I) strategies.

## Conclusion

Up to two-thirds of patients in primary-care settings have sleep problems, and 12% have severe insomnia that interferes with functioning. As a significant number of patients are reluctant to report their sleep difficulties without being prompted, physicians should ask about sleep as part of routine care.

When insomnia is chronic, the intervention of choice is CBT-I. If this is unavailable or impossible, then behavioural advice based on the principles of CBT-I is appropriate. Intermittent use of Z-drugs such as zolpidem or zopiclone may be useful. Extended-release melatonin and ramelteon show promise for chronic insomnia, but they are not available in Canada at this time. A slow, supervised, taper schedule is very helpful for patients who are withdrawing from long-term hypnotic use, especially from traditional BDZs; when done in conjunction with CBT-I, it is likely to be successful. CBT-I leads to sleep improvements that are sustained by the patient long after the intervention ends.

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