



# INSOMNIA *in* OLDER ADULTS

*Providers must recognize that sleep difficulties resulting in daytime functional concerns require identification and appropriate interventions.*



Particularly among older adults, insomnia is one of the most common complaints in primary care.<sup>1</sup> Although occasional difficulty sleeping can be a relatively minor concern, persistent sleep problems can be quite serious, resulting in dysfunction in self-care, participation in valued activities, and maintaining a social life—all of which are critical to well-being in old age. Insomnia also can contribute to or reflect significant physical and mental disorders.<sup>2</sup>

## **What Is Insomnia?**

Like “anxiety” and “depression,” “insomnia” has both a loose everyday meaning and a technical meaning as a psychiatric diagnosis. In ordinary parlance, insomnia can mean having a bad night and a struggle to get through the next day, or it can mean

having a significant number of bad nights that make it difficult to function adequately.

Technically, an insomnia disorder is one of 11 sleep disorders included in the *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5)*, where it is defined as persistent difficulty falling asleep or staying asleep, with associated daytime impairment.<sup>3</sup> Daytime complaints frequently include fatigue, poor concentration, sad mood, boredom, irritability, poor motivation, and physical complaints such as pain and poor balance. Insomnia disorder is also defined by frequency—at least three times per week—and duration—for a period of three months or more. More frequent and longer lasting insomnia symptoms may result in more severe functional impairment.

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In practice, however, it is important to appreciate that there are no defining benchmarks for clinically significant difficulty sleeping. Functional impairment during the day, no matter what the frequency or duration of difficulty sleeping, calls for a medical work-up even without a technically precise diagnosis of insomnia.

### Diagnosing Insomnia

The diagnosis of insomnia can be challenging. Temporal variations of insomnia symptoms are common. Patients with insomnia disorder may have seemingly random episodes of insomnia, recurrent episodes lasting weeks to months interspersed with periods of good sleep, or nightly insomnia that lasts for years. In all cases, to diagnose insomnia disorder, the sleep complaint must be associated with distress and daytime impairment.

Insomnia may develop as an independent disorder with no contributing medical cause. Conversely, it may begin as a symptom of a physical or psychiatric disease and ultimately take on a life of its own.

To reflect the clinical importance of diagnosing insomnia disorder regardless of co-occurring medical or psychiatric diseases, the definition of insomnia in *DSM-5* is different from definitions in previous versions. Most significantly, there is no longer a formal distinction between “primary” and “secondary” insomnia. Instead of distinguishing between insomnia that is caused by other conditions (secondary insomnia) and insomnia that is not, *DSM-5* emphasizes the fact that insomnia frequently co-occurs with, is influenced by, and influences other mental and/or physical disorders.<sup>4</sup>

In other words, the diagnostic process does not rely on ruling out various disorders that often co-occur with insomnia, but on identifying any comorbid conditions that may exacerbate or result from insomnia symptoms. Examples include seizure disorders, pain syndromes, psychiatric or substance use disorders, and other sleep disorders, including but not limited to obstructive sleep apnea, circadian phase disorder, and restless leg syndrome. For example, a patient with obstructive sleep apnea may also have insomnia disorder and require treatment to end or ameliorate sleeping problems and promote improved functioning.

### Insomnia in Old Age

Is insomnia normal in old age? It is certainly more common with age,<sup>5</sup> and there are age-related changes in sleep patterns, such as fewer hours of sleep, less deep sleep, and earlier sleepiness and waking.<sup>6</sup>

But sleep difficulties that result in day-to-day functional problems should not be dismissed in older people as simply a normal part of aging. Indeed, addressing poor sleep in older people can result in significant improvements in memory, ability to concentrate, enjoyment of life, and reduced need for long-term assistance with activities of daily living and executive functioning.<sup>7</sup>

### Treating Insomnia

Because insomnia may be related to multiple conditions, interventions often must be multimodal and involve combinations of approaches, eg, supporting behavior change, psychotherapy, and medications.

In addition, it is important to collaborate with patients in defining treatment goals regarding not only their sleep problems but also resolutions of their daytime symptoms and distress about insomnia.

Interventions to overcome or ameliorate insomnia include medications; sleep hygiene—behavioral, lifestyle, and environmental adjustments to promote a good night’s sleep; cognitive behavioral therapy for insomnia (CBT-I); alternative interventions such as meditation or yoga; and home remedies.

### Screening and Assessment

Not all patients with insomnia will bring it to a physician as a complaint. For example, older patients and their caregivers often assume that difficulty sleeping is a normal part of aging. Therefore, it is essential to ask about sleep during routine examinations. If there is a sleep problem, it’s important to get some details by asking patients the following questions:

- Is the problem going to sleep, staying asleep, waking too early, or not feeling refreshed in the morning?
- What is the nature of discomfort—is it agitation, inability to find a comfortable sleep position, trembling legs, heartburn, or pain?
- What wakes you—bad dreams, fear, noise, or other stimuli?
- What is on your mind when you lie awake at night—are there ruminations, remorse, concerns about work or family?
- Do you get up to go to the bathroom? How often? Is it difficult to get back to sleep afterward? Have you ever fallen while going back and forth to the bathroom?
- Do you use caffeine, alcohol, marijuana, or illegal drugs? When? It is particularly important to assess alcohol intake, which is a common and underrecognized self-help method to induce sleep.
- What is your sleeping environment like—what is the quality of the mattress and pillow, what are the ambient lighting and sound like in the environment? To what degree are electronics such as TVs, computers, and other equipment, used in the bedroom before or after going to bed?
- Do you have a bed partner? Has the partner noticed snoring, restlessness? Does the partner disturb your sleep? Is there a problem in the relationship?
- What time do you go to bed? What time do you wake up? Is the sleep cycle too early or too late to accommodate the daily schedule?
- Do you take naps during the day?
- Do you engage in physical activity during the day?

It is important to explore the history of the problem as well as the current symptoms. The factors that initially triggered insomnia may not be the same as those that perpetuate the insomnia.

It is equally important to evaluate attempted solutions. Keep in mind that some patients will have found their own solutions, which may or may not be consistent with the tenets of sleep hygiene. For example, some people find that reading in bed or having a snack, both of which are generally discouraged by sleep experts, helps them to get back to sleep.

It is also important to explore co-occurring physical and psychological issues, which may or may not contribute to poor sleep. Common co-occurring physical conditions include musculoskeletal pain, migraine headaches, breathing problems, acid reflux, and even other sleep disorders such as apnea.



Common co-occurring psychological issues include stress, difficulty concentrating, irritability, depression, anxiety, post-traumatic stress disorder, poor memory and/or dementia, and substance use disorders.

### Medications

Sleep aids, both over-the-counter (OTC) and prescription, are frequently used for both occasional and persistent insomnia, and they may safely provide benefit in the short term (two to four weeks) but should be used very cautiously in the long term because they can contribute to the following concerns:

- interference with good sleep;
- potential for abuse and addiction;
- risks of falling and driving while unknowingly cognitively impaired; and
- risks of adverse drug interactions.

Cautious use is especially important for older people for whom proper dosage can be difficult to determine and in whom drug interactions and side effects are common. Perhaps the most important concern is falls, which are a primary cause of premature disability and death among older adults.

Frequently prescribed sleep medications include hypnotics, such as Ambien; antihistamines, common in OTC medications; and benzodiazepines such as Restoril. Potentially useful psychotropic medications include antipsychotics such as quetiapine and antidepressants such as escitalopram.

Unfortunately, antipsychotics and antidepressants are frequently prescribed for insomnia even though a patient does not have a diagnosable mental disorder. (Depression is a common misdiagnosis, probably because sleeplessness is a frequent symptom of major depressive disorder. Proper diagnosis of major depressive disorder

requires a combination of symptoms including either profound sadness—or other mood changes—and/or anhedonia).<sup>8</sup> Both antipsychotics and antidepressants are associated with significant risks in the elderly, including premature disability and mortality, especially due to falls and cardiac conditions.<sup>9,10</sup> In addition, benzodiazepines are generally contraindicated for older adults.

In general, it is preferable to use nonpharmacological interventions for long-term treatment.

### Sleep Hygiene

Engaging patients with persistent sleep problems in changing behaviors and lifestyle that affect sleep and in modifying the sleeping environment may be helpful. It is most useful for patients with milder, less persistent sleep problems rather than for patients with a true diagnosable insomnia disorder.<sup>11</sup>

Lists of behavioral, lifestyle, and environmental changes vary, but there appears to be general agreement on factors that can influence sleep patterns, including the following:<sup>12,13</sup>

- Naps interfere with sleep at night and should be avoided.
- It is important to establish and adhere to a sleep schedule with specific times to go bed and get up every day unless this is truly impossible.
- Use the bed only for sleep and sex with no reading, working, or watching TV in bed.
- It is important to have a comfortable sleeping environment.
- Substances such as caffeine and alcohol prior to bedtime can interfere with falling asleep or staying asleep.
- Food just before sleep can disrupt sleep although a light snack may not cause a problem.
- Physical activity such as a brisk walk during the day may be helpful, but exercise just before going to bed is not.

## Prototypical Insomnia Cases

**Edna** lost her husband of nearly 60 years when she was 82. She suffered severe but not abnormal grief and gradually picked up life with old friends and volunteer work. Every night at 6 PM she had two drinks—as she and her husband had done through all the years of their marriage. She didn't realize her body could no longer handle the second drink. She began to fall asleep before dinner. When she woke up, she would heat up a frozen meal and eat it quickly while watching TV. Generally, she found that she couldn't fall asleep at her usual bedtime, so she would continue to watch TV until she did. But she wouldn't sleep long and was up and down several times a night. Over time, she began to feel too tired during the day to keep up with her volunteer work and her friends. She stayed home, becoming increasingly isolated. She began to drink earlier in the day. The cycle of troubled sleep continued until one day, feeling very sleepy, she fell and broke her hip. It was the beginning of the end for her.

When **Adam** was 69, he was in a serious automobile accident on his way to work. The damage to his legs and back required surgery, followed by nearly a year of rehab and physical therapy until he could walk with a cane. Pain varied from mild to severe, but he was never without it, especially at night when he lay in bed. His doctors had suggested opiate painkillers, but he didn't want to become addicted. He used over-the-counter medication

and otherwise lived with the pain. But sleeping was difficult. He usually fell asleep but pain, and often the need to urinate, would wake him. Getting out of bed and to the bathroom exacerbated the pain, so his sleep was very disrupted. He was tired when he got up in the morning. He didn't have the mental ability he had had before the accident—it was hard to concentrate, work with numbers, and difficult to socialize with colleagues. He retired unhappily.

**Jane** had been CEO of a large corporation that required senior executives to retire at the age of 70. She had never slept well. Between her work and her family, her busy life and responsibilities required her to juggle too much. At night she tended to ruminate about the next day at work or about her children, but she was one of those people who could function on very little sleep. After she retired, she continued to ruminate at night, but there were no real problems to solve so she developed a sense of agitation without substance, which she found very disturbing. She would get up, pace around, read her e-mail, and struggle to get back to sleep. During the day she was increasingly irritable and alienated family and friends. She was lonely and found nothing meaningful to which she devoted her time. Sleeping became increasingly difficult; she became increasingly edgy and unpleasant. It was a vicious cycle that was ruining what should have been a lovely restful and well-earned retirement.



- Lying in bed while unable to sleep is counterproductive. It's better to get up and then go back to bed when feeling tired.
- Relaxation techniques can be very helpful.

As with all recommendations to patients to change behavior and lifestyle, there should not be an expectation that patients will do what is recommended, even if they agree to do it. It is important to follow up to determine whether patients have changed their sleep habits.

Motivation to change is the key. In some cases, providing more information about the importance of sleep, the long-term consequences of poor sleep, and other sleep-related information can help motivate change. In other cases, rational appeals will do no good. Long-standing habits over a long life are exceedingly difficult to change. Primary care providers who are skillful in motivational interviewing will probably be more successful at helping their patients change.

### **CBT-I**

If providing information about sleep hygiene doesn't achieve the desired results, the patient ideally should be referred to a mental health professional trained to provide CBT-I, an evidence-based intervention that is effective both individually and in groups.<sup>14,15</sup>

The four key components of CBT-I include the following:<sup>16</sup>

- **A rigorous process of sleep restriction.** This involves going to bed and getting up at times that have been chosen to fit the individual patient.
- **Stimulus control instructions tailored to the patient.** This includes lighting and sound in the bedroom as well as conditioning the brain to associate being in bed with sleep and sex only, and by getting out of bed if a patient wakes up during the night and does not fall back to sleep quickly.
- **Sleep hygiene education tailored to the patient.**
- **Cognitive strategies** to reduce a patient's worries, ruminations, or distress over difficulty sleeping.

A sleep diary is used to monitor sleep.

As a result of CBT-I, patients may spend less time in bed and less time asleep, but they benefit from improved consolidated sleep. These benefits, which may take eight weeks to achieve, can be long lasting with the use of relapse prevention, such as reinstatement of sleep restriction and other changes that may have lapsed.

Just as with starting a new exercise regimen, patients may initially struggle with restricting sleep. It is important to inform them that their sleep may get a bit worse before it gets better so that they don't become discouraged and give up.

Perhaps the most significant problem with CBT-I is accessing it. Even in service-rich areas it can be difficult to find a mental health professional trained in CBT-I, especially for older adults, for whom mental health services are generally in short supply.

There are currently several efforts to address this problem. These include stepped care, which requires less physician involvement,<sup>17</sup> self-help,<sup>18</sup> telephone support for self-help,<sup>19</sup> and online therapies including apps for mobile phones.<sup>20,21</sup> Although these types of interventions may be better than nothing, clinician-led CBT-I is the gold standard.

### **Alternative Interventions**

In addition to the pharmacological and nonpharmacological medical interventions previously noted, there are a variety of alternative interventions that may be helpful. These include a number of "natural" substances such as melatonin, which may be useful for older adults whose sleep cycle is delayed but is probably not effective for the treatment of true insomnia disorder. The authors do not discuss other substances here because of controversy about their safety and effectiveness.

Other alternative interventions are focused on producing relaxed states. They include stress reduction, muscle relaxation, imagery training, meditation, mindfulness, yoga, deep breathing exercises such as yogic breathing, and exercise (though not before going to bed because it is energizing). Acupuncture also appears to be helpful for some people.

### **Home Remedies**

Many people with sleep problems develop remedies of their own. Some, such as using alcohol or marijuana, can be counterproductive in the long term. But other home remedies may work well on an individual basis, whether or not they are consistent with the tenets of sleep hygiene. For example, some people like to read themselves to sleep in bed or pick up a book or digital reader to go back to sleep after awakening. Others like to watch TV or even keep it on all night. Some people find that having a snack quiets a churning stomach and helps them go to or get back to sleep. Sexual activity, including masturbation, helps some people go to sleep or go back to sleep. (Yes, many older people have sex.)

### **Conclusion**

Difficulty sleeping is a common problem among older adults, but it is not normal and should not be ignored as being simply a part of aging. Various treatments discussed in this article are available and may be effective. The result can be not only better sleep but also overall improved functioning and significant reduction of apparent dependency.

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