Sleep Problems and Insomnia: Information for Primary Care



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Summary: Insomnia is an increasingly common sleep disorder in today's modern society, characterized by unsatisfactory sleep quality or sleep quantity due to difficulty falling asleep or difficulty maintaining sleep. Many sleep disorders are undiagnosed and untreated. The distress and daytime symptoms caused by insomnia leads to social, occupational, and other areas of impairment. Patients frequently present to primary care providers with sleep problems. First-line treatments include: sleep hygiene, behavioural and cognitive strategies. When necessary, medications can sometimes be helpful.

Case

Ms. T is a 42-year-old mother of two who sees you for trouble falling asleep at night.
This first began 2 months ago when she and her husband decided to separate.
She finds herself staring at the clock for hours trying to fall asleep. She wakes in the morning feeling tired and is having trouble staying awake until the end of the day.
"I just can't sleep! Can't you just give me something for my sleep?"

Epidemiology

Prevalence

- 33% of the population reports insomnia symptoms (DSM-5).
- 10-15% experience daytime impairment (DSM-5).
- 6-10% have symptoms that meet DSM-5 criteria for insomnia.
- Insomnia may occur on its own, but is most frequently a comorbid condition with another medical condition or mental disorder (DSM-5).

Risk Factors

- Personal:
  - Anxiety or worry-prone personality
  - Increased arousal predisposition
  - Tendency to repress emotions
- Environmental:

    - Too much noise
    - Too much light, such as from electronic devices and screens
    - Too hot or too cold
    - High altitude
- Female gender
    - Advancing age
    - Family history of insomnia
    - Physiological and genetic:
- Stressors
    - Acute stress (e.g. major life events such as illness, relationship stresses)
    - Chronic daily stress.

Screening

Screen for sleep problems when patients present with:

- Fatigue, excessive daytime sleepiness
- Depression, anxiety
- Concentration or memory problems
- Pain

Screening Tools

The Sleep Disorders Symptom Checklist (SDS-CL)-17 is a single page instrument that was developed to screen for six sleep disorders in primary care.

- Insomnia,
- Obstructive sleep apnea,
- Restless legs syndrome,
- Periodic limb movement disorder,
- Circadian rhythm sleep-wake disorders,
- Narcolepsy,
- Parasomnias.

Link to the questionnaire
https://www.med.upenn.edu/cbti...

For more information
https://www.sleepmedres.org/up...

History / Interview Questions

- Sample questions
    - How have you been sleeping recently?
    - Since when have you had problems sleeping?
    - When do you start your bedtime routine? What is your bedtime routine?
    - Does anything in your sleep environment keep you up? (e.g. noise, interruptions, temperature, light)?
    - What time do you go to bed / wakeup on weekdays? On weekends?
    - Electronics: Do you use any electronics before bedtime? What do you do?
    - What daytime consequences do you experience?
    - Do you doze off or have difficulty staying awake during routine tasks, especially while driving?

Terms

- Insomnia
  - Difficulties falling and/or staying asleep or non-restorative sleep that results in distress or impairment in social, occupational, or other important areas of functioning
- Insomnia Disorder (DSM-5):
  - Insomnia that does not have a clear etiological factor or is not associated with any other medical condition.
- Comorbid insomnia :
  - The term « secondary » is recently replaced by the term « comorbid ». Occurs as a consequence of a medical condition, or adaptive situation.

DSM-5 Criteria for Insomnia

1. A predominant complaint of dissatisfaction with sleep quantity or quality, associated with 1 or more of the following symptoms:
   1. Difficulty initiating sleep (In children, this may manifest as difficulty initiating sleep without caregiver intervention)
   2. Difficulty maintaining sleep, characterized by frequent awakenings or problems returning to sleep after awakenings (In children, this may manifest as difficulty returning to sleep without caregiver intervention)
   3. Early-morning awakening with inability to return to sleep
2. The sleep disturbance causes clinically significant distress or impairment in social, occupational, educational, academic, behavioural, or other important areas of functioning
3. The sleep difficulty occurs at least 3 nights per week
4. The sleep difficulty is present for at least 3 months
5. The insomnia is not better explained by and does not occur exclusively during the course of another sleep-wake disorder (e.g., narcolepsy, a breathing-related sleep disorder, a circadian rhythm sleep-wake disorder, a parasomnia)
6. The insomnia is not attributable to the physiological effects of a substance (e.g., drug of abuse, a medication)
7. Coexisting mental disorders and medical conditions do not adequately explain the predominant complaint of insomnia

Specify if:

- Episodic: symptoms last at least 1 month but less than 3 months
- Persistent: symptoms last 3 months or longer
- Recurrent: 2 or more episodes with the space of 1 year

Differential Diagnosis

Condition	Description	Possible screening questions
Normal sleep variations	Sleep duration varies considerably across individuals Some individuals who require little sleep may be concerned about their sleep duration. These individuals do not have difficulty falling asleep or staying asleep and do not suffer from daytime symptoms (fatigue, concentration problems, irritability).	I hear that you are worried about how much you sleep. How do you feel in the morning? Do you feel well-rested?

Situational/acute insomnia	Condition lasting a few days to a few weeks, often with life events or with changes in sleep schedules	What stresses have you been under lately? Has the stress been worse lately?
Primary Sleep Disorders		
• Breathing-related sleep disorders including obstructive sleep apnea (OSA)	Symptoms of loud snoring, breathing pauses during sleep, and excessive daytime sleepiness Note that not everyone with OSA reports insomnia The following factors are predictive for OSA: • Snoring • Increased neck circumference (17 inches for men, 16 inches for women) • Witnessed apnea • Increasing age • Presence of high blood pressure (see STOP BANG)	Do you snore loudly? Has anyone said that you gasp, choke, or stop breathing during sleep?
Movement disorders		
• Restless legs syndrome (RLS)	Difficulties falling asleep due to unpleasant sensations most commonly in the lower limbs that come on at rest and are relieved by movement and occur primarily in the evenings Commonly associated with low iron, renal problems, pregnancy and SSRIs	Do your legs ever bother you at night time? If so, as “URGE” criteria (DSM-5 criteria for RLS) Do you have an URGE to move the legs? Are they worsened by REST and/or prolonged periods of inactivity? do the GET BETTER with movement (e.g. walking) or applying counterstimulus – massage etc? Are they worse in a particular time of day, i.e. EVENINGS?
• Periodic limb movement disorder (PLMD)	Previously known as nocturnal myoclonus, PLMD is repetitive twitching or jerking of the legs during sleep, which disrupts sleep Movements are "periodic", i.e. repetitive and rhythmic, occurring about every 5-90 seconds	Does your bed partner report that your legs or arms jerk during sleep?
Circadian rhythm disorders		
• Delayed sleep phase (DSP)	Patients often prefer going to bed later and waking up later, and thus sleep later than others (e.g. often initiating sleep past 0200h) and wake up later	It sounds like you go to bed later and wake up later than most other people. If not for the fact that you have to go to school or work, would this be a problem otherwise? Have people ever called you a 'night owl'?
• Advanced sleep phase (ASP)	Can occur commonly in the elderly, with abnormally early bedtime and subsequent early morning awakening	
• Shift work types of circadian rhythm sleep-wake disorder	Sleep problems caused by shift work	Do you do shiftwork? What times are your shifts? Are your sleep schedules irregular?

• Jet lag	Frequent travel to different time zones	
Narcolepsy	Predominant symptoms is excessive daytime sleepiness, possibly with cataplexy, sleep paralysis, and sleep-related hallucinations	Do you get sleep attacks (i.e. periods during the daytime where you have an irresistible urge to sleep)? If somebody were to tell you something funny or something that made you laugh, or get angry, or surprised, have you ever felt like your muscles got weak or that you had to grab on to something in case you fell over?
Parasomnias	Unusual behaviours during sleep that may lead to intermittent awakenings and difficulty resuming sleep	Do you sleep walk? Have you ever acted out dreams? Do you get nightmares? Have you ever fallen out of bed?
Substance/medication-induced sleep disorder, insomnia type	Insomnia is due to the patient using a medication or substance	
	Recreational drug Alcohol	Any recreational drugs? How much alcohol do you drink in a week?
	Heavy caffeine consumption Nicotine (i.e. smoking)	How much caffeine do you drink? How much do you smoke?
	Medications Antidepressants (SSRIs, SNRIs, bupropion) ADHD stimulants (e.g. dextroamphetamine, methylphenidate, atomoxetine0	Any medications such as SSRIs? Any stimulants? When did you first start taking this medication? Did your sleep problems start around the same time?
Secondary / Co-morbid insomnia		
• Medical conditions	Chronic pain syndromes Menopause Gastrointestinal reflux disease (GERD) and Peptic ulcer disease COPD / Asthma Benign prostatic hyperplasia	Any other medical conditions that you have?

Comorbidity

Insomnia increases the risk of medical conditions, and medical conditions increase the risk of insomnia.

Common comorbid medical conditions include:

- Diabetes
- Coronary heart disease
- Chronic obstructive pulmonary disease
- Arthritis
- Fibromyalgia and other chronic pain conditions

Comorbid mental disorders include:

- Bipolar disorder
- Depressive disorder

- Anxiety disorders

Investigations

Laboratory investigations

- Rule out medical conditions causing insomnia such as thyroid problems.

Sleep Diary

- For a week or so, ask the patient to record bedtime, total sleep time, time until sleep onset, number of awakenings, use of sleep medications, time out of bed in the morning, and rating of quality of sleep and daytime symptoms

Polysomnography

- Most commonly used to diagnosis sleep-relating breathing disorders
- In select cases, can be used to diagnose periodic limb movement disorder, parasomnias and other less common sleep disorders

Management: Non-pharmacologic

Stress management

- Is there a contributing stress or trigger situation?
    - Clinician:
        - “What stresses are you under?”
        - “What is the worst thing about that stress?”
        - “How have you been coping with that stress?”
        - “How can I support you with that stress?”
        - “Who else might support you with this stress?”
    - If the stress or situation is significant enough, consider referral to mental health professionals.
    - Clinician: “I believe it might be helpful to have someone else to help support you with this stress, such a counselor… How does that sound?”

Therapeutic alliance building

- Explore patient’s perception of the problem, and any ideas they had about next steps.
- Clinician: “The bad news is that you are having troubles with your sleep. The good news, is that there are many things we can do to help with your sleep… I have some ideas, but first, did you have any particular ideas on what we could do?”

Sleep hygiene

- Avoid blue light in the evening, such as from electronic devices with backlit screens such as cellphones, TVs or tablets. Consider low blue light apps such as “f.luxe” which can reduce blue light from screens, or consider wearing (amber coloured) low blue light glasses that block blue light.
- Avoid caffeine, nicotine, and alcohol too close to bedtime
    - Alcohol may help with sleep initiation but it impairs sleep maintenance
    - Nicotine is a stimulant and therefore induces awakenings from the withdrawal
- Avoid heavy meals close to bedtime
- Get regular exercise such as:
    - Vigorous exercise in the late morning or afternoon
    - Relaxing exercise (yoga) can be done before bed
- Establish a regular relaxing bedtime routine
- Eliminate non-sleep activities from the bedroom

    - Avoid TV, computer, and work
- Associate your bed with sleep
    - Avoid doing activating activities in bed, e.g. watching videos.
- Minimize noise, light, and excessive temperatures (e.g. too hot or too cold) during the sleep period.
- Avoid watching and checking the clock.

Sleep consolidation / restriction

- Give a “sleep prescription” with a fixed bedtime and wake time
- Approximate their average sleep time
    - Prescribe the time in bed to current total sleep time plus 30 minutes
    - Minimum sleep time should be 5 hours (no less)
- Set a consistent wake time (7 days/week)
- Bed time is determined by counting backwards from the set wake time
- Once the patient is able to sleep for >85-90% of the time spent in bed for 2 consecutive weeks, then the amount of time spent in bed can be slowly increased by 15-30 minutes weekly.
- Average total sleep time for most people is 7-9 hours a night
- Aim to compres the total time in bed to match the total sleep needs of the individual in order to improve the efficiency of their sleep

Relaxation strategies

- Avoid arousing activities before bed (phone calls, work, TV)
- Allow at least 1 hour before bedtime to unwind from the day (dim light, relaxing activities)
- Relaxation exercise such as deep breathing, light exercise, stretching, yoga, and relaxation audios can help promote sleep
- Stress management skills including progressive muscle relaxation, biofeedback, hypnosis, meditation, imagery training (usually with trained professionals).

Other strategies:

- Go to bed only when sleepy.
- Get out of bed if not able to fall asleep within 15-20 minutes and go to another room to relax and/or do someting boring before returning to bed when sleepy.
- Set alarm for set wake time.
- Avoid excessive napping during the day (i.e. keep any naps to less than 30-minutes).

Cognitive behaviour therapy (CBT)

- If basic sleep hygiene strategies are not successful, consider CBT to help address inappropriate beliefs and attitudes associated with insomnia.
- Identify unhelpful thoughts for sleep, and replace those thoughts with more helpful thoughts and behaviours to promote sleep.
- Examples:
    - Unhelpful thoughts
        - “I can’t sleep… My life sucks… I’m going to be a wreck tomorrow. Everything is ruined, I might as well just play another video games..."
    - More helpful thoughts/behaviours
        - “I can’t sleep yet… It’d be fun to play another video game, I know I shouldn't because then I'll be up for hours.... I'm just going to read a book instead..."

Management: Pharmacological

- Consider medications for short-term treatment (up to a week or so) if patient has not already responded to cognitive or behavioural approaches.
- Try to avoid using hypnotics for long term due to the potential for tolerance and dependence.

- If using hypnotics, try using <3 times/week.

Common Sleep Medications

Medication	Dosage
Zopiclone	Start 3.75 mg once at bedtime; may increase to 5 mg and then to 7.5 mg mg at bedtime if necessary (max: 7.5 mg once daily)
Temazepam	15-30 mg at bedtime
Trazodone	50-150 mg bedtime

Natural Health Products and Over-the-Counter

Substance	Dosage
L-Tryptophan	500 mg-2gm
Melatonin	Start at 3-6 mg (or 5 mg) in evening, 1-2 hrs before bedtime over 4 weeks Increase up to 9 mg (or 10 mg) if necessary, though literature reports no benefit past 6 mg daily
Valerian	400-600 mg/day taken 1 hour before bedtime for 2-4 weeks
Diphenhydramine (Benadryl, Nytol, Sleep Eze)	50 mg at bedtime

Apps for Sleep

CBT-I Coach App

- For people who are doing cognitive behavioural therapy (CBT) with a health care provider, or who have experienced insomnia and would like to improve their sleep habits.
- The app teaches users about sleep, guides them through developing positive sleep routines, improving their sleep environments.
- Link to app: https://mobile.va.gov/app/cbt-i-coach

For more apps, please visit Apps for Sleep.

When and Where to Refer

Indications for referral

- Uncertainty in diagnosis.
- Lack of response to multiple management approaches.
- Comorbid medical or psychiatric conditions.
- If there are sleep disorders such as sleep apnea, restless legs or periodic limb movement disorder, consider referral to sleep specialist.

Reporting Obligations

Consider reporting chronic insomnia due to conditions such as sleep apnea, or narcolepsy

- In Ontario, the Highway Traffic Act requires that physicians report every individual 16 years of age or over

attending upon the physician for medical services, who, in the opinion of the physician is suffering from a condition that may make it dangerous to operate a motor vehicle.

References

Colten HR, Altevogt BM. Washington, DC: The National Academies Press; 2006. Sleep disorder and sleep deprivation: An unmet public health problem.
Towards Optimized Practice (TOP) Program Guideline to Adult Primary. Insomnia: Diagnosis to Management. Top Program 2010.
Walsh JK., et al. Insomnia: Assessment and Management in Primary Care. Am Fam Physician. 1999; 59(11):3029-3038.

About this Document

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