

INSOMNIA

AGS Geriatrics Evaluation and Management Tools (Geriatrics E&M Tools) support clinicians and systems that are caring for older adults with common geriatric conditions.

From the AMERICAN GERIATRICS SOCIETY

Geriatrics Evaluation & Management Tools

DEFINITION	Difficulty falling asleep, difficulty staying asleep, or waking up too early, associated with daytime impairment (e.g., fatigue, poor concentration, daytime sleepiness, concerns about sleep)																						
BACKGROUND	<ul style="list-style-type: none"> Reported prevalence of insomnia symptoms in those >65 years old varies, but may be 30% - 50% 																						
SCREENING	<p>All geriatric patients should be asked annually about sleep problems.</p> <ul style="list-style-type: none"> Is the person satisfied with his or her sleep? Does sleep or fatigue interfere with daytime activities? Does the bed partner or others complain of snoring, interrupted breathing, or excessive movements? 																						
HISTORY OF PRESENT ILLNESS	<p>In those who report problems, a patient sleep log can be helpful:</p> <ul style="list-style-type: none"> Each morning, record characteristics of the prior night's sleep such as: the amount of time spent in bed, the estimated total amount of sleep, the number of awakenings, the time of final morning awakening, and any symptoms that occurred during the night Supplement with information from bed partner, others, and/or validated sleep questionnaire Examples of patient sleep logs are available (e.g., Consensus Sleep Diary: Carney et al. SLEEP 2012;35(2):287-302; National Sleep Foundation Sleep Diary: https://www.sleepfoundation.org/nsf-official-sleep-diary). 																						
PAST MEDICAL HISTORY/ REVIEW OF SYSTEMS	<p>Evaluate presence of conditions associated with sleep disturbances.</p> <ul style="list-style-type: none"> Psychological/psychiatric: adjustment disorders, anxiety, bereavement, depression, post-traumatic stress disorder (PTSD) Cardio-respiratory: cough, dyspnea, witnessed apneas, palpitations, or chest pain Gastrointestinal: gastroesophageal reflux disease (GERD) Urologic: nocturia, incontinence Neurologic: pain, paresthesia, Parkinson disease, restless legs syndrome, seizure activity, stroke 																						
MEDICATIONS	<p>Thorough evaluation of medications that can contribute to sleep problems (including over-the-counter).</p> <ul style="list-style-type: none"> Lighter, shorter/fragmented sleep: alcohol, sedatives, cholinesterase inhibitors Nightmares: antidepressants, anti-Parkinson's agents, antihypertensives, cholinesterase inhibitors Nocturia: diuretics Sedation: antidepressants, clonidine, phenytoin (or insomnia also possible with phenytoin), sedatives Stimulation: bronchodilators, caffeine, corticosteroids, nicotine, sympathomimetics, antidepressants 																						
PHYSICAL EXAM	Focused physical exam typically including ENT, cardiac, pulmonary, and neurologic systems																						
FURTHER TESTING	<ul style="list-style-type: none"> Polysomnography is indicated if a primary sleep disorder is suspected, such as: sleep apnea, narcolepsy, REM sleep behavior disorder, or other violent or unusual behaviors during sleep. In-home portable sleep-monitoring systems is often used to screen for sleep apnea. 																						
NONPHARMA-COLOGIC INTERVENTIONS	<p>Examples of Nonpharmacologic Interventions to Improve Sleep</p> <table border="1"> <thead> <tr> <th>Intervention</th> <th>Goal</th> <th>Brief Description</th> </tr> </thead> <tbody> <tr> <td>Stimulus control</td> <td>To recondition maladaptive sleep-related behaviors</td> <td>Patient is instructed to go to bed only when sleepy, not use the bed for eating or looking at monitors (eg, television, laptops, tablets), get out of bed if unable to fall asleep, return to bed only when sleepy, get up at same time each morning, not take naps during the day</td> </tr> <tr> <td>Sleep restriction</td> <td>To improve sleep efficiency (time asleep over time in bed) by limiting time in bed</td> <td>Patient first keeps a sleep diary for 1–2 weeks to determine average total daily sleep time, then stays in bed only that amount of time plus 15 minutes; gets up at same time each morning; takes no naps during the day; gradually increases time allowed in bed as sleep efficiency improves</td> </tr> <tr> <td>Cognitive interventions</td> <td>To change misunderstandings regarding sleep</td> <td>Patient's dysfunctional beliefs and attitudes about sleep are identified; patient is educated to change these beliefs and attitudes, including both normal changes in sleep with age and changes that are pathologic</td> </tr> <tr> <td>Relaxation techniques</td> <td>To recognize and relieve tension and anxiety</td> <td>In progressive muscle relaxation, patient is taught to tense and relax each muscle group; in electromyographic biofeedback, patient is given feedback regarding muscle tension and learns techniques to relieve it; meditation or imagery techniques are taught to relieve racing thoughts or anxiety</td> </tr> <tr> <td>Cognitive-behavioral therapy</td> <td>Combines features of several behavioral interventions</td> <td>Typically combines stimulus control, sleep restriction, and cognitive interventions, with or without relaxation techniques</td> </tr> <tr> <td>Bright light</td> <td>To correct circadian rhythm causes of sleeping difficulty (ie, sleep-phase problems)</td> <td>Patient is exposed to sunlight or a light box. For delayed sleep phase, 2 hours early morning light; for advanced sleep phase, 2 hours evening light; light intensity >2,000 lux. Appropriate timing of the light exposure is important. Shorter durations may be as effective. Routine eye examination is recommended before treatment; do not use light boxes with ultraviolet exposure.</td> </tr> </tbody> </table>		Intervention	Goal	Brief Description	Stimulus control	To recondition maladaptive sleep-related behaviors	Patient is instructed to go to bed only when sleepy, not use the bed for eating or looking at monitors (eg, television, laptops, tablets), get out of bed if unable to fall asleep, return to bed only when sleepy, get up at same time each morning, not take naps during the day	Sleep restriction	To improve sleep efficiency (time asleep over time in bed) by limiting time in bed	Patient first keeps a sleep diary for 1–2 weeks to determine average total daily sleep time, then stays in bed only that amount of time plus 15 minutes; gets up at same time each morning; takes no naps during the day; gradually increases time allowed in bed as sleep efficiency improves	Cognitive interventions	To change misunderstandings regarding sleep	Patient's dysfunctional beliefs and attitudes about sleep are identified; patient is educated to change these beliefs and attitudes, including both normal changes in sleep with age and changes that are pathologic	Relaxation techniques	To recognize and relieve tension and anxiety	In progressive muscle relaxation, patient is taught to tense and relax each muscle group; in electromyographic biofeedback, patient is given feedback regarding muscle tension and learns techniques to relieve it; meditation or imagery techniques are taught to relieve racing thoughts or anxiety	Cognitive-behavioral therapy	Combines features of several behavioral interventions	Typically combines stimulus control, sleep restriction, and cognitive interventions, with or without relaxation techniques	Bright light	To correct circadian rhythm causes of sleeping difficulty (ie, sleep-phase problems)	Patient is exposed to sunlight or a light box. For delayed sleep phase, 2 hours early morning light; for advanced sleep phase, 2 hours evening light; light intensity >2,000 lux. Appropriate timing of the light exposure is important. Shorter durations may be as effective. Routine eye examination is recommended before treatment; do not use light boxes with ultraviolet exposure.
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NONPHARMA- COLOGIC INTERVENTIONS (CONT'D)

- Behavioral treatment of insomnia is effective in older adults.
- Sleep hygiene is generally not effective for chronic insomnia when used alone.
- Improve sleep hygiene during the daytime:
 - Maintain a regular rising time and decrease or eliminate naps, unless necessary
 - Exercise daily but not within 2 hours before bedtime
 - Get adequate exposure to bright light during the day
 - Limit or eliminate alcohol, caffeine, nicotine especially within 4 hours of bedtime.
- Improve sleep hygiene at night:
 - Maintain a regular bedtime, unless not sleepy.
 - If hungry, have a light snack (except with symptoms of GERD or medical contraindications).
 - Relax mentally, wind down before bedtime, establish a scheduled "worry-time" during the day to avoid worry at night, maintain a routine of preparation for bed.
 - Control the nighttime environment with comfortable cool temperature, quiet, and darkness.
 - Try a fan or other "white noise" machine.
 - Wear comfortable bed clothing.
 - If not asleep within 30 minutes, get out of bed and perform soothing activity (avoid bright light).

PHARMA- COLOGIC INTERVENTIONS

- Behavioral treatment of insomnia is recommended first line therapy, including in older adults.
- Treat associated medical conditions.
- If possible, discontinue medications that contribute to sleep disturbances.
- Do not use antihistamines or sedating antipsychotics in routine management of insomnia.
- If a decision is made to use a sedative-hypnotic, use the smallest dosage of medication for the shortest duration necessary, and monitor for efficacy and adverse effects.
- To discontinue sleep medications among chronic users, provide behavioral treatment for insomnia and taper the sleep medication dose gradually prior to discontinuation.

MEDICATIONS USED FOR INSOMNIA IN OLDER ADULTS

Class, Medication	Starting Dose (Mg)	Usual Dose (Mg)	Half-Life (Hours)	Comments
Intermediate-acting benzodiazepine				
Temazepam	7.5	7.5–30	8.8	Psychomotor impairment, increased risk of falls
Short-acting non-benzodiazepines				
Eszopiclone	1	1–2	6	Reportedly effective for long-term use in selected individuals; may be associated with unpleasant taste, headache; may cause next-day mental impairment, risk of falls; avoid administration with high-fat meal
Zaleplon (a pyrazolopyrimidine)	5	5–10	1 (reportedly unchanged in older adults)	Can cause daytime drowsiness and dizziness; risk of falls
Zolpidem (an imidazopyridine)	5	5	1.5–4.5 (3 in older adults; 10 in hepatic cirrhosis)	Reportedly little daytime carryover, tolerance, or rebound insomnia; complicated sleep behaviors/parasomnias have been reported; risk of falls
Melatonin receptor agonist				
Ramelteon	8	8	1.5 (2.6 in older adults)	Dizziness, myalgia, headache, other adverse events reported; no significant rebound insomnia or withdrawal with discontinuation
Sedating antidepressants				
Mirtazapine (off-label)	7.5	7.5–45	31–39 in older adults; 13–34 in younger adults; mean = 21	Increased appetite, weight gain, headache, dizziness; daytime carryover; used for insomnia with depression; more sedating at lower doses than higher doses
Trazodone (off-label)	25–50	25–150	Reportedly 6 ± 2; prolonged in older adults and obese individuals	Moderate orthostatic effects; effective for insomnia with depression; risk of falls