

CLINICAL INQUIRIES FROM THE FAMILY PRACTICE INQUIRIES NETWORK

What is the best hypnotic for use in the elderly?

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■ EVIDENCE-BASED ANSWER

Short-acting hypnotics such as zolpidem (Ambien) or zaleplon (Sonata) are the preferred hypnotics in the elderly because of an improved side-effect profile compared with traditional hypnotics such as benzodiazepines (strength of recommendation: **B**, based on extrapolations of randomized controlled trials). Zolpidem and zaleplon have a quick onset and short duration of action, making them less likely to cause residual sedation, cognitive changes, and falls than benzodiazepines. More comparative clinical trials in the elderly are needed to determine if zolpidem and zaleplon are truly safer than benzodiazepines in this population. Hypnotics should be prescribed on a short-term, intermittent basis as part of a comprehensive treatment plan that addresses any underlying causes of poor sleep.

■ EVIDENCE SUMMARY

Zolpidem and zaleplon

Zolpidem and zaleplon differ structurally from benzodiazepines but act at the benzodiazepine receptor.¹ Due to their rapid absorption and short half-lives, they are particularly helpful for patients who have trouble falling asleep.² They have been shown to decrease sleep latency, increase total sleep time, and increase sleep efficiency without disturbing sleep architecture or adversely affecting memory.¹

Comparative studies in the elderly have demonstrated that zolpidem is as effective as triazolam,³ and that zaleplon is more effective than placebo at decreasing sleep latency and improving sleep quality.⁴ Tolerance, withdrawal symptoms, or rebound insomnia occur less frequently than with benzodiazepines,¹ but zolpidem increased risk of hip fracture in a case control study (adjusted odds ratio=1.95, 95% confidence interval, 1.09–3.51).⁵

Side effects of zolpidem and zaleplon are considered dose-related, and a lower dose of 5 mg is recommended for older patients.² Efficacy of intermittent use of zolpidem has been demonstrated in clinical studies,¹ a practice that could potentially decrease risk of side effects. Overall, if a hypnotic is desired for an older adult, zolpidem and zaleplon are preferred because of their improved side-effect profiles compared with older hypnotics such as benzodiazepines, chloral hydrate, over-the-counter sleep aids, and antidepressants (see **Table**).

Adverse effects of hypnotics in the elderly

Hypnotic	Adverse effect
Benzodiazepines	Somnolence, anterograde amnesia, falls, hip fracture, rebound insomnia, tolerance, dependence, impaired sleep architecture ^{2,3,5}
Antihistamines	Somnolence, dry mouth, constipation, urinary retention, blurred vision, cognitive changes ³
Valerian	Headache, excitability, uneasiness, cardiac disturbances, insomnia, drowsiness, withdrawal symptoms ¹⁰
Melatonin	Headache, depressive symptoms, daytime fatigue and drowsiness, dizziness, abdominal cramps, reduced alertness ¹⁰
Chloral hydrate	Nausea, vomiting, diarrhea, may increase effects of warfarin, overdose potential ^{3,8}
Tricyclic antidepressants	Dry mouth, constipation, urinary retention, blurred vision, cognitive changes, orthostatic hypotension, somnolence, worsening of chronic heart failure, overdose potential, cardiac conduction abnormalities ^{2,3}
Trazodone	Somnolence, orthostatic hypotension, dry mouth, priapism ³
Zolpidem	Drowsiness, headache, dizziness, somnolence, fatigue, agitation, nightmares, diarrhea, myalgia, arthralgia, anterograde amnesia ^{1,10}
Zaleplon	Headache, dizziness, somnolence, short-term amnesic effects, next-day memory impairment, mild rebound insomnia ^{1,10}

Benzodiazepines

Benzodiazepines have been used since the 1960s for their hypnotic, anxiolytic, anticonvulsant, muscle-relaxing, and amnesic properties. A recent meta-analysis showed that benzodiazepines improve sleep latency by only 4.2 minutes compared with placebo.⁶ Although benzodiazepines increase sleep time and efficiency, patients quickly develop tolerance to the hypnotic effects.⁷ Additional problems associated with benzodiazepines include dependence, rebound insomnia, residual sedation, falls, hip fractures, and detrimental effects on sleep architecture.⁷

Chloral hydrate

Chloral hydrate has a narrow therapeutic index and is not recommended for the treatment of insomnia.⁸ Tolerance to its effects develops after only 2 weeks of use, and drug interactions with warfarin can occur.²

Over-the-counter sleep aids

Most over-the-counter sleep aids contain diphen-hydramine, a long-acting antihistamine that is considered less effective than benzodiazepines. The anticholinergic properties of antihistamines can result in cognitive changes and urinary retention in the elderly.⁸ Melatonin and valerian are “natural” hypnotics that are available without a prescription,⁹ but their safety and efficacy are not regulated by the FDA.⁸

Antidepressants

Antidepressants with sedative effects, such as tricyclic antidepressants and trazodone, have been used for insomnia, but minimal data support the efficacy or safety of this approach.⁸ Tricyclic antidepressants may exacerbate restless legs syndrome and periodic limb movement disorder,⁸ cause anticholinergic side effects, worsen chronic heart failure, and cause ortho-static hypotension and falls.² Although tra-zodone is not a tricyclic antidepressant, it can cause dry mouth, orthostatic hypotension, and (rarely) priapism.²

■ RECOMMENDATIONS FROM OTHERS

A Canadian consensus statement published in 2003 supports the use of non-benzodiazepines such as zolpidem and zaleplon due to improved tolerability, and less withdrawal and abuse potential compared with benzodiazepines.⁷ The National Heart, Lung and Blood Institute Working Group on Insomnia recommends the use of short-acting hypnotics for short-term management of insomnia, but does not differentiate between short-acting benzodiazepines and the newer hypnotics such as zolpidem and zale-plon.⁸ Geriatric experts recommend that long-acting benzodiazepines, barbiturates, and amitriptyline be avoided in the elderly due to the risk of adverse drug events.¹⁰

CLINICAL COMMENTARY

Question the patient about sleep habits

David Cravens, MD, MSPH

Sleep complaints are common in the elderly. However, before prescribing a hypnotic, determine the elderly patient's sleep habits: often daytime naps plus nighttime sleep add up to adequate sleep. Encourage measures to avoid daytime naps if nighttime sleep is more important. Second, discuss sleep hygiene, such as avoiding evening caffeine or excessive alcohol, and avoiding using bed for activities other than sleeping, such as watching TV, reading, and the like. Determine whether sleep problems are part of a larger problem requiring evaluation, such as medication effects, depression, or obstructive sleep apnea. Finally, consider costs: although not a true hypnotic, trazodone at doses of 25–50 mg is a very effective and well-tolerated soporific at about one-tenth the cost of 5 mg of zolpidem or zaleplon.

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