

Table 7.3 Medications Used to Treat Insomnia

Medication	Dosing	Onset (min)	Half-life (h)	Duration	Drug interactions or comments
Benzodiazepines					
Clorazepate (Tranxene)	3.75-20 mg in 2-3 divided doses	30	2	Short	
Estazolam (Prosom)	1-2 mg; 0.5 mg in elderly	15-30	10-24	Intermediate	CYP3A4 inhibitors (ketoconazole, clarithromycin, itraconazole, nefazodone, ritonavir, and nelfinavir) increase drug levels.
Flurazepam (Dalmane)	15-30 mg	60-120	8; active metabolite 47-100	Long	Avoid use in elderly due to active metabolite.
Quazepam (Doral)	7.5-15 mg	20-45	25-84	Long	Avoid use in elderly. CYP2B6 inhibitors (orphenadrine) increase levels and effects of drug.
Temazepam (Restoril)	7.5-30 mg; 7.5 mg in elderly	45-60	4-18	Intermediate	
Triazolam (Halcion)	0.125-0.25 mg; 0.125 mg in elderly	15-30	2-4	Short	CYP3A4 inhibitors (ketoconazole, clarithromycin, itraconazole, nefazodone, ritonavir, and nelfinavir) increase drug levels. CYP3A4 inducers (rifampicin) decrease drug levels.
Nonbenzodiazepines					
Zolpidem (Ambien)	5-10 mg; 5 mg in elderly	30	1.4-4.5	Intermediate	CYP3A4 inhibitors (ketoconazole, clarithromycin, itraconazole, nefazodone, ritonavir, and nelfinavir) increase drug levels. CYP3A4 inducers (rifampicin) decrease drug levels.
Zolpidem (Ambien CR)	6.25-12.5 mg; 6.25 mg in elderly	30	1.6-5.5	Intermediate	CYP3A4 inhibitors (ketoconazole, clarithromycin, itraconazole, nefazodone, ritonavir, and nelfinavir) increase drug levels. CYP3A4 inducers (rifampicin) decrease drug levels.
Zaleplon (Sonata)	10-20 mg; 5 mg in elderly	20	0.5-1	Ultrashort	CYP3A4 inhibitors (ketoconazole, clarithromycin, itraconazole, nefazodone, ritonavir, and nelfinavir) increase drug levels. CYP3A4 inducers (rifampicin) decrease drug levels.
Eszopiclone (Lunesta)	2-3 mg; 1 mg in elderly	30	6	Intermediate	CYP3A4 inhibitors (ketoconazole, clarithromycin, itraconazole, nefazodone, ritonavir, and nelfinavir) increase drug levels. CYP3A4 inducers (rifampicin) decrease drug levels.
Melatonin agonist					
Ramelteon (Rozerem)	8 mg	30	1-2.6; active metabolite 2-5	Short	CYP3A4 inhibitors (ketoconazole, clarithromycin, itraconazole, nefazodone, ritonavir, and nelfinavir) increase drug levels. CYP3A4 inducers (rifampicin) decrease drug levels.

From L. Carl, J. Gallo, and P. Johnson, 2014, *Practical Pharmacology in Rehabilitation: Effect of Medication on Therapy* (Champaign, IL: Human Kinetics).

Medication	Dosing	Onset (min)	Half-life (h)	Duration	Drug interactions or comments
					decrease drug levels. CYP2C9 inhibitors (fluconazole, miconazole, and valproic acid) and CYP1A2 inhibitors (fluoroquinolones, fluvoxamine, and verapamil) increase drug levels.
First-generation antihistamines					
Diphenhydramine (Benadryl)	25 mg	30	4-8	Long	Avoid use in elderly due to altered cognition and fall risk.
Doxylamine (Unisom)	50 mg	30	4-6	Long	Avoid use in elderly due to altered cognition and fall risk.
Herbals					
Valerian	2-3 g of root for tea or 400-900 mg of extract; 450 mg in elderly	30; delayed onset of 2-4 wk	1-2	Short	Avoid with other sedatives. Paradoxical stimulation can occur with long-term use. Binds with gamma amino butyric acid receptors, may be associated with hepatotoxicity.
Chamomile tea	1 teaspoon up to 3 times/day	30	1-2	Short	Avoid in ragweed allergy. May increase anticoagulant effects of warfarin (Coumadin). Avoid using with other sedatives.
Melatonin	0.3-5 mg; 0.1-3 mg in elderly	30; 120 for XR	1-2	Short	Take sustained-release product 1-2 h before bedtime. May alter menstrual cycle. May increase anticoagulant effect of warfarin (Coumadin).
Treatment of nightmares and insomnia associated with posttraumatic stress disorder					
Prazosin (Minipress)	Start at 1 mg and increase by 1 mg weekly to maximum dose of 10 mg	30	2-3	Intermediate	Avoid taking with other medications that can decrease blood pressure.

XR = extended release.