

Medications to avoid in the elderly



In accordance with the American Geriatrics Society 2015 Beers Updated Criteria for Potentially Inappropriate Medication Use in Older Adults, we are providing this tool to aid in safer medication alternatives for your older adult patients.

Description	Medications to avoid ^{1,2}	Adverse side effects/concerns	Drug List alternatives ^{3,4,5}
Alpha agonists, central	<ul style="list-style-type: none"> • guanfacine • guanabenz • methyl dopa • reserpine (doses greater than 0.1 mg/day) 	High risk of central nervous system (CNS) effects; may cause bradycardia and orthostatic hypotension; not recommended for routine treatment of hypertension	<p>Hypertension: amlodipine, atenolol, lisinopril, losartan, valsartan, clonidine</p> <p>ADHD: dextroamphetamine, methylphenidate</p>
Analgesics	<ul style="list-style-type: none"> • indomethacin • ketorolac 	Potential for gastrointestinal bleeding, renal failure, high blood pressure and heart failure	meloxicam, ibuprofen, naproxen, diclofenac
Anti-anxiety	<ul style="list-style-type: none"> • aspirin-meprobamate • meprobamate 	Addictive and sedating anxiolytic	<p>Anxiety: buspirone, duloxetine, escitalopram, sertraline, venlafaxine</p> <p>Insomnia: See the nonbenzodiazepine hypnotic section for insomnia alternatives.</p>
Antidepressants (includes single entity or as part of a combination product)	<ul style="list-style-type: none"> • amoxapine • amitriptyline • clomipramine • desipramine • doxepin (doses greater than 6 mg/day) • imipramine • nortriptyline • paroxetine • trimipramine • protriptyline 	Highly anticholinergic effects; may cause orthostatic hypotension	<p>Depression: Selective serotonin reuptake inhibitors (SSRIs)⁵—escitalopram, sertraline; serotonin and norepinephrine reuptake inhibitors (SNRIs)—duloxetine, venlafaxine</p> <p>Insomnia: See the nonbenzodiazepine hypnotic section for insomnia alternatives.</p> <p>Neuropathic pain: gabapentin</p>
Antihistamines (includes single entity or as part of a combination product)	<ul style="list-style-type: none"> • brompheniramine • carbinoxamine • chlorpheniramine • clemastine • cyproheptadine • dexbrompheniramine • dexchlorpheniramine • diphenhydramine (oral) • dimenhydrinate • doxylamine • hydroxyzine • meclizine • promethazine • triprolidine 	Highly anticholinergic effects, sedation, weakness, blood pressure changes, dry mouth, urinary retention; clearance reduced in advanced age (Tolerance develops when used as hypnotic.)	<p>Pruritus/urticaria: cetirizine oral solution, levocetirizine, loratadine^Δ</p> <p>Nausea/vomiting: ondansetron, prochlorperazine</p> <p>Allergic rhinitis: azelastine^Δ, cetirizine oral solution, fexofenadine^Δ, fluticasone nasal spray, flunisolide nasal spray, levocetirizine, loratadine^Δ</p> <p>Insomnia: See the nonbenzodiazepine hypnotic section for insomnia alternatives.</p>
Anti-infectives (when cumulative days' supply greater than 90 days)	<ul style="list-style-type: none"> • nitrofurantoin • nitrofurantoin macrocrystals 	Potential for pulmonary toxicity, hepatotoxicity and peripheral neuropathy; nitrofurantoin causes renal impairment; avoid in persons with a CrCl less than 60 mL/min due to inadequate drug concentration in the urine	Dependent on the infection: cephalexin, ciprofloxacin, sulfamethoxazole/trimethoprim, doxycycline
Anti-Parkinson agents	<ul style="list-style-type: none"> • benzotropine (oral) • trihexyphenidyl 	Not recommended for prevention of extrapyramidal symptoms with antipsychotics	carbidopa-levodopa, pramipexole (Mirapex), ropinirole (Requip)
Antispasmodics (includes single entity or as part of a combination product)	<ul style="list-style-type: none"> • atropine (excludes ophthalmic) • belladonna • clidinium-chlordiazepoxide • dicyclomine • hyoscyamine • propantheline • scopolamine 	Anticholinergic effects	<p>Constipation: polyethylene glycol oral^Δ, psyllium^Δ, stool softener^Δ</p> <p>Diarrhea: aluminum hydroxide^Δ, sucralfate, pantoprazole, omeprazole, loperamide</p>
Anti-thrombotics	<ul style="list-style-type: none"> • dipyridamole (oral short-acting only) • ticlopidine 	Dipyridamole may cause orthostatic hypotension; more effective alternatives are available	cilostazol, clopidogrel, low-dose aspirin ^Δ
Barbiturates	<ul style="list-style-type: none"> • amobarbital • butabarbital • butalbital • mephobarbital • pentobarbital • phenobarbital • secobarbital 	High rate of physical dependence; patients develop tolerance, which reduces sleep benefits; risk of overdose at low dosage due to tolerance and patient choice to over-medicate to achieve therapeutic effect	<p>Anxiety: SSRIs⁵ (escitalopram, sertraline); SNRIs (duloxetine, venlafaxine); buspirone</p> <p>Insomnia: See the nonbenzodiazepine hypnotic section for insomnia alternatives.</p> <p>Seizure: gabapentin, lamotrigine, topiramate</p> <p>Migraine: naproxen</p>
Calcium channel blockers	<ul style="list-style-type: none"> • nifedipine—short-acting only 	Potential for hypotension; risk of causing myocardial ischemia	Use long-acting formulation to avoid adverse effects: felodipine, amlodipine
Cardiovascular	<ul style="list-style-type: none"> • digoxin (doses greater than 0.125 mg/day) • disopyramide 	<p>Digoxin: In heart failure, higher doses have increased risk of toxicity; decreased renal clearance</p> <p>Disopyramide: Potent negative inotrope that may induce heart failure in older adults; anticholinergic effects</p>	<p>Digoxin does not decrease morbidity or mortality.</p> <p>Optimize angiotensin-converting enzyme inhibitors (ACEI), angiotensin receptor blockers (ARB), beta blockers and/or aldosterone antagonist prior to digoxin use.</p> <p>Options from each class include: ACEI—lisinopril, enalapril; ARB—losartan, valsartan; beta blocker—metoprolol succinate XL, carvedilol, atenolol; aldosterone antagonist—spironolactone</p> <p>Antiarrhythmics—quinidine, flecainide, diltiazem</p>

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Endocrine	<ul style="list-style-type: none"> • megestrol 	Increases risk of thrombotic event and possibly death in older adults	Consider nutritional support and treatment of potential cause (e.g., depression, certain medications).
Nonbarbiturate or nonbenzodiazepine hypnotic (when cumulative days' supply greater than 90 days)	<ul style="list-style-type: none"> • Lunesta (eszopiclone) • Sonata (zaleplon) • Ambien (zolpidem) 	Benzodiazepine-receptor agonists have adverse events similar to those of benzodiazepines in older adults (e.g., delirium, falls, fractures); they produce minimal improvement in sleep latency and duration ¹	<p>Consider only short-term or intermittent use (less than 90 days per year).</p> <p>Ambien IR: Do not exceed 5 mg orally at bedtime in geriatrics.⁶</p> <p>suvorexant (Belsomra)</p> <p>Discuss sleep hygiene and avoidance of caffeine, alcohol, nicotine and medications that cause insomnia.</p> <p>Evaluate for depression, a common cause of insomnia in the elderly. Secondary insomnia can be treated with trazodone 50 mg (may cause orthostatic hypotension).</p>
Oral estrogens and estradiol transdermal patch	<ul style="list-style-type: none"> • conjugated estrogen • conjugated estrogen-medroxyprogesterone • drospirenone-estradiol • esterified estrogen • estradiol-norethindrone • esterified estrogen-methyltestosterone • estropipate • estradiol • estradiol-levonorgestrel 	Cardio-protective properties are absent; high carcinogenic effects (breast cancer and endometrial cancer)	<p>Hot flashes: SSRIs⁵: escitalopram</p> <p>Vaginal dryness: estradiol vaginal cream, Premarin vaginal cream</p> <p>Bone density: alendronate, calcium, raloxifene, vitamin D^Δ</p>
Hypoglycemics	<ul style="list-style-type: none"> • chlorpropamide • glyburide 	Prolonged half-life causing prolonged hypoglycemia; also causes syndrome of inappropriate anti-diuretic hormone secretion (SIADH)	glimepiride, glipizide
Skeletal muscle relaxants	<ul style="list-style-type: none"> • ASA/caffeine/orphenadrine • ASA/carisoprodol/orphenadrine • aspirin-carisoprodol • carisoprodol • chlorzoxazone • cyclobenzaprine • metaxalone • methocarbamol • orphenadrine 	<p>Anticholinergic effects, sedation, weakness and increased risk of fractures</p> <p>Poorly tolerated; effectiveness at doses tolerated by older adults is questionable</p>	<p>baclofen, tizanidine</p> <p>Nonpharmacologic treatment for muscle spasms: heat, massage, stretching/exercise</p>
Thyroid	<ul style="list-style-type: none"> • thyroid desiccated 	Cardiac concerns	levothyroxine
Vasodilators	<ul style="list-style-type: none"> • dipyridamole—short-acting only • ergot mesyloid • isoxsuprine 	Orthostatic hypotension	<p>Stroke prevention: clopidogrel, low-dose aspirin^Δ</p> <p>Coronary artery disease: amlodipine</p> <p>Alzheimer's disease/dementia: donepezil</p>

Δ = OTC medication

Note: To view current medication coverage, go to Humana.com/DrugListSearch.

\$ = Selective serotonin reuptake inhibitors can be considered a clinical alternative for patients older than 65 years old on a high-risk medication (HRM), but they should not be considered an alternative or used in patients with a history of falls or dementia. Recommend SSRI alternatives, NOT paroxetine.

References:

¹The American Geriatrics Society 2015 Beers Criteria Update Expert Panel (2015). American Geriatrics Society 2015 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. *Journal of the American Geriatrics Society*. DOI: 10.1111/jgs.13702. <http://onlinelibrary.wiley.com/doi/10.1111/jgs.13702/full>. Accessed Nov. 28, 2018.

²The Pharmacy Quality Alliance Technical Specifications for PQA Approved Measures. July 2018 Edition. Print.

³Joseph T. Hanlon, Todd P. Semla and Kenneth E. Schmader. "Alternative Medications for Medications in the Use of High-Risk Medications in the Elderly and Potentially Harmful Drug-Disease Interactions in the Elderly Quality Measures." *Journal of the American Geriatrics Society* 63.12 (2015): e8-e18.

⁴Source: PL Detail-Document, Potentially Harmful Drugs in the Elderly: Beers List. Pharmacist's Letter/Prescriber's Letter. June 2012.

⁵Starting and Stopping Medications in the Elderly. Pharmacist's Letter/Prescriber's Letter. (2011): 270906

⁶DRUGDEX. Micromedex, Greenwood Village, CO: Truven Health Analytics Inc. 2013. Accessed Nov. 28, 2018. Available from: <http://www.micromedexsolutions.com>.