Selected High Risk Medications to Avoid in Patients Aged 65 Years or Older.
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| Drugs to Avoid[a,1] | Concern[1] | Potential Alternatives[b] |
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| **Antidepressants, tricyclic** (eg, amitriptyline, clomipramine, doxepin at >6 mg/day) | Highly anticholinergic, sedating, and causes orthostatic hypertension | For depression: pharmacotherapy with SSRI (citalopram, escitalopram, sertraline), SNRI (venlafaxine), or others (buproprion, duloxetine) can be selected based on adverse effect profiles, cost, and patient preferences. Consider psychotherapy, ECT, or light therapy.[2] |
| **Antihistamines, first generation** (eg, clemastine, hydroxyzine, promethazine) | Potent anticholinergic properties; may cause sedation, constipation, dry mouth, and impair cognitive performance; clearance reduced in advanced age | OTC second generation antihistamines (eg, cetirizine, fexofenadine, loratadine); third generation antihistamines (eg, levocetirizine). For allergic rhinitis: intranasal corticosteroids.[3] For emesis: consider ondansetron. |
| **Anti-infectives**<br>- Nitrofurantoin | Potential for pulmonary toxicity; lack of efficacy in patients with CrCl <60 mL/min due to inadequate drug concentration in the urine | For uncomplicated cystitis: antibiotic therapy may include fluoroquinolones or TMP-SMX. Consider patient's allergy history and other risk factors and local resistance patterns.[4] |
| **Antiparkinsonian agents**<br>- Benztropine (oral)<br>- Trihexyphenidyl | Highly anticholinergic. Not recommended for prevention of extrapyramidal symptoms with antipsychotics; more effective agents available for treatment of Parkinson's disease | For antipsychotic induced EPS the cornerstones of treatment are prevention, early detection, and management of potentially reversible causes. For Parkinson's disease: carbidopa/levodopa (+/- COMT Inhibitors), dopamine agonists, MAO B inhibitors.[6] |
| **Barbiturates** (eg, phenobarbital) | High rate of physical dependence; tolerance to sleep benefits develops; risk of overdose at low dosages | For epilepsy: consider newer anti-epileptic drugs (eg, lamotrigine, topiramate).[7] |
| **Benzodiazepines, short-, intermediate-, and long-acting** (eg, clonazepam, diazepam, lorazepam) | Older adults have increased sensitivity to benzodiazepines and slower metabolism of long-acting agents. In general, all benzodiazepines increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle accidents in older adults | For anxiety: consider buspirone, SSRIs, SNRIs, and/or CBT.[8] |
| **Cardiovascular agents** | | |
| - Methyldopa | High risk of adverse CNS effects; may cause bradycardia and orthostatic hypotension | Consider alternate antihypertensive therapy (eg, thiazide diuretic, ACEI, ARBs, long-acting dihydropyridine calcium channel blockers).[9] |
| - Digoxin >0.125 mg/day | In heart failure, high dosages are associated with no additional benefit; decreased clearance may lead to risk of toxic effects | Consider rate control before rhythm control; monitor SCr and digoxin levels. |
| **Endocrine agents**<br>- Megestrol | Minimal effect on weight; increases risk of thrombotic events and possibly death in older adults | Maximize nutritional supplementation. Consider mirtazapine for weight gain.[10] |
| **Estrogens +/- progestin, oral and patches** (eg, Premarin, PremPro, Vivelle Dot) | Lack of cardioprotective effect in older women; carcinogenic potential (breast and endometrium) | For osteoporosis: non-estrogen treatments (eg, calcium and vitamin D supplementation or bisphosphonates) For continuing perimenopausal symptoms: reassess need to treat.[11] |

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| **Nonbenzodiazepine hypnotics** (eg, eszopiclone, zolpidem) | Similar adverse effects to benzodiazepines in older adults (eg, delirium, falls, fractures); minimal improvement in sleep latency and duration | Nonpharmacologic therapy (eg, avoid daytime naps and caffeinated beverages, and other sleep hygiene techniques)[12] |
| **Non-COX-selective NSAIDs**<br>- Indomethacin<br>- Ketorolac | Increases risk of GI bleeding and peptic ulcer disease in high-risk groups[2] | Consider a COX-2 selective NSAID (eg, celecoxib) or concomitant gastrointestinal prophylaxis with a PPI in patients with risk factors for bleeding.[13] |
| **Skeletal muscle relaxants** (eg, carisoprodol, cyclobenzaprine, metaxalone, methocarbamol) | Poorly tolerated because of anticholinergic adverse effects, sedation, and weakness; effectiveness at doses tolerated by older patients is questionable[2] | For muscle spasms: nonpharmacologic therapy (eg, physiotherapy, heat or cold, and TENS); short-term acetaminophen, ibuprofen, or naproxen for pain.[14] |
| **Sulfonylureas, long-acting**<br>- Chlorpropamide<br>- Glyburide | Greater risk of severe prolonged hyperglycemia in older adults[2] | Consider glipizide or metformin.[15] |

a Including combination products, if available.

b Refer to a patient's individual plan formulary to determine whether a potential alternative may be covered.

ACEI = angiotensin converting enzyme inhibitor; ARB =angiotensin receptor blocker; CBT = cognitive-behavioral therapy; CNS = central nervous system; COX = cyclooxygenase; ECT = electroconvulsive therapy; EPS = extrapyramidal symptoms; GI = gastrointestinal; MAO-B = monoamine oxidase B; NSAID = nonsteroidal anti-inflammatory drug; OTC = over-the-counter; PPI = proton pump inhibitor; SCr = serum creatinine; SNRI = serotonin-norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TENS = transcutaneous electrical stimulation; TMP-SMX = trimethoprim-sulfamethoxazole.

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