



### Drug-Disease Interaction: Medications and Fall Risk in Older Adults

Falls are the leading cause of injury-related death among adults aged 65 and older in the United States.<sup>1</sup> According to the Centers for Disease Control and Prevention (CDC), there are approximately three million emergency department visits for older adults due to falls each year.<sup>2</sup> The use of some medications may increase the risk of falls. A 2022 analysis of drug-induced fall events found that the largest contributors were neurological drugs, including antipsychotics, antidepressants, anticonvulsants and hypnotic sedatives.<sup>3</sup> Fall risk reduction interventions may reduce serious injuries, emergency department visits, hospitalizations, nursing home placements and functional decline. If the use of a high fall risk medication is required, use should be at the minimum effective dose and duration while monitoring for falls.<sup>4</sup>

An important Healthcare Effectiveness Data and Information Set (HEDIS) measure assesses the use of medications with the potential to cause harmful drug-disease interactions in patients 65 years and older with a history of fall or hip fracture.<sup>5</sup> Consider the following alternatives to reduce the risk of falls:

Drug Class	Medications to Avoid <sup>4,5*</sup>		Potential Alternatives <sup>4,5,6</sup>
<b>Antiepileptics</b>	carbamazepine divalproex ethosuximide felbamate fosphenytoin gabapentin lamotrigine	levetiracetam oxcarbazepine phenobarbital phenytoin pregabalin topiramate valproic acid	<ul style="list-style-type: none"> <li>For new-onset epilepsy: newer agents such as lamotrigine and levetiracetam are preferred</li> <li>For neuropathic pain: OTC capsaicin topical or low-dose duloxetine for shortest duration possible</li> <li>For post-herpetic neuralgia: lidocaine patch</li> <li>For diabetic neuropathy: lidocaine patch</li> </ul>
<b>Antipsychotics</b>	aripiprazole brexpiprazole cariprazine clozapine fluphenazine haloperidol	lurasidone olanzapine paliperidone quetiapine risperidone ziprasidone	<ul style="list-style-type: none"> <li>For delirium: low-dose quetiapine<sup>‡</sup> may be used for shortest duration possible if nonpharmacological approaches have failed and patient may harm self or others</li> </ul>
<b>Benzodiazepines</b>	alprazolam clonazepam diazepam estazolam	lorazepam oxazepam temazepam triazolam	<ul style="list-style-type: none"> <li>For anxiety: buspirone, mirtazapine<sup>‡</sup></li> <li>For insomnia: low-dose doxepin (≤6mg), ramelteon, trazodone<sup>‡</sup>, mirtazapine<sup>‡‡</sup></li> </ul>
<b>Nonbenzodiazepine hypnotics</b>	eszopiclone zaleplon	zolpidem	<ul style="list-style-type: none"> <li>For insomnia: low-dose doxepin (≤6mg), ramelteon, trazodone<sup>‡</sup>, mirtazapine<sup>‡‡</sup></li> </ul>
<b>Selective serotonin reuptake inhibitors (SSRIs)</b>	citalopram escitalopram fluoxetine	fluvoxamine paroxetine sertraline	<ul style="list-style-type: none"> <li>For depression: bupropion, trazodone, mirtazapine</li> <li>For anxiety: buspirone, mirtazapine<sup>‡</sup></li> </ul>
<b>Serotonin-norepinephrine reuptake inhibitors (SNRIs)</b>	desvenlafaxine duloxetine	levomilnacipran venlafaxine	<ul style="list-style-type: none"> <li>For depression: bupropion, trazodone, mirtazapine</li> <li>For anxiety: buspirone, mirtazapine<sup>‡</sup></li> <li>For neuropathic pain: OTC capsaicin topical or low-dose duloxetine for shortest duration possible</li> </ul>
<b>Tricyclic antidepressants</b>	amitriptyline clomipramine doxepin (>6 mg)	imipramine nortriptyline	<ul style="list-style-type: none"> <li>For depression: bupropion, trazodone, mirtazapine</li> <li>For neuropathic pain: OTC capsaicin topical or low-dose duloxetine for shortest duration possible</li> </ul>

\*Not a comprehensive list; ‡Off-label; ‡‡For adults with insomnia secondary to comorbid dysthymic disorder

#### References

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