

Medications and the Risk of Falling

Which drugs can increase the risk of falls?

In theory ANY drug that causes one of the following effects can increase the risk of falling:

- Drowsiness
- Dizziness
- Hypotension
- Parkinsonian effects
- Ataxia/gait disturbance
- Vision disturbance

As well, theoretically ANY drug that causes the following effects can increase the risk of a serious outcome if an individual falls:

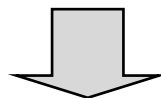
- Osteoporosis or reduced bone mineral density: Increased risk of fracture if a fall occurs
- Bleeding risk: Increased risk of a cerebral hemorrhage if a fall occurs

What can be done if you are taking a drug that can increase the falls risk?

Individualize treatment. Drugs are just one of many factors that can increase the risk of falling.

Assessment: Are you at high risk?

- Have you had a slip, trip, near fall or fall in the last 6 months?**
- Are you **taking a drug that can cause the effects listed above** (see attached list of drugs)
- Are you taking a **high dose of the drug?**
- Are you **displaying any of the adverse effects listed above**, such as drowsiness?
- Are you over the age of 65? Elderly patients may be more sensitive to adverse drug effects because of alterations in the way that the body absorbs, distributes or eliminates the drug.
- Are you **taking more than one drug that increases the falls risk?**
- Are you at **high risk of falling for other, non-drug reasons?**
- Is it **difficult for you or your doctor to monitor** for an adverse drug effect?



Consider intervention, especially if you have assessed the patient as high risk:

- Consider risk/benefit ratio: Does the benefit of the drug outweigh a possible risk of falling?
- Is there a safer drug or non-drug alternative?
- Is it possible to minimize the dose without losing the benefit of the drug?

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Examples of drugs that can increase the risk of falling, or of a serious outcome if a fall occurs (and possible mechanisms)

ACE Inhibitors (3)	Methsuximide (1,2,5)	Cyproheptadine	Digoxin (mechanism unknown)	Fentanyl
Benazepril	Oxcarbazepine (1,2,5,6)	Diphenhydramine		Hydromorphone
Captopril	Phenobarbital (1,2)	Hydroxyzine		Meperidine
Cilazapril	Phenytoin (1,2,5,7)	Meclizine		Methadone
Enalapril/enalaprilat	Primidone (1,2)	Promethazine	Eye drops (6)	Morphine
Fosinopril	Topiramate (1,2)	Trimeprazine		Oxycodone
Lisinopril	Valproic acid (1,2,5)			Oxymorphone
Perindopril	Vigabatrin (1,2)	Antipsychotics (1,3,4)	Herbal and Natural health products	Nalbuphine
Quinapril		Chlorpromazine	Natural sleep aids	Pentazocine
Ramipril		Clozapine	Natural products	Propoxyphene
Trandolapril		Flupenthixol	for sexual enhancement (possible adulteration with undeclared drugs)	Sufentanil
		Fluphenazine		
Alcohol (1,5)	Antidepressants (1,2,3,6)	Haloperidol	Metoclopramide (1,2,4)	Proton Pump Inhibitors (9)
	Amitriptyline	Loxapine		Esomeprazole
Alpha Receptor Blockers (2,3, especially initial doses)	Bupropion	Methotrimeprazine		Lansoprazole
Alfuzosin	Citalopram	Olanzapine		Omeprazole
Doxazosin	Clomipramine	Paliperidone		Pantoprazole
Prazosin	Desipramine	Perphenazine		Rabeprazole
Tamsulosin	Doxepin	Pimozide		
Terazosin	Escitalopram	Pipotiazine		Sedative/hypnotics
	Fluoxetine	Prochlorperazine		Benzodiazepines
	Fluvoxamine	Quetiapine	Muscle Relaxants (1,2)	Barbiturates (1,2,5)
	Imipramine	Risperidone	Baclofen	Alprazolam
	Maprotiline	Thiopropazine	Carisoprodol	Bromazepam
Anticoagulants (8)	Mirtazapine	Thiothixene	Chlorzoxazone	Chloral hydrate
Dalteparin	Moclobemide	Trifluoperazine	Cyclobenzaprine	Clorazepate
Danaparoid	Nortriptyline	Zuclopenthixol	Dantrolene	Diazepam
Enoxaparin	Paroxetine		Methocarbamol	Diphenhydramine
Heparin	Phenelzine 1,2,3		Orphenadrine	Doxylamine
Nadroparin	Sertraline	Corticosteroids, oral (7)	Tizanidine	Flurazepam
Nicoumalone	Tranlycypromine 2,3	<i>Corticosteroids, inhaled, high-dose</i> (7)		Lorazepam
Tinzaparin	Trazodone	Beclomethasone	Nitrates (2,3)	Midazolam
Warfarin	Trimipramine	Betamethasone	Isosorbide dinitrate	Nitrazepam
	Venlafaxine	Budesonide	Isosorbide mononitrate	Oxazepam
		Cortisone	Nitroglycerin	Pentobarbital
Anticonvulsants (1,2,5,6,7)		Dexamethasone		Phenobarbital
Carbamazepine (1,2,6)	Antihistamines, sedating (1)	Fludrocortisone	NSAIDs	Temazepam
Ethosuximide (1,2,5)	<i>Cold Medications that contain sedating antihistamines</i> (1)	Fluticasone	ASA/acetylsalicylic acid (8)	Triazolam
Fosphenytoin (1,2,5,7)	Azatadine	Hydrocortisone		Zopiclone
Gabapentin (1,2,5,6)	Brompheniramine	Methylprednisolone	Opiates/narcotics (1,2,3)	
Lamotrigine (1,2,6)	Cetirizine	Prednisolone	Alfentanil	Thiazolidinediones (7)
Levetiracetam (1,2,5)	Chlorpheniramine	Prednisone	Butorphanol	Pioglitazone
	Clemastine	Triamcinolone	Codeine	Rosiglit

Possible mechanisms (often unclear): (1) Drowsiness; (2) Dizziness; (3) Hypotension; (4) Parkinsonian effects; (5) Ataxia/gait disturbance; (6) Vision disturbance; (7) Osteoporosis or reduced bone mineral density increases the fracture risk if a fall occurs; (8) Risk of serious bleeding if a fall occurs. Drugs are listed by generic (chemical) name under each drug group. For Brand (manufacturer's) names, check in the CPS to find the generic name. This list includes only those drugs for which there is evidence of increased risk of falls or their consequences. There may be other drugs that increase this risk in certain patients.