

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 the patient 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 a patient is 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: Is this patient at high risk?

- Has the patient had a slip, trip, near fall or fall in the last 6 months?**
- Is the patient **taking a drug that can cause the effects listed above** (see attached list of drugs)
- Is the patient taking a **high dose of the drug?**
- Is the patient **displaying any of the adverse effects listed above**, such as drowsiness?
- Is the patient **elderly?** 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.
- Is the patient **taking more than one drug that increases the falls risk?**
- Is the patient at **high risk of falling for other, non-drug reasons?**
- Is it **difficult to monitor** the patient 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?

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