

Guidance 4: Medicines and Falls Risk in Care Homes

Purpose:

This serves as a reference guide to raise awareness of medicines that can cause or contribute to falls in older people.

Summary:

Falls don't "just happen", often, more than one underlying cause or risk factor is involved. As the number of risk factors increases, so does the risk of falling. Many falls are linked to a person's physical condition and/or a medical problem. Other risk factors could be hazards in the person's home or community environment.

Some medications can increase a person's risk of falling because of its action or associated side effects like dizziness, sedation, confusion, low blood pressure or postural hypotension. Older people are more vulnerable to the side effects of medications because of age related changes to the liver, kidney, central nervous system and heart.

Key Messages

- Falls may be due to recent medication changes, but are usually caused by medicines that have been given for a long time without appropriate review
- The more medications a person takes the greater the falls risk. The significance of side effects is likely to increase if people are taking medications with similar side effects
- The risk of having a fall increases with the number of risk factors below. Those with 4 or more risk factors are considered at the greatest risk of having a fall
- The most common reasons for medications to cause falls are:
 - **Sedation** leading to impaired balance and slowed responses
 - **Postural hypotension**, a drop in blood pressure on standing

Risk factors include: Previous falls, poor mobility, muscle weakness, postural hypotension, low blood pressure, sedating medications, balance disorder, dementia or cognitive impairment, visual and hearing problems, and taking greater than 1unit/day of alcohol.

Advice

- **Any resident that has had an acute fall should have a medication review by their GP usually within two weeks aiming to reduce, stop or change any medications that may be causing sedation or having an effect on blood pressure**
- **Alert GP's to any changes in a resident's mobility, balance, coordination or alertness especially following any medication changes**

A list of most commonly prescribed drugs that can contribute to falls risk is attached.

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*Commonly prescribed drugs that can contribute to falls

This list is to raise awareness of most commonly prescribed drugs that can contribute to falls risk. The grading of the drugs has been adapted from the Medicines and Falls in Hospital: Guidance Sheet by John Radcliffe Hospital, Oxford, March; 2011 and approved by the British Geriatrics Society.

Key to the table

High risk: can commonly cause falls alone or in combination
Moderate risk: can cause falls especially in combination
Possibly causes fall, particularly in combination

DRUG NAME	COMMON USE	EFFECTS ON FALL RISK
Alfluzosin	Benign prostatic hyperplasia	Postural hypotension.
Alimemazine	Urticaria and pruritus	Drowsiness and blurred vision.
Amitriptyline	Depression	Postural hypotension, drowsiness, slow reactions, impaired balance.
Amlodipine	Hypertension, Angina	Low blood pressure, Postural hypotension.
Atenolol	Hypertension, Angina, Arrhythmia	Low blood pressure, Postural hypotension, slow heart rate
Baclofen	Severe spasticity of voluntary muscle	Sedation and reduced muscle tone.
Bendroflumethiazide	Oedema, Hypertension	Low blood pressure, Postural hypotension and sedation.
Betahistine	Vertigo, tinnitus	Sedation.
Bisoprolol	Hypertension, Angina, Heart failure	Low blood pressure, Postural hypotension, slow heart rate
Bumetanide	Oedema	Low blood pressure, Postural hypotension.
Candesartan	Hypertension, Heart failure	Low blood pressure,.
Captopril	Hypertension, Heart failure	Low blood pressure, Postural hypotension.
Carbamazepine	Epilepsy	Sedation, slow reactions, unsteadiness and lack of movement control.
Carvedilol	Hypertension, Angina, Heart failure	Low blood pressure, Postural hypotension, slow heart rate
Chlordiazepoxide	Anxiety, acute alcohol withdrawal	Drowsiness, slow reactions, impaired balance.
Chlorphenamine	Allergy and urticaria	Drowsiness and blurred vision.
Chlorpromazine	Psychosis	Postural hypotension, sedation, slow reflexes, loss of balance.
Chlorthalidone	Oedema, Hypertension, Heart failure	Low blood pressure, Postural hypotension and sedation.
Cinnarazine	Nausea, vomiting, vertigo, tinnitus	Sedation.
Citalopram	Depression	Postural hypotension, Confusion.
Clomipramine	Depression, phobia	Postural hypotension, drowsiness, slow reactions, impaired balance.
Clonazepam	Epilepsy	Drowsiness, slow reactions, impaired balance.
Clonidine	Hypertension, migraine	Low blood pressure, Postural hypotension and sedation.
Dantrolene	Severe spasticity of voluntary muscle	Sedation and reduced muscle tone.
Diazepam	Insomnia or anxiety	Drowsiness, slow reactions, impaired balance.
Digoxin	Heart Failure	Slow heart rate
Diltiazem	Hypertension, Angina	Low blood pressure, Postural hypotension.
Donepezil	Dementia	Fainting.
Dosulepin	Depression	Postural hypotension, drowsiness, slow reactions, impaired balance.
Doxazosin	Hypertension	Low blood pressure, Postural hypotension.
Doxepin	Depression, pruritus in eczema	Low blood pressure, Postural hypotension, drowsiness, slow reactions, impaired balance.
Duloxetine	Depression, anxiety disorder	Postural hypotension, Sedation, dizziness, confusion.
Enalapril	Hypertension, Heart failure	Low blood pressure, Postural hypotension.
Eprosartan	Hypertension	Low blood pressure,
Felodipine	Hypertension, Angina	Low blood pressure, Postural hypotension.
Fluoxetine	Depression	Confusion.
Fluphenazine	Psychosis	Postural hypotension, sedation, slow reflexes, loss of balance.
Flurazepam	Insomnia	Drowsiness, slow reactions, impaired balance.
Furosemide	Oedema, hypertension	Low blood pressure, Postural hypotension.
Gabapentin	Chronic pain	Postural hypotension, sedation, unsteadiness
Galantamine	Dementia	Fainting.
Glyceryl trinitrate (GTN)	Angina	Postural hypotension.
Haloperidol	Psychosis	Postural hypotension, sedation, slow reflexes, loss of balance.
Hydroxyzine	Puritus	Drowsiness and blurred vision.
Imipramine	Depression	Postural hypotension, drowsiness, slow reactions, impaired balance.
Indoramin	Hypertension	Low blood pressure, Postural hypotension.
Irbesartan	Hypertension	Low blood pressure

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Isocarboxazid	Depression	Postural hypotension.
Isosorbide mononitrate	Angina	Postural hypotension.
Lercanidipine	Hypertension	Low blood pressure, Postural hypotension.
Lisinopril	Hypertension, Heart failure	Low blood pressure, Postural hypotension.
Lofepramine	Depression	Postural hypotension, drowsiness, slow reactions, impaired balance.
Lorazepam	Insomnia or anxiety	Drowsiness, slow reactions, impaired balance.
Lortemazepam	Insomnia	Drowsiness, slow reactions, impaired balance.
Losartan	Hypertension, Heart failure	Low blood pressure
Metolazone	Oedema, Hypertension	Low blood pressure, Postural hypotension and sedation.
Metoprolol	Hypertension, Angina, Arrhythmia	Low blood pressure, Postural hypotension, slow heart rate
Mianserin	Depression	Postural hypotension, drowsiness, slow reactions, impaired balance.
Mirtazapine	Depression	Postural hypotension, drowsiness, slow reactions, impaired balance.
Moxonidine	Hypertension	Low blood pressure, Postural hypotension and sedation.
Nicorandil	Angina	Postural hypotension.
Nifedipine	Hypertension, Angina	Low blood pressure, Postural hypotension.
Nitrazepam	Insomnia	Drowsiness, slow reactions, impaired balance.
Nortriptyline	Depression, neuropathic pain	Postural hypotension, drowsiness, slow reactions, impaired balance.
Olanzapine	Psychosis and agitation	Postural hypotension, sedation, slow reflexes, loss of balance.
Olmesartan	Hypertension	Low blood pressure
Oxazepam	Anxiety	Drowsiness, slow reactions, impaired balance.
Oxybutinin	Urinary incontinence	Drowsiness, dizziness and blurred vision.
Paroxetine	Depression	Postural hypotension, Confusion.
Perindopril	Hypertension, Heart failure	Low blood pressure, Postural hypotension.
Phenelzine	Depression	Postural hypotension.
Phenobarbitone	Epilepsy	Sedation, slow reactions, unsteadiness and lack of movement control.
Phenytoin	Epilepsy	Unsteadiness and lack of movement control.
Pramipexole	Parkinson's disease	Delirium and Postural hypotension.
Prazosin	Hypertension	Postural hypotension.
Pregabalin	Epilepsy and neuropathic pain	Sedation.
Prochlorperazine	Nausea, vomiting, vertigo	Movement disorder in long term use.
Promethazine	Allergy and urticaria	Drowsiness and blurred vision.
Propranolol	Hypertension, Angina, Arrhythmia	Low blood pressure, Postural hypotension, slow heart rate
Quetiapine	Psychosis and agitation	Postural hypotension, sedation, slow reflexes, loss of balance.
Ramipril	Hypertension, Heart failure	Low blood pressure, Postural hypotension.
Risperidone	Psychosis and agitation	Postural hypotension, sedation, slow reflexes, loss of balance.
Rivastigmine	Dementia	Fainting.
Ropinirole	Parkinson's disease	Delirium and Postural hypotension.
Selegiline	Parkinson's disease	Postural hypotension.
Sertraline	Depression	Postural hypotension, Confusion.
Solifenacin	Urinary incontinence	Drowsiness, dizziness and blurred vision.
Sotalol	Arrhythmia	Low blood pressure, Postural hypotension, slow heart rate
Tamsulosin	Benign prostatic hyperplasia	Postural hypotension.
Telmisartan	Hypertension	Low blood pressure
Temazepam	Insomnia	Drowsiness, slow reactions, impaired balance.
Terazocin	Benign prostatic hyperplasia	Postural hypotension.
Timolol eye drops	Glaucoma	Postural hypotension, slow heart rate
Tolterodine	Urinary incontinence	Drowsiness, dizziness and blurred vision.
Tranlycypromine	Depression	Postural hypotension.
Trazodone	Depression, anxiety	Postural hypotension, drowsiness, slow reactions, impaired balance.
Trimipramine	Depression	Postural hypotension, drowsiness, slow reactions, impaired balance.
Venlafaxine	Depression	Postural hypotension, Sedation, dizziness, confusion.
Verapamil	Hypertension, Angina, Arrhythmia	Low blood pressure Postural hypotension.
Zolpidem	Insomnia	Drowsiness, slow reactions, impaired balance.
Zopiclone	Insomnia	Drowsiness, slow reactions, impaired balance.