

Commonly Prescribed Drugs that May Contribute to Falls

This classification has been based upon a review of the clinical evidence of medicines implicated in falls and from an analysis of the most commonly used drugs with side effect profiles associated with an increase in falls risk.

The list is not meant to be fully comprehensive but intended to raise awareness of the types of drugs that can contribute to falls. Drugs have been graded as either a high, moderate or low risk in terms of their 'potential to cause falls'.

HIGH RISK DRUGS

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| Antidepressants | Avoid Tricyclic antidepressants esp TCAs with high anti-muscarinic activity eg Amitriptyline. SSRIs are associated with a reduced incidence of side effects in the elderly. Trial of gradual withdrawal should be attempted for all anti-depressants after 6-12 months of initial treatment. |
| Antipsychotics including atypicals | Risk of hypotension is a dose related effect reduced by the 'start low go slow approach.' Attempted withdrawal MUST always be gradual to avoid precipitation of withdrawal symptoms e.g. rebound agitation etc. All anti-psychotics are capable of inducing extra-pyramidal disorders although incidence is less with atypicals. The phenothiazine Prochlorperazine (Stemetil) is frequently inappropriately prescribed for dizziness due to postural instability and the most frequently implicated drug causing drug induced Parkinson's disease. |
| Anti-muscarinic drugs (Anticholinergics) | Anti-muscarinic drugs are used in treatment of urinary incontinence and in Parkinson's disease. Oxybutynin may cause acute confusional states in the elderly especially those with pre-existing cognitive impairment. |
| Benzodiazepines & Hypnotics | Whilst complete withdrawal may not be an achievable goal there is still benefit to be gained in reducing use to the minimum effective dose. (Ref BNF). Avoid long acting benzodiazepines e.g. Nitrazepam. Newer hypnotics e.g. Zopiclone are associated with reduced hangover effects but all licensed for short-term use only. |
| Dopaminergic drugs used in Parkinson's disease | Sudden excessive daytime sleepiness can occur with Levodopa and other dopamine receptor agonists. Careful dose titration is particularly important in initiation of treatment because of additional risk of inducing confusion. As the patient ages, maintenance doses may need to be reduced. |

MODERATE RISK DRUGS

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| ACE inhibitors / Angiotensin II antagonists | Risk of hypotension is potentiated by concomitant diuretic use. Incidence of dizziness varies from 4-12% of patients but affects twice as many patients with heart failure than hypertension. |
| Alpha-blockers | Doses used for treatment of BPH less likely to cause hypotension than those required to treat hypertension. |
| Anti-arrhythmics | Dizziness and drowsiness are possible signs of Digoxin toxicity - risks of toxicity greater in renal impairment or in the presence of hypokalaemia. Flecainide has a high risk for drug interactions and can also cause dizziness. |
| Anti-epileptics | Group with high risk for potential drug interactions. Incidence of dizziness drowsiness and blurred vision are dose related side effects observed with Carbamazepine but may be reduced by altering timing or choice of formulation. Phenytoin side effects such as dizziness blurred vision etc. may be signs of drug related toxicity. |
| Anti-histamines | Somnolence may affect up-to 40% of patients with older antihistamines e.g. Chlorpheniramine. The newer anti-histamines e.g. Desloratadine cause less sedation and psychomotor impairment. Risk of hypotension with Cinnarizine is a dose related side effect. |
| Beta-blockers | Reports of dizziness may be due to postural hypotension and can affect up to 10% of patients. Water-soluble beta-blockers can accumulate in renal impairment and therefore dose reduction is often necessary. |
| Diuretics | Postural hypotension, dizziness and nocturia are the most frequent problems seen in the elderly. Diuretics should <u>not</u> be prescribed for long-term use in the treatment of gravitational oedema. |
| Opiate analgesics | Drowsiness and sedation common with initiation of treatment but tolerance to these side effects is usually seen within 2 weeks of continuous treatment. Drowsiness and sedation is rare with Codeine unless concurrently used in combination with other drugs with CNS effects. Confusion also reported with Tramadol. |

LOW RISK DRUGS

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| Calcium Channel Blockers | Incidence dizziness low especially for once daily dihydropyridone calcium channel blockers e.g. Felodipine |
| Nitrates | Dizziness may be due to postural hypotension. Advise patient to sit when using GTN spray or tablets |
| Oral anti-diabetic drugs | Dizziness due to hypoglycaemia but usually avoidable. Avoid long acting sulphonylureas e.g. Chlorpropamide. |
| Proton Pump Inhibitors (PPIs) & H₂ Antagonists | Avoid Cimetidine in polypharmacy patients - high risk of potential drug interactions. Cimetidine also associated with causing confusion in the elderly. Reports of dizziness, somnolence are uncommon and mental confusion or blurred vision rare with the other PPIs and H ₂ antagonists |

Produced by Maria Smith On behalf of WAM Falls in Elderly Steering Group

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REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.