

# Medication review: Reducing the risk of falls - Information for GPs

In patients taking medicines known to contribute to falls, medication review can play an important part in falls prevention. The aim of the review should be to modify or withdraw the drug, if this is not possible, close monitoring is required.

## Key points

- Patients who have fallen are at high risk for a repeat fall. The mortality risk from a fall at age 85 is about 1% per fall.<sup>1</sup>
- Older people ( $\geq 65$  years of age) have altered pharmacokinetics and may be more “sensitive” to medications.
- Renal function impairment may result in accumulation of medication and increased risk of adverse reactions.
- Patients taking  $\geq 4$  prescription drugs, regardless of pharmacologic classification, are at an increased risk for falls.<sup>2</sup>
- There are two classes of drugs that have the highest propensity to cause falls, those acting on the brain and those acting on the heart and circulation. See attachment 1 for more information on individual drugs.
- Orthostatic hypotension is often caused by medication and leads to falls in older adults.<sup>3</sup>
- 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, e.g. long term use of steroids: Increased risk of fracture if a fall occurs.
  - » Bleeding risk e.g. anticoagulants: Increased risk of a cerebral haemorrhage if a fall occurs.

## Symptomatic hypotension in systolic cardiac failure<sup>2</sup>

- Liaise with the consultant for patients with symptomatic hypotension in systolic cardiac failure and review all medicines the patient is taking.
- ACEIs and beta blocker have a survival benefit in systolic cardiac failure and should be maintained whenever possible.
- Most cardiac failure in older people is diastolic (preserved left ventricular function). ACEIs and beta blockers have little survival benefit in diastolic failure.

## Key actions

- 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?
- To screen for postural hypotension lying and standing blood pressures should be performed. (Remember to keep the instrument at the level of the patient’s heart both when they are lying and when they are standing). Orthostatic hypotension is defined as a drop in BP (usually  $>20/10$  mm Hg) within three minutes of standing.<sup>4</sup>

- Symptomatic orthostatic hypotension can be reversed by non-pharmacological interventions. These include advice on avoiding:<sup>3</sup>
  - » Sudden head-up postural change (especially first thing in the morning)
  - » Hunger
  - » Dehydration
  - » Excessive heat
  - » Large meals especially with alcohol
  - » Straining (when passing stool)

The use of compression hosiery to increase venous return is an option for low blood pressure (in the absence of any signs of arterial disease, e.g. intermittent claudication).

If non-pharmacological interventions fail, pharmacological interventions may be required. These include use of blood pressure elevating drugs such as fludrocortisone, corrective measures such as use of slow sodium 2g-10g/day or laxatives to prevent straining.

## REMEMBER

Medicines are just one of many factors that can increase the risk of falling. Others include:

- Motor problems
- Physical problems
- Environmental problems
- Cognitive problems
- Behavioural problems
- Cardiovascular problems
- Neurological problems.

## References

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