

Medication and the Risk of Falls in Older People

Falls and fall-related injuries are a common and a serious problem for older people. Whilst there can be many contributing factors, the use of certain medications is recognised as a major and modifiable risk factor for falls. Therefore, **a full medication review** should form part of the assessment for people with a history of falls. A medication review should include modification or withdrawal of **Fall-Risk-Increasing Drugs (FRIDs)**, where possible. One of the prominent risk factors is the use of FRIDs.

To support clinicians in the management of FRIDs when performing a medication review, and to facilitate the deprescribing process, the **STOPPFall (Screening Tool of Older Persons Prescriptions in older adults with high fall risk)** and a **deprescribing tool** have been developed by a European expert group (see table below).

For any medication, withdrawal should always be considered where there is no indication for prescribing or if a safer alternative is available. In addition, the deprescribing guidance for the STOPPFall medication classes outlines in which cases to consider withdrawal, whether stepwise withdrawal is needed and whether monitoring is advised after deprescribing. Withdrawal of medication should ALWAYS be done under the supervision of a suitable clinician.

The table below includes the **STOPPFall** medication classes and **deprescribing guidance**.

Medication class	Commonly used medications within the class	Consider withdrawal if any of the following occur	Stepwise withdrawal needed?	Monitoring after deprescribing?
Benzodiazepines and benzodiazepine-related drugs*	Chlordiazepoxide, clonazepam, diazepam, flurazepam, lorazepam, lormetazepam, nitrazepam, oxazepam, temazepam, zolpidem, zopiclone	Daytime sedation, cognitive impairment, or psychomotor impairments. If given for both indications: sleep and anxiety disorder.	In general, stepwise withdrawal needed.	Monitor: anxiety, insomnia, agitation. Consider monitoring: delirium, seizures, confusion.
Antipsychotics*	Amisulpiride, aripiprazole, chlorpromazine, fluphenazine, haloperidol, olanzapine, quetiapine, risperidone, sulpiride, trifluoperazine	Extrapyramidal or cardiac side effects, sedation, signs of sedation, dizziness, or blurred vision. If given for behavioural and psychosocial symptoms of dementia (BPSD) or sleep disorder, possibly if given for bipolar disorder.	In general, stepwise / gradual withdrawal needed.	Monitor: recurrence of symptoms (e.g. psychosis, aggression, agitation, delusion, hallucination) Consider monitoring: insomnia
Opioids	Buprenorphine, codeine (including co-codamol, co-dydramol, dihydrocodeine), fentanyl, methadone, morphine, oxycodone, tramadol	Slow reactions, impaired balance, or sedative symptoms If given for chronic pain, and possibly if given for acute pain	In general, stepwise / gradual withdrawal needed.	Monitor: recurrence of pain Consider monitoring: musculoskeletal symptoms, restlessness, gastrointestinal symptoms, anxiety, insomnia, diaphoresis, anger, chills
Antidepressants*	Amitriptyline, citalopram, clomipramine, dosulepin, doxepin, duloxetine, fluoxetine, imipramine, isocarboxazid, lofepramine, mianserin, mirtazapine, nortriptyline, paroxetine, phenelzine, promazine, sertraline, tranylcypromine, trazodone, trimipramine, venlafaxine	Hyponatremia, orthostatic hypotension (OH), dizziness, sedative symptoms, or tachycardia/arrhythmia If given for depression (depends on symptom-free time and history of symptoms), or if given for sleep disorder, and possibly if given for neuropathic pain or anxiety disorder	In general, stepwise / gradual withdrawal needed.	Monitor: recurrence of depression, anxiety, irritability and insomnia Consider monitoring: headache, malaise, gastrointestinal symptoms

Medication class	Commonly used medications within the class	Consider withdrawal if any of the following occur	Stepwise withdrawal needed?	Monitoring after deprescribing?
Antiepileptics	Carbamazepine, gabapentin, lamotrigine, levetiracetam, phenobarbitone, phenytoin, pregabalin, sodium valproate, topiramate	Ataxia, somnolence, impaired balance, or possibly dizziness If given for anxiety disorder or neuropathic pain	Consider stepwise / gradual withdrawal	Monitor: recurrence of seizures (seek immediate medical advice) Consider monitoring: anxiety, restlessness, insomnia, headache
Diuretics	Bendroflumethiazide, bumetanide, chlorthalidone, furosemide, indapamide, metolazone	OH, hypotension, or electrolyte disturbance and possibly urinary incontinence Possibly if given for hypertension	Consider stepwise / gradual withdrawal	Monitor: symptoms of heart failure, hypertension (monitor blood pressure), signs of fluid retention
Alpha blockers used as antihypertensives or for prostate hyperplasia	Alfluzosin, doxazosin, indoramin, prazosin, tamsulosin, terazosin	Hypotension, OH, or dizziness	Consider for if used for blood pressure. Generally, not needed for prostate hyperplasia	Antihypertensive: Monitor: hypertension Consider monitoring: palpitations, headache Prostate: Monitor: return of symptoms
Centrally acting antihypertensives	Clonidine, methyl dopa, moxonidine	Hypotension, OH, or sedative symptoms	Consider stepwise / gradual withdrawal	Monitor: hypertension
Sedative antihistamines	Chlorphenamine, hydroxyzine, promethazine, alimemazine (trimeprazine)	Confusion, drowsiness, dizziness, or blurred vision If given for all indications: hypnotic/ sedative, chronic itch, allergic symptoms	Consider stepwise / gradual withdrawal	Monitor: return of symptoms Consider monitoring: insomnia, anxiety
Vasodilators in cardiac disease	ACE inhibitors (including captopril, enalapril, fosinopril, imidapril, lisinopril, perindopril, quinapril, ramipril), glyceryl trinitrate, hydralazine, isosorbide mononitrate, minoxidil	Hypotension, OH, or dizziness	Consider stepwise / gradual withdrawal	Monitor: symptoms of Angina Pectoris (e.g. chest pain, nausea, shortness of breath etc.)
Overactive bladder and incontinence medications	Oxybutynin, solifenacin, tolterodine	Dizziness, confusion, blurred vision, drowsiness, or increased QT-interval	Consider stepwise / gradual withdrawal	Monitor: return of symptoms

*Support for prescribing for mental health conditions in older people can be found at: <https://www.england.nhs.uk/wp-content/uploads/2017/09/practice-primer.pdf>

Reference used:

- [PrescQIPP C.I.C. Medication and falls, Bulletin 300, February 2022](#)

Other references to support with reviews:

- Decision trees to support review - <https://kik.amc.nl/falls/decision-tree/>
- Relevant deprescribing algorithms can also be found at: <https://www.prescqipp.info/our-resources/webkits/polypharmacy-and-deprescribing/>
- [PrescQIPP IMPACT bulletin](#) provides additional advice on clinical risk, deprescribing priority and withdrawing and/or tapering medicines.