Dizziness in the Elderly and Falls:

A Structured, Evidence-Based Approach for General Clinicians

Vestibular Medicine for General Clinicians

Topic 10 of 14

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How to Use This Review

This literature review is part of the Vestibular Medicine for General Clinicians series published by the Australian Dizziness Clinics Education Hub. It is written for general practitioners, hospital generalists, nursing, and allied health staff who assess and manage older patients presenting with dizziness or falls.

The review is designed to be read in a single 20–30 minute sitting, or used as a desktop reference. It is supported by an A4 one-page cheat sheet, short-form clinician videos, and audio episodes that cover the same material.

Callout Box Guide

☐ **Key Point:** Foundational concepts and summary statements that anchor the core clinical content of each section.

☐ **Clinical Insight:** Clinically relevant observations for direct application in assessment and management.

☐ **Clinical Pearl:** High-yield memorable clinical points — the take-home messages most likely to change practice.

☐ **Important:** Red flags, emergencies, and critical safety points requiring immediate action.

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I. Why Dizziness in Older Adults is Different

Dizziness in the older adult is one of the most common, costly, and under-investigated symptoms in primary care. Approximately 30% of community-dwelling adults over 65 report regular dizziness, and prevalence rises to over 50% beyond age 80 [1,2]. It is consistently among the top five reasons older patients consult their GP, and is independently associated with falls, hospitalisation, loss of independence, depression, and mortality [3,4].

Despite this burden, dizziness in older adults is frequently dismissed as an inevitable feature of ageing, attributed to a single cause without further enquiry, or treated empirically with vestibular suppressants. Each of these errors carries clinical cost. Treating older dizziness as one diagnosis rather than as a syndrome systematically misses reversible contributors. Empirical suppressants — particularly prochlorperazine, promethazine, and benzodiazepines — increase falls risk and impair central compensation [5,6].

This review reframes dizziness in the older adult as a multifactorial geriatric syndrome, akin to delirium or incontinence: rarely caused by a single pathology, often improvable when each contributing system is identified and treated, and dangerous when ignored. The general clinician's role is not to make a single unifying diagnosis but to identify the dominant contributors and address them in parallel.

□ **Key Point:** Dizziness in the older adult is a multifactorial geriatric syndrome, not a single diagnosis. Up to 75% of older patients with chronic dizziness have three or more contributing causes — vestibular, orthostatic, visual, proprioceptive, central, or medication-related.

II. The Multifactorial Model of Geriatric Dizziness

The single most useful conceptual shift in managing the older dizzy patient is the move from 'find the cause' to 'find the causes'. Tinetti's seminal work in the 1990s established that older patients with chronic dizziness average 3.5 contributing diagnoses, and that addressing each contributor in parallel improves dizziness severity and falls risk to a far greater extent than any single intervention [7,8].

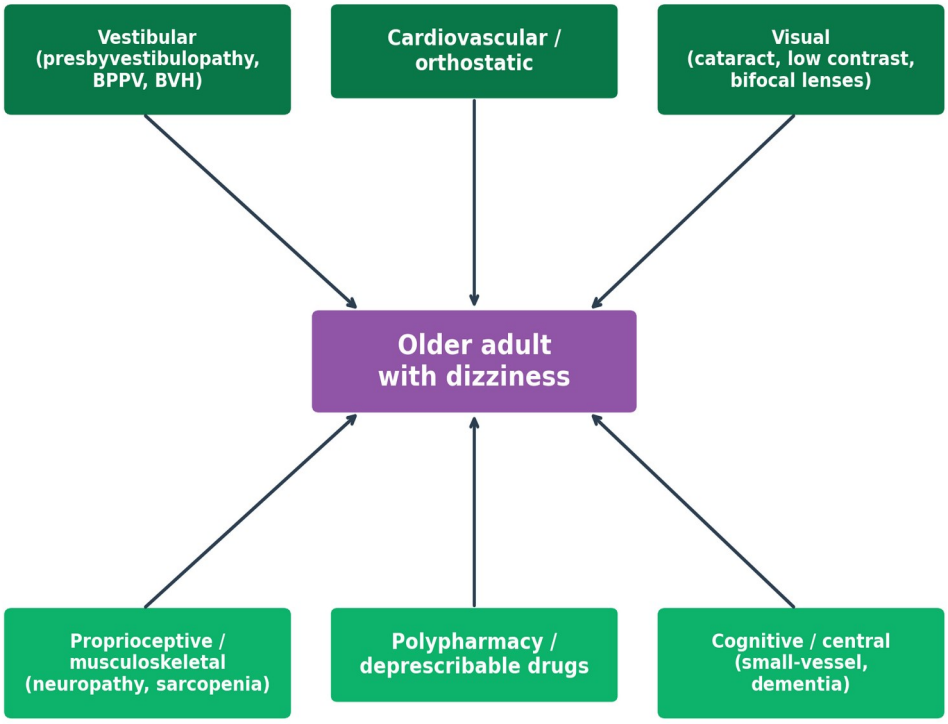

Figure 1. The multifactorial model of dizziness in the older adult — six contributing systems, any of which may be the dominant driver and most of which are at least partly reversible.
Source: Australian Dizziness Clinics — clinical schematic.

The six contributing systems

- Vestibular: presbyvestibulopathy (age-related bilateral vestibular hypofunction), under-recognised BPPV (the single commonest specific vestibular diagnosis in older adults), and post-neuritis residual hypofunction.
- Cardiovascular and orthostatic: orthostatic hypotension, postprandial hypotension, vasovagal syncope, carotid sinus hypersensitivity, arrhythmia, structural heart disease.
- Visual: cataract, age-related macular degeneration, reduced contrast sensitivity, bifocal or progressive lenses worn during stair descent and gait.
- Proprioceptive and musculoskeletal: peripheral neuropathy (especially diabetic), cervical spondylosis with somatosensory deficit, sarcopenia and lower-limb weakness, gait apraxia.
- Central: cerebral small-vessel disease, lacunar strokes, normal pressure hydrocephalus, vascular cognitive impairment, Parkinson disease, cerebellar atrophy.
- Medication-related: anticholinergics, antihypertensives, alpha-blockers, opioids, benzodiazepines, sedating antihistamines, and dopaminergic agents.

□ **Clinical Insight:** BPPV is the single most common specific vestibular diagnosis in older patients with falls — present in 9% of community fallers and up to 40% of those who have fallen with injury. Routine Dix-Hallpike in every older faller identifies a treatable cause that two-thirds of patients have not connected to head-position triggers.

Each contributor accumulates risk additively. A patient with mild presbyvestibulopathy alone may walk safely with a stick. The same patient with the addition of a new antihypertensive, a cataract change, and a worsening peripheral neuropathy may fall on the way to the bathroom. The clinical task is to look for, and then trim, each modifiable contributor.

III. History — What to Ask and How to Reframe

Older patients describe dizziness imprecisely and often interchangeably as 'lightheaded', 'wobbly', 'foggy', 'spinning', or simply 'off'. Asking 'what kind of dizziness do you have?' is unhelpful — descriptors are unreliable and change between consultations [9]. The TiTrATE framework (Timing, Triggers, Associated symptoms, Targeted Examination) translates better than symptom-quality questions because timing and triggers are stable across consultations.

High-yield additions for the older patient

- Falls history in the past 12 months — number, mechanism, injury, fear of falling. A previous fall is the strongest single predictor of future falls.
- Postural component — does dizziness come on when getting out of bed, standing from sitting, or after meals? This is the orthostatic / postprandial signature.
- Head-position triggers — rolling over in bed, looking up to a high shelf, lying flat for the dentist or hairdresser. These prompts catch BPPV that the patient has not volunteered.
- Medication review — every prescription and over-the-counter agent, including timing relative to dizziness episodes. Recent dose changes are particularly informative.
- Hearing — any change, asymmetry, fluctuation, or new tinnitus.
- Cognition and mood — established cognitive impairment, recent decline, depressive symptoms, anxiety. All amplify perceived dizziness and predict poor rehabilitation engagement.
- Functional impact — activities the patient has stopped doing because of dizziness or falls fear. This both quantifies severity and guides rehabilitation priorities.

□ **Clinical Pearl:** Always ask the older patient: 'Has anything in your day-to-day life changed because of the dizziness?' The functional answer — stopped driving, stopped going to the shops, stopped showering alone — is often more useful than any descriptor and predicts trajectory better

than any single symptom.

IV. Bedside Assessment for the Older Dizzy Patient

The bedside examination of the older dizzy patient is broader than the standard HINTS-and-Dix-Hallpike work-up because non-vestibular contributors must be detected at the same visit. The minimum bedside set covers six domains and takes under ten minutes.

The six-domain bedside set

- General observation and gait — stance width, step height, turn quality, use of an aid, ability to tandem walk three steps.
- Oculomotor and HINTS — head impulse test, nystagmus characterisation in primary and lateral gaze, alternate cover for skew. Performed only if active vertigo or persistent nystagmus is present.
- Dix-Hallpike (and supine roll if Dix-Hallpike is negative) — perform on every older patient with episodic positional dizziness and on every faller, even when the trigger has not been volunteered.
- Orthostatic blood pressure — supine after 5 minutes rest, then at 1 and 3 minutes standing. A drop of more than 20 mmHg systolic or 10 mmHg diastolic, or any reproduction of symptoms, is positive.
- Lower-limb sensorimotor — proprioception at hallux, ankle reflexes, hip flexion against resistance, ability to stand from a chair without using the arms.
- Cognitive screen — Mini-Cog or 4AT for delirium screen if any concern about acute change. Cognition contextualises rehabilitation potential.

□ **Clinical Insight:** Tandem stand for 10 seconds with eyes open is a rapid screen for vestibular and proprioceptive contribution. Inability is sensitive (around 80%) for clinically meaningful imbalance and predicts falls independently of TUG.

When to add HINTS

HINTS is appropriate only in the actively-symptomatic patient with continuous vertigo and nystagmus — that is, in suspected acute vestibular syndrome. In the chronic, intermittent, or non-vertiginous older patient, HINTS interpretation is unreliable and the test does not change management. Substitute the head impulse test alone (looking for catch-up saccades) and proceed with the rest of the multidomain set.

V. Presbyvestibulopathy and Bilateral Vestibular Hypofunction

Presbyvestibulopathy is age-related decline in peripheral vestibular function, formally defined by Bárány Society 2019 criteria as chronic unsteadiness or vestibular symptoms with at least mildly reduced vestibulo-ocular reflex gains, in patients aged 60 or older, in whom no other cause better explains the picture [10]. It is distinct from, but on a spectrum with, frank bilateral vestibular hypofunction.

Patients describe insidious imbalance worse on uneven ground or in dim light, often with oscillopsia (the visual world bobs with each step), and a tendency to use a wall, rail, or trolley for confidence. Episodic vertigo is uncommon in pure presbyvestibulopathy — when present it usually reflects a superimposed BPPV episode.

Why this diagnosis matters

- Patients are often labelled with non-specific imbalance and offered no targeted intervention.
- Vestibular rehabilitation, particularly gaze-stabilisation and substitution exercises, is effective and reduces falls risk [11].
- Concurrent ototoxic exposure (gentamicin courses, certain chemotherapy agents) may be unmodifiable but is important to avoid in future treatment planning.
- Bilateral vestibular hypofunction is a recognised contraindication to certain medications (sedating drugs that suppress central compensation) and is a reason to avoid bifocal and progressive lenses on stairs.

□ **Clinical Pearl:** If an older patient says 'I can walk indoors but I can't walk in the dark or on grass,' suspect bilateral vestibular hypofunction. The visual and proprioceptive crutches that mask the deficit indoors are removed by darkness and by uneven, compliant surfaces.

VI. Orthostatic Hypotension and Cardiovascular Causes

Orthostatic hypotension is present in 18–30% of community older adults and accounts for around 15% of geriatric dizziness presentations [12]. The diagnosis is missed when blood pressure is measured only at one position, or when the patient stands too briefly. Symptoms — lightheadedness, near-syncope, blurred vision on standing — peak between 30 seconds and 3 minutes after standing.

Practical orthostatic protocol

- Patient supine for at least 5 minutes; record BP and heart rate.
- Stand the patient — record BP and heart rate at 1 and 3 minutes.
- Positive if systolic drop of more than 20 mmHg, diastolic drop of more than 10 mmHg, or reproduction of symptoms.
- Lack of compensatory rise in heart rate (less than 10 bpm) suggests autonomic failure; brisk rise of more than 30 bpm suggests volume depletion or postural orthostatic tachycardia.

Specific cardiovascular contributors

- Postprandial hypotension — symptoms 30 to 90 minutes after meals; common in diabetes, autonomic failure, and Parkinson disease.
- Vasovagal syncope and carotid sinus hypersensitivity — particularly in older men with neck movement or tight collars; tilt-table or carotid sinus massage may be diagnostic.
- Arrhythmia — atrial fibrillation with rapid response, sick sinus syndrome, intermittent heart block. ECG and consider Holter monitoring if history is suggestive.
- Aortic stenosis — exertional dizziness with a systolic ejection murmur; refer for echocardiography.

□ **Important:** Sudden new-onset orthostatic dizziness in an older patient is not always benign. Differentials include occult bleeding (gastrointestinal, retroperitoneal), acute autonomic failure, sepsis, or a new arrhythmia. Examine, take basic bloods, and perform an ECG before attributing the symptom to age or medication alone.

VII. Polypharmacy and Drug-Induced Dizziness

The single most modifiable contributor to dizziness in older adults is medication. Dizziness is a recognised adverse effect of more than 90 commonly prescribed agents, and the risk rises non-linearly with the total number of medications [13]. Each additional medication beyond five doubles the risk of a fall in older adults [14].

A structured medication review focused on dizziness aims to identify three groups: drugs that cause dizziness through orthostatic effect (antihypertensives, alpha-blockers, nitrates, tricyclics), drugs that cause dizziness through central sedation or cognitive load (benzodiazepines, opioids, sedating antihistamines, anticholinergics), and drugs that suppress vestibular compensation (prochlorperazine, promethazine, betahistine in inappropriate populations, prolonged anti-emetics).

Table 1. High-risk medication classes for dizziness and falls in older adults — mechanism and deprescribing approach.

Drug class	Mechanism of dizziness	Deprescribing approach
Antihypertensives (especially alpha-blockers, diuretics)	Orthostatic hypotension	Review BP target for age and frailty; reduce or rationalise; consider deprescribing alpha-blockers first
Benzodiazepines and Z-drugs	CNS depression, balance impairment, dependence	Slow taper over 8–12 weeks; replace with sleep hygiene and CBT-I

Opioids	CNS depression, hypotension	Lowest effective dose; reassess at every visit; non-opioid alternatives
Anticholinergics (oxybutynin, amitriptyline, sedating antihistamines)	Cognitive impairment, blurred vision, postural instability	Calculate anticholinergic burden; substitute lower-burden alternatives
Antipsychotics	Orthostatic hypotension, sedation, parkinsonism	Avoid in dementia where possible; if used, lowest dose, time-limited
Tricyclic antidepressants	Orthostatic effect, anticholinergic burden	SSRIs or mirtazapine generally preferred in older adults
Vestibular suppressants (prochlorperazine, promethazine, prolonged anti-emetics)	Suppress central compensation, sedation	Limit to 48–72 hours in acute vertigo; never long-term

Source: Australian Dizziness Clinics — clinician reference.

□ **Clinical Pearl:** The Beers criteria and the STOPP/START tool are the two best-validated geriatric prescribing checklists. Either is suitable for an annual review in any older patient with dizziness or recurrent falls.

VIII. Falls Risk Stratification

Falls and dizziness are bidirectionally linked. Older patients with dizziness have a roughly two-fold increased fall risk; older patients with recurrent falls have a roughly two-fold increased prevalence of dizziness [15]. Every older dizzy patient should therefore have falls risk explicitly assessed at the same visit.

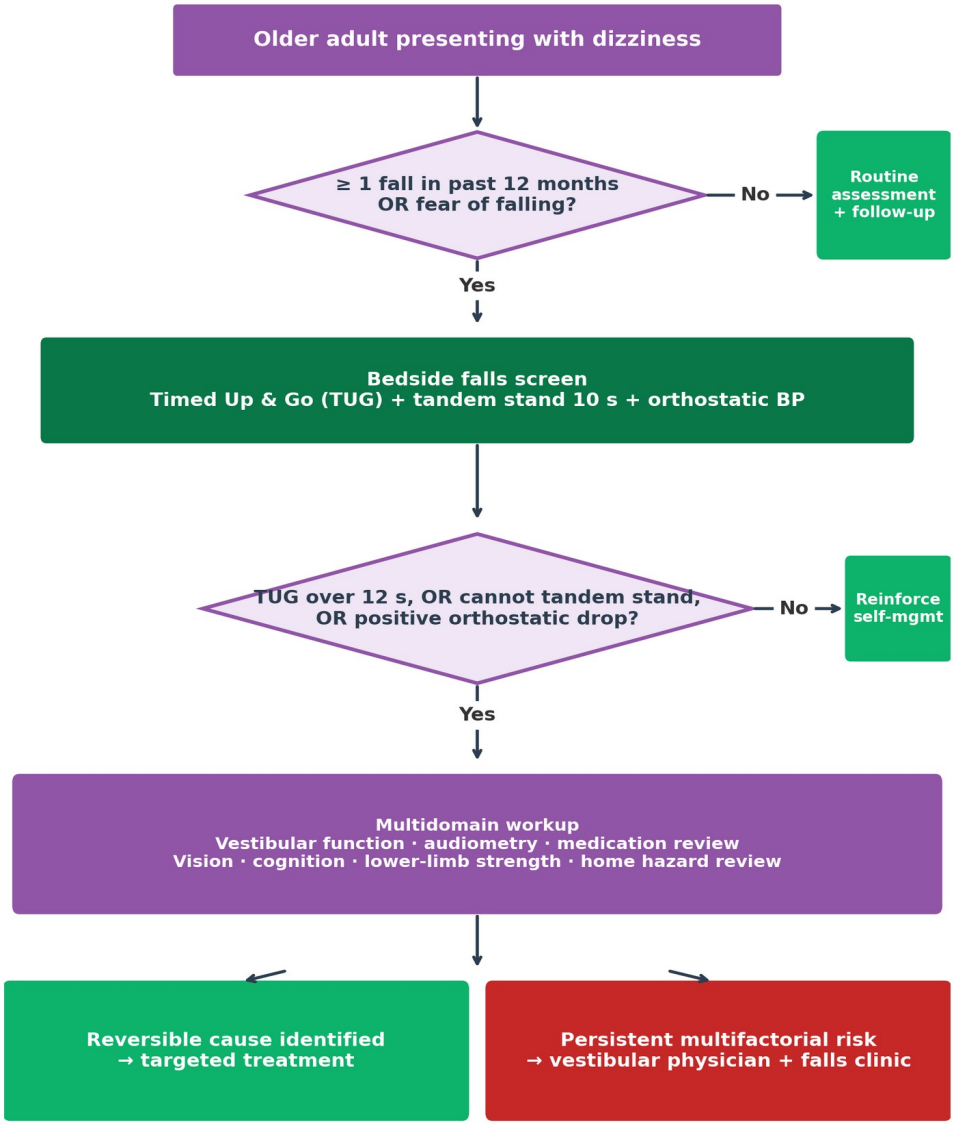

Figure 2. Falls risk stratification in the older dizzy patient — a bedside screen that takes under five minutes and triages workup intensity.
Source: Australian Dizziness Clinics — clinical algorithm.

Bedside falls screen

- Timed Up and Go (TUG): rise from a standard chair, walk 3 metres, turn, return, sit down. Greater than 12 seconds is associated with increased falls risk; greater than 15 seconds carries marked risk.
- Tandem stand for 10 seconds, eyes open, arms folded. Failure is independently associated with falls and is a strong indicator for vestibular workup.
- 30-second sit-to-stand: number of times the patient can stand from a chair in 30 seconds. A score below age- and sex-adjusted norms identifies sarcopenia-related falls risk.
- Falls Efficacy Scale-International (Short FES-I) — 7 items, scored 7–28; higher scores indicate greater falls fear and predict activity restriction.

□ **Clinical Insight:** A patient who tells you they 'just feel a bit unsteady' but cannot tandem stand for 10 seconds and has a TUG over 12 seconds is at high falls risk — even without a fall in the past 12 months. Document this objectively; it changes the threshold for medication change, home modification, and referral.

IX. Management — Multidomain Intervention and Vestibular Rehabilitation

The dominant evidence in geriatric dizziness is for multidomain intervention, not single-cause treatment. Tinetti's randomised work, replicated several times since, shows that addressing every modifiable contributor in parallel — vestibular rehabilitation, deprescribing, optimising vision, treating orthostatic hypotension, strength and balance training, home hazard review — reduces dizziness severity, falls, and the activity restriction that follows [16,17].

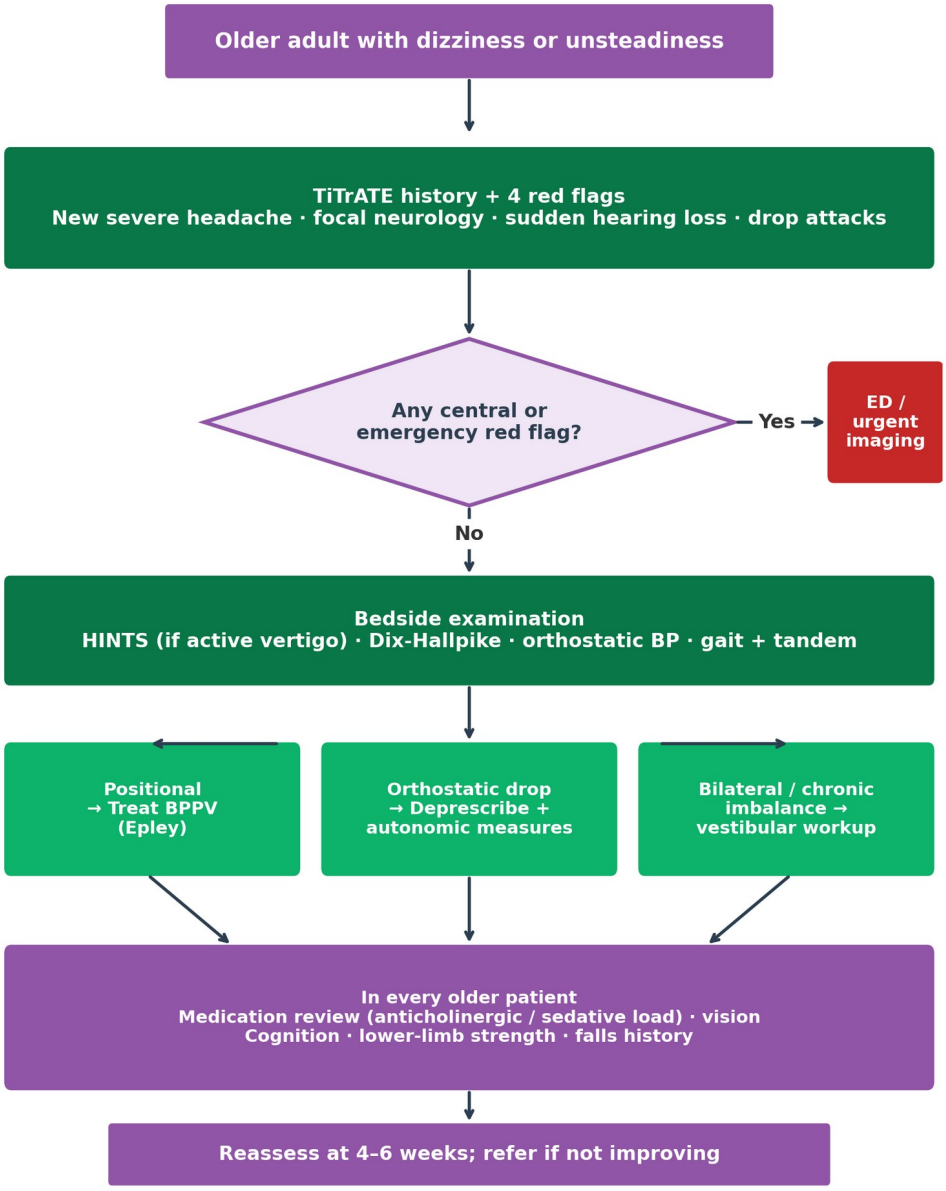

Figure 3. Geriatric dizziness assessment algorithm — from triage and bedside through pattern-based treatment to the universal multidomain workup.
Source: Australian Dizziness Clinics — clinical algorithm.

Vestibular rehabilitation in the older adult

Vestibular rehabilitation is effective in older patients with peripheral, central, and mixed dizziness. Programmes are individualised but typically include three components: gaze-stabilisation exercises (VOR x1 viewing) for vestibulo-ocular reflex retraining, balance and gait training under progressively challenging sensory conditions, and habituation exercises for motion-provoked symptoms. Twelve weeks of supervised therapy outperforms unsupervised home programmes in older patients [18].

Cardiovascular and orthostatic

- Non-pharmacological first: slow position changes, leg crossing on standing, abdominal binding, raise head of bed 10–20 degrees, increase salt and fluid (where safe).
- Compression stockings to mid-thigh if tolerated.
- Review every antihypertensive — the dizzy older patient with orthostatic hypotension on three antihypertensives almost always tolerates de-escalation.
- Pharmacological adjuncts (fludrocortisone, midodrone) only after non-pharmacological measures, and ideally after specialist input.

Bedside BPPV treatment

Posterior canal BPPV in the older adult is treated as in the younger patient — Epley manoeuvre, with 80–90% success after one or two treatments. Modify the manoeuvre for cervical spondylosis or limited neck range using a foam wedge to support the head, or refer to an experienced physiotherapist for a modified positioning approach. Persistent post-Epley unsteadiness for several days is common and does not indicate failure.

□ **Important:** Avoid prochlorperazine, promethazine, and benzodiazepines for chronic dizziness in older adults. These drugs suppress central compensation, increase falls, and are associated with cognitive decline. Acute use beyond 48–72 hours is rarely justified.

X. Documentation, Communication, and When to Refer

Documentation

A defensible record after the older dizzy patient consultation captures the same six domains as the bedside set: gait and aid use, oculomotor or HINTS findings (or rationale for not performing), Dix-Hallpike, orthostatic readings at supine, 1 and 3 minutes, lower-limb screen, cognitive screen, and the patient's functional impact. A list of contributors and the plan for each is more useful than a single diagnosis label.

Communicating with the patient and family

Older patients and their families often arrive with a single-cause expectation ('we want to know what is causing the dizziness') and leave disappointed if a single answer is not given. Reframing in plain language is part of the consultation: 'In older adults, dizziness almost always has more than one cause stacking up. Each one is small on its own. Treating each cause makes a real difference even when none can be cured.' Patients respond well to this framing because it both legitimises their experience and gives a tractable plan.

When to refer

- Suspected presbyvestibulopathy or bilateral vestibular hypofunction — formal vestibular function testing and rehabilitation planning.
- Recurrent falls (≥2 in 12 months) with a vestibular component — vestibular physician with falls clinic linkage.
- Refractory BPPV after two correctly performed Epley manoeuvres.
- Diagnostic uncertainty after multidomain workup.
- Acute or subacute change in dizziness pattern, particularly with new neurological symptoms, sudden hearing change, or drop attacks — these warrant urgent assessment, not multidomain workup.
- Significant orthostatic hypotension persisting despite deprescribing and non-pharmacological measures — autonomic referral.

□ **Key Point:** Dizziness in the older adult almost never has a single cause and almost always has at least one modifiable cause. The work of the general clinician is to identify each contributor, address each one in parallel, and refer when the vestibular component is large, the diagnosis is uncertain, or the falls risk persists despite multidomain intervention.

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