Vestibular Migraine —
Rehabilitation Approaches
Trigger Management, Cautious Dosing, and Co-management

Vestibular Physiotherapy for Clinicians

Topic 12 of 12

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Version 2.0 | May 2026

How to Use This Review

This literature review equips physiotherapists with a special interest in vestibular rehabilitation with the practical framework to assess, dose, and progress vestibular rehabilitation in patients with vestibular migraine (VM). It addresses Bárány Society and IHS diagnostic criteria, common triggers, the principle of cautious dosing during habituation training, and the co-management relationship with the vestibular physician.

The document follows a structured clinical format with numbered sections, integrated callout boxes for rapid reference, summary tables, four embedded flowcharts and a complete reference list. It is designed for the physiotherapist managing VM patients in outpatient settings — patients who improve with the right dose and worsen with the wrong one.

Callout Box Guide

Pearl: Pearls capture clinical insights worth memorising — read these as 'wish I'd known this earlier' notes from the bedside.

Pitfall: Pitfalls flag common mistakes — read these first if you have only five minutes for the section.

Note: Notes provide definitions or framing for key terms used in the section that follows.

Caution: Cautions flag safety concerns or red flags that demand immediate clinical action or escalation.

Snapshot: Snapshots crystallise the section above into one or two memorable lines — use these as your section take-home.

Contents

I. Introduction and Diagnostic Criteria

Vestibular migraine (VM) is the most common cause of recurrent vertigo in adults, affecting 1–3% of the general population and up to 11% of patients in vestibular clinics [1,2]. It is the second most frequent vestibular diagnosis after BPPV in tertiary settings. VM presents as recurrent vestibular symptoms — vertigo, dizziness, imbalance, motion sensitivity — in a patient with current or prior migraine history, with episodes that may or may not include headache. Critically, the rehabilitation approach differs sharply from standard VRT for unilateral hypofunction.

Bárány Society and IHS Criteria

The Bárány Society and International Headache Society diagnostic criteria require: (1) at least five episodes of moderate-to-severe vestibular symptoms lasting 5 minutes to 72 hours, (2) current or prior migraine history per ICHD-3 criteria, (3) one or more migraine features (headache, photophobia, phonophobia, visual aura) with at least 50% of vestibular episodes, and (4) symptoms not better accounted for by another vestibular or central diagnosis [3]. Probable VM relaxes criteria 1 or 3.

Demographics and Female Preponderance

VM shows a 2:1–3:1 female predominance and typically begins in young to middle adulthood (20–50 years). It can occur at any age, with paediatric and post-menopausal presentations well described. Family history of migraine is common. In vestibular clinics, VM represents 5–15% of patients; in headache clinics, vertigo affects 30–50% of migraine patients [4].

Snapshot: VM diagnosis is clinical — based on Bárány/IHS criteria — not on imaging or vestibular function tests, which are typically normal or non-specific in VM.

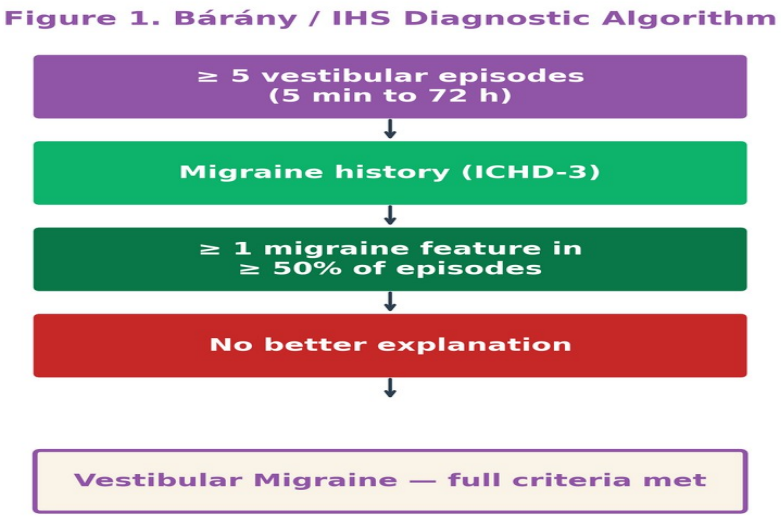

Figure 1. Bárány Society / IHS diagnostic algorithm — four criteria for VM diagnosis.

Source: Australian Dizziness Clinics, 2026.

II. Pathophysiology for Physiotherapists

The pathophysiology of VM involves central sensitisation, cortical spreading depression, and thalamic hyperexcitability with overlapping migraine and vestibular pathways [5]. CGRP (calcitonin gene-related peptide) and serotonergic systems are central to both migraine and vestibular processing. Shared neural circuitry between trigeminal nucleus, vestibular nuclei, and thalamus explains the symptom overlap. The clinically relevant consequence for physiotherapists is impaired habituation — VM patients sensitise rather than desensitise to repeated motion-provocative stimuli, which means standard habituation protocols flare rather than improve symptoms when dosed too aggressively.

Pearl: Aggressive adaptation drills in a VM patient routinely cause headache flares, photophobia, and dropout. Cautious dosing — start at 25–30% of standard VRT volume — is the single most important rehab decision in VM.

III. Common Triggers and the Trigger Wheel

VM episodes are typically multi-trigger phenomena rather than single-cause events. The trigger wheel — sleep, hydration, dietary, hormonal, sensory, and stress triggers — is the working framework patients use to identify their individual constellation. No single trigger triggers every episode; instead, accumulated trigger load crosses an individual threshold and tips the patient into an episode [6,7].

Trigger category	Common examples	Evidence strength
Sleep	Insufficient or excessive sleep, irregular schedule	Strong
Hydration	Dehydration, especially in heat	Moderate
Dietary	Tyramine, MSG, nitrates, caffeine over- or under-use, alcohol (red wine)	Variable, individual
Hormonal	Menstrual cycle, oestrogen withdrawal, perimenopause	Strong (women)
Sensory	Bright/flickering lights, strong smells, busy visual scenes, loud noise	Strong
Stress / weather	Acute stress, post-stress let-down, barometric change	Moderate

Trigger identification is patient-led — symptom diary across 4–6 weeks is the highest-yield tool.

Pearl: A two-week symptom diary capturing sleep, food, stress, hormonal events, and episode timing identifies the dominant triggers for ~70% of VM patients. The diary is more useful than any test for guiding lifestyle prescription.

Figure 2. VM Trigger Wheel

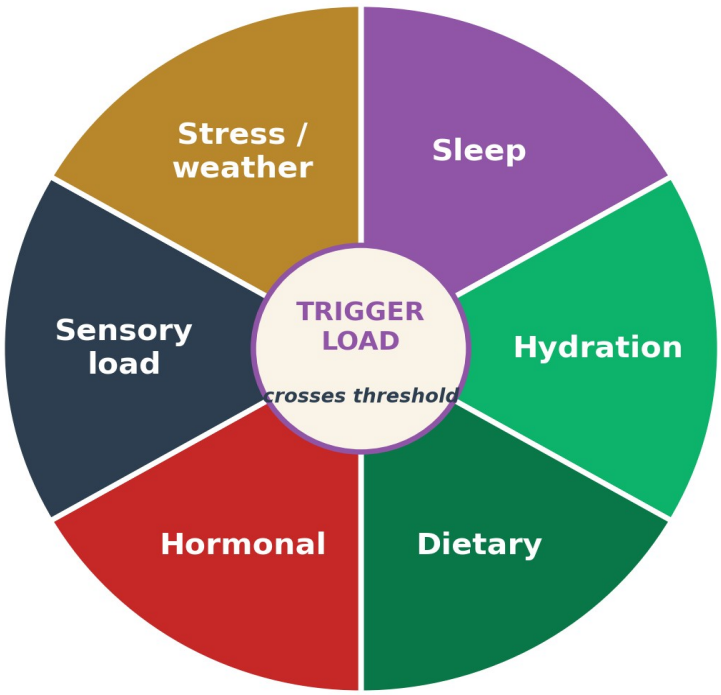

Figure 2. The VM trigger wheel — six categories combine to cross an individual threshold.

Source: Australian Dizziness Clinics, 2026.

IV. Assessment Framework for VM

Subjective assessment for VM identifies episode pattern (frequency, duration, severity), trigger candidates from history, interictal symptom burden, motion sensitivity profile, photophobia/phonophobia, and migraine medication use. Objective assessment includes the standard vestibular battery — vHIT, head impulse, dynamic visual acuity, Romberg variants, Functional Gait Assessment — recognising that these are typically normal or only mildly abnormal in VM.

Patient-reported outcome measures critical in VM management: Dizziness Handicap Inventory (DHI), Visual Vertigo Analogue Scale (VVAS), Motion Sensitivity Quotient (MSQ), and the Headache Impact Test (HIT-6). Re-measurement at 6 and 12 weeks captures the slower trajectory of VM rehabilitation compared with standard UVH recovery [8].

V. Lifestyle Pillars — Sleep, Hydration, Diet, Exercise

Lifestyle pillars are the foundation of VM management and are owned jointly by the patient, physiotherapist, and vestibular physician [9]. Sleep regularity (consistent bed and wake times, 7–8 hours) is the single most evidence-supported lifestyle lever. Hydration — 30 mL/kg/day or more — reduces episode frequency in a substantial subset. Caffeine intake should be steady (avoid both excess and withdrawal). Dietary triggers vary widely; an elimination approach guided by the symptom diary is more effective than blanket restriction.

Aerobic exercise — 30 minutes, 4–5 times per week, sustained over 8–12 weeks — has Level A evidence for migraine frequency reduction and is the only physiotherapy-prescribable intervention with that level of evidence in VM. The challenge is dosing exercise in patients who are motion-sensitive; most VM patients tolerate aerobic exercise far better than head-and-eye movement drills, and aerobic conditioning supports overall recovery and trigger threshold.

Snapshot: Aerobic exercise is the highest-evidence non-pharmacological intervention in VM — Level A evidence for episode reduction. Most VM patients tolerate cardio better than VRT in the early weeks; lead with aerobic, layer VRT cautiously.

Figure 3. VM Treatment Pillars

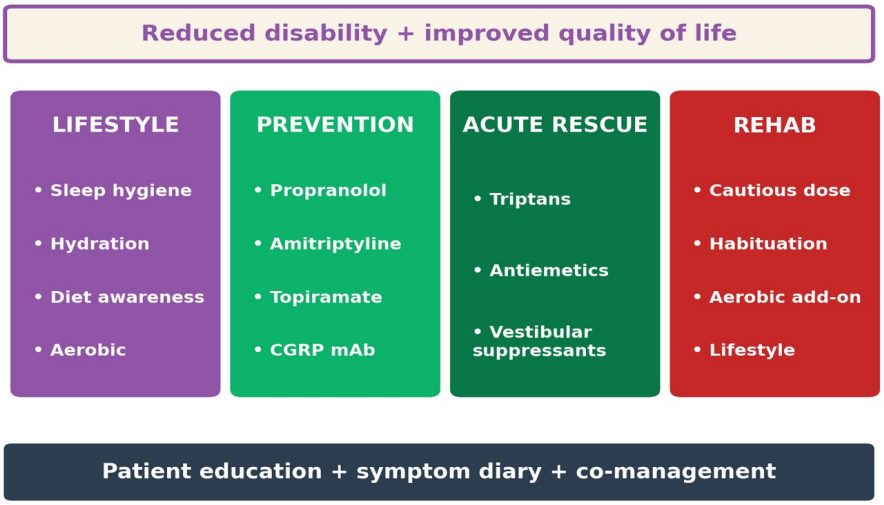

Figure 3. The four pillars of VM management — lifestyle, prevention, acute rescue, and rehab.

Source: Australian Dizziness Clinics, 2026.

VI. Vestibular Rehab in VM — Cautious Dosing and Habituation Limits

Why Standard VRT Fails in VM

Standard VRT prescriptions designed for unilateral hypofunction — high-frequency VOR x1/x2 drills, aggressive habituation to motion, 20–30 minutes daily — typically flare VM patients within the first two weeks and cause dropout. The neurobiology is impaired habituation: VM patients sensitise to repeated motion-provocative stimuli rather than desensitising. The exercise prescription must respect this.

Cautious Dosing Principles

Start at 25–30% of standard VRT volume. Single-domain exercises (eye-only, head-only) before combined drills. Frequency-conservative: 1–2 minutes per drill, 1–2 times daily, increasing to 2–3 weekly over 4 weeks if tolerated. Symptom rule: mild symptoms that settle within 5 minutes are acceptable; symptoms persisting over 30 minutes require dose reduction. Plateau is common; progress is non-linear; expect 3–6 month course rather than 6–8 weeks [10,11].

Exercise category	Standard VRT dose	VM cautious dose

VOR x1 (gaze stab)	3–5x daily, 1–2 min/axis	1–2x daily, 30–60 sec/axis, start with eyes only
Habituation (motion)	2–3x daily until 50% sx ↓	1x daily; tolerate mild flare; expect slow progress
Visual stimulation hierarchy	Standard busy scenes early	Graded — start with simple patterns; expand slowly
Aerobic exercise	Adjunct	PRIMARY intervention — 30 min, 4–5x weekly
Balance / gait	Standard progression	Standard progression — usually well tolerated

Caution: If a VM patient reports headache or photophobia flares from VRT exercises, halve the dose immediately and check trigger load (sleep, hydration, hormonal). Symptoms persisting beyond 24 hours after a session indicate a dose that is too high — back off, do not push through.

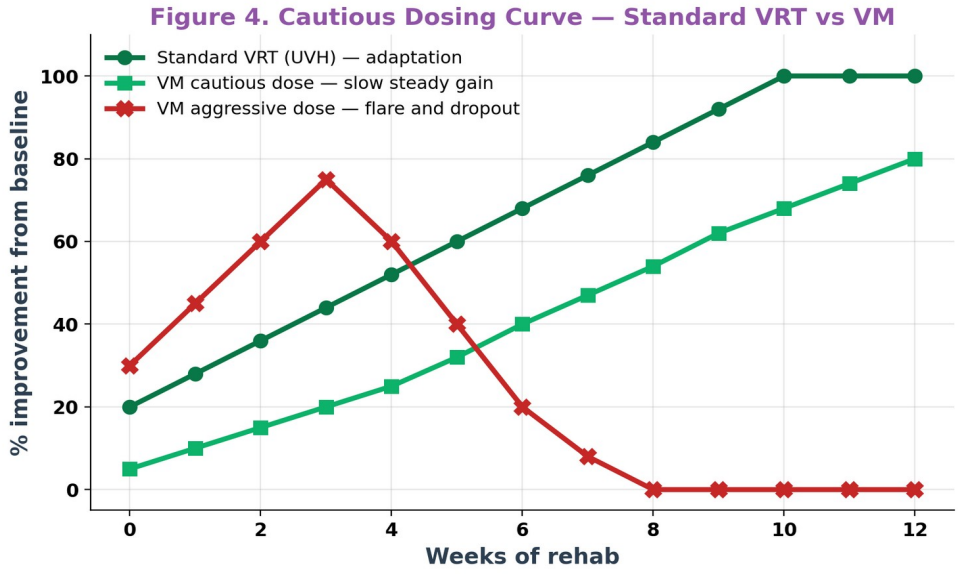

Figure 4. Cautious dosing curve — standard VRT versus VM trajectories. Aggressive dosing flares and loses the patient.

Source: Australian Dizziness Clinics, 2026.

VII. Acute Rescue and Prevention — What the Physio Should Know

Acute rescue medications for VM include triptans (where migraine features are prominent), antiemetics, and vestibular suppressants used briefly. Prophylactic medications include propranolol, candesartan, topiramate, amitriptyline, venlafaxine, flunarizine (where available), and CGRP monoclonal antibodies (erenumab, fremanezumab, galcanezumab) which have transformed VM prevention in the last 5 years [12]. The physiotherapist does not prescribe but should know what each medication does, when it is escalated, and why pharmacological optimisation often transforms VRT response.

Pearl: VRT in VM works best when prophylaxis is optimised. A patient still flaring with prophylaxis should be co-reviewed with the vestibular physician before more rehab dose escalation — the medication is the lever, not the exercise.

VIII. Long-term Outcomes and Prognosis

Long-term outcomes are favourable for most VM patients with combined lifestyle, prophylaxis and rehab management: 60–70% achieve substantial improvement at 12 months, 30–40% achieve near-remission at 24 months [13]. Worse prognostic factors include high baseline DHI, comorbid PPPD or anxiety, female perimenopausal hormonal pattern, and delayed initiation of comprehensive management. Better prognostic factors include early diagnosis, lifestyle compliance, prophylaxis tolerance, and structured rehab.

IX. Co-management with the Vestibular Physician

Optimal VM care is rarely a solo physiotherapy or solo medical job. The vestibular physician owns prophylaxis selection and titration, hormonal review, and refractory-case escalation; the physiotherapist owns trigger management education, lifestyle pillars, dose-cautious VRT, and patient outcome tracking. Regular communication — every 6–8 weeks early, then 3–6 monthly — keeps both arms aligned and lets one party adjust when the other is reaching its ceiling.

Snapshot: Refer to the vestibular physician when: episode frequency exceeds 4/month despite lifestyle optimisation; DHI remains over 50 at 12 weeks; current prophylaxis fails or is poorly tolerated; new neurological features emerge.

Figure 5. VM Co-management Workflow

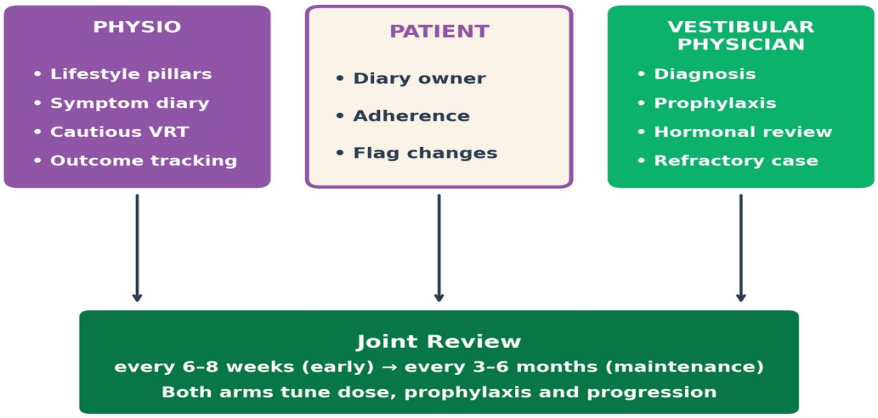

Figure 5. VM co-management — physiotherapist, vestibular physician, and patient with regular joint review.
Source: Australian Dizziness Clinics, 2026.

X. Conclusions and Practical Workflow

VM rehabilitation requires a different mindset to standard VRT. The practical workflow: (1) confirm Bárány/IHS criteria with the referring physician; (2) start the symptom diary at session one; (3) lead with lifestyle pillars and aerobic exercise; (4) introduce cautious-dose VRT in week 2–3 if tolerated; (5) coordinate with vestibular physician for prophylaxis review at week 6–8; (6) re-measure DHI, VVAS, MSQ at 6 and 12 weeks; (7) extend the course to 3–6 months rather than 6–8 weeks. With this approach, most VM patients achieve substantial reduction in disability at 6–12 months.

References

[1] Lempert T, Olesen J, Furman J, et al. Vestibular migraine: diagnostic criteria. J Vestib Res. 2012;22(4):167-172.

[2] Neuhauser HK, Radtke A, von Brevern M, et al. Migrainous vertigo: prevalence and impact on quality of life. Neurology. 2006;67(6):1028-1033.

[3] Headache Classification Committee of the International Headache Society. The International Classification of Headache Disorders, 3rd edition. Cephalalgia. 2018;38(1):1-211.

[4] Dieterich M, Brandt T. Episodic vertigo related to migraine (90 cases): vestibular migraine? J Neurol. 1999;246(10):883-892.

[5] Espinosa-Sanchez JM, Lopez-Escamez JA. New insights into pathophysiology of vestibular migraine. Front Neurol. 2015;6:12.

[6] Maldonado Fernandez M, Birdi JS, Irving GJ, et al. Pharmacological agents for the prevention of vestibular migraine. Cochrane Database Syst Rev. 2015;(6):CD010600.

[7] Sharon JD, Hullar TE. Motion sensitivity and migraine: a population-based study. Headache. 2014;54(8):1462-1471.

[8] Whitney SL, Wrisley DM, Brown KE, Furman JM. Physical therapy for migraine-related vestibulopathy. J Vestib Res. 2000;10(4-5):215-223.

[9] Mikulec AA, Faraji F, Kinsella LJ. Evaluation of the efficacy of caffeine cessation, nortriptyline, and topiramate therapy in vestibular migraine. Am J Otolaryngol. 2012;33(1):121-127.

[10] Vitkovic J, Winoto A, Rance G, et al. Vestibular rehabilitation outcomes in patients with and without vestibular migraine. J Neurol. 2013;260(12):3039-3048.

[11] Sugaya N, Arai M, Goto F. Is the headache in patients with vestibular migraine attenuated by vestibular rehabilitation? Front Neurol. 2017;8:124.

[12] Bisdorff AR. Treatment of migraine related vertigo with lamotrigine: an observational study. Bull Soc Sci Med Grand Duche Luxemb. 2004;(2):103-108.

[13] Beh SC. The spectrum of vestibular migraine: clinical features and prognostic factors. Curr Pain Headache Rep. 2018;22(2):14.

[14] Brodsky JR, Cusick BA, Zhou G. Evaluation and management of vestibular migraine in children. Pediatr Neurol. 2016;58:5-21.

[15] Furman JM, Marcus DA, Balaban CD. Vestibular migraine: clinical aspects and pathophysiology. Lancet Neurol. 2013;12(7):706-715.

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Accuracy and Currency

Every effort has been made to ensure accuracy and completeness at the time of publication; however, the field of vestibular medicine evolves rapidly. Readers should consult current guidelines and primary literature when making clinical decisions.

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Version 2.0 — May 2026 | Initial release of v2.0