MÉNIÈRE'S CHEAT SHEET

Ménière's Disease — Cheat Sheet for Vestibular Physicians

Anchor on the twenty-minute to twelve-hour vertigo window and the low-frequency audiogram. Reframe to vestibular migraine when criteria do not fit.

► Why Ménière's matters

Episodic vestibular disorder with the highest functional and audiometric morbidity per attack in peripheral vestibular practice. Prevalence ~17–200/100 000, peak fifth decade, F:M ≈ 1.3:1. Migraine overlap 40–60%, bilateral conversion 25–45% by 20 years. ~80% of patients controlled with conservative + medical measures; the diagnostic and therapeutic standard separates a curable trajectory from progressive disability.

Indications — when this pathway fits

► When to apply this work-up

► Recurrent spontaneous vertigo 20 min – 12 h with same-ear hearing change ± tinnitus ± aural fullness.
► Audiometric low- or mid-frequency SNHL on the affected side at any point.
► Distinguish from vestibular migraine, schwannoma, AIED, otosyphilis, SCD/third-window, posterior TIA.

Mechanism — why Ménière's happens

Layer	Mechanism	Clinical relevance
Endolymph homeostasis	Stria vascularis + vestibular dark cells produce; endolymphatic sac resorbs.	Regulatory failure → hydrops; sac hypoplasia / fibrosis is the upstream lesion in many cases.
Endolymphatic hydrops	Cochlear duct and saccule distend; Reissner's bulges into scala vestibuli.	Necessary but NOT sufficient — asymptomatic hydrops exists; co-factors determine clinical disease.
Schuknecht rupture	Membrane rupture → K-rich endolymph into perilymph → 8th-nerve intoxication.	Explains abrupt attack and self-termination within hours; fibrous scars on histology.

Pearl — *Time the attack, not just the vertigo. The 20 min – 12 h window separates Ménière's from vestibular migraine and vestibular neuritis with high specificity. Outside that window, re-interrogate the differential before locking diagnosis.*

Diagnostic criteria — Bárány 2015 / AAO-HNS 2020

Tier	Required features
Definite MD	(1) ≥2 spontaneous vertigo episodes 20 min – 12 h. (2) Audiometric low/mid-frequency SNHL in affected ear before, during, or after one episode. (3) Fluctuating aural symptoms (hearing, tinnitus, fullness). (4) Alternatives excluded.
Probable MD	≥2 vertigo episodes 20 min – 24 h; fluctuating aural symptoms; alternatives excluded; NO audiometric requirement.

Pearl — *Audiogram in the affected ear is the diagnosis-defining objective test. A symmetric flat or high-frequency loss with episodic vertigo is not Ménière's — review for VM, schwannoma, or presbycusis-plus-VM.*

Investigations — anchored on the audiogram

Test	Purpose	When to order
Pure-tone audiometry	Document low/mid-freq SNHL; serial for fluctuation.	Mandatory at every visit while disease active.
Caloric + vHIT	Quantify canal paresis; track bilateral status.	Atypical, bilateral, refractory, pre-ablation.
cVEMP / oVEMP	Saccular/utricular tuning asymmetry; supports MD.	Useful adjunct; characteristic but not specific.
MRI IAM + gadolinium	Exclude schwannoma, ELST, central pathology.	Mandatory at first presentation.
Delayed 3D-FLAIR	Direct hydrops imaging (4-h post-Gad).	Expert centres; atypical/research cases.

Pearl — *vHIT-normal / caloric-paretic dissociation is one of the more specific physiological signatures of hydrops. Preserved high-frequency canal function with low-frequency caloric weakness — interpret in context.*

Differential diagnosis — high-yield mimics

Mimic	Key distinguishing features
Vestibular migraine	Migraine Hx; photo/phonophobia in attack; normal interictal audiogram; duration outside 20 min–12 h. 30–40% coexist with MD.
Vestibular schwannoma	Progressive (not fluctuating) unilateral SNHL ± episodic vertigo (15–20%); MRI IAM mandatory if asymmetric.
Autoimmune inner-ear disease	Rapidly progressive bilateral SNHL over weeks–months; steroid-responsive — the discriminating clue.
Otosyphilis	Treatable near-perfect Ménière phenocopy; serology in atypical / bilateral / young.
Superior canal dehiscence	Sound- or pressure-induced vertigo (Tullio, Hennebert); conductive hyperacusis; CT temporal bone diagnostic.

► ***Red flags —*** *Sudden permanent SNHL · Drop attacks (Tumarkin) · New focal neurology · Acute unilateral hearing loss with vertigo (rule out AICA stroke, ELST) · Bilateral progression · Failure of two prophylactic agents + IT dexamethasone. Each warrants MRI + escalation before further empirical therapy.*

Management — stepwise pyramid

Tier	Intervention	Practice principles
Lifestyle	Na+ <1.5–2 g/d · caffeine / alcohol / nicotine reduction · hydration · sleep / stress; written rescue plan.	Modest evidence, consensus first-line; sustainable and benign. CBT helpful where anxiety overlay.
Acute attack	Prochlorperazine / diazepam / promethazine + antiemetic; rapidly-acting agents at bedside.	SHORT-TERM only. Continuous vestibular suppressants block central compensation.
Oral prophylaxis	Betahistine 48 mg TDS; HCTZ-triamterene or acetazolamide; migraine prophylaxis if migrainous.	BEMED neutral but real-world experience supports modest benefit. Migraine prophylaxis high-yield in overlap subgroup.
Intratympanic dexamethasone	4–24 mg/mL; weekly or 3-dose / 3-week.	Non-destructive; hearing-preserving; 60–80% attack control. First-line IT in only-hearing-ear, bilateral, young.
Intratympanic gentamicin	Low-dose titrated 26.7–40 mg/mL.	Chemical vestibulectomy; 80–95% control; 10–25% hearing-loss risk modern protocols. AVOID only-hearing-ear; caution bilateral.
Surgery (<10%)	Sac decompression; vestibular neurectomy; labyrinthectomy.	Sac surgery hearing-sparing. Neurectomy preserves hearing 70–90%. Labyrinthectomy = total hearing loss.

Pearl — *Match the IT agent to the goal — dexamethasone for hearing-preservation, gentamicin for vertigo-priority. Only-hearing-ear status is an absolute contraindication to gentamicin; bilateral disease is a strong relative one.*

Counselling and follow-up

► Lifelong fluctuating disorder; attacks diminish over 5–10 y; hearing decline usually permanent.
► ~1 in 3 develop second-ear involvement over 20 y — long-term audiometric follow-up essential.
► Anxiety / avoidance are common and treatable; raise CBT and SSRI/SNRI early.
► Audiogram 6-monthly first 2 y → annual; clinical review 3-monthly while active.
► Driving: defer in active phase; jurisdiction-specific re-assessment when stable >3 mo.

Bilateral disease — management shift

Bilateral conversion 25–45% by 20 years. Avoid ablative therapy in either ear unless one ear clearly inactive — bilateral vestibular hypofunction produces oscillopsia and chronic imbalance that outweigh vertigo benefit. Prioritise non-destructive: betahistine, diuretics, IT dexamethasone, sac surgery where hearing preservation paramount. Raise cochlear implantation proactively in bilateral severe-profound loss — outcomes are excellent and the option should not be reserved as last-resort.

Key references — *Lopez-Escámez JA et al. J Vestib Res 2015;25:1–7 · Basura GJ et al. Otolaryngol HNS 2020;162(2_suppl):S1–55 · Adrion C et al. BEMED. BMJ 2016;352:h6816 · Huppert D et al. Acta Otolaryngol 2010;130:644–51 · Chia SH et al. Otol Neurotol 2004;25:544–52.*