LR 04
CHEAT SHEET

Benign Paroxysmal Positional Vertigo (BPPV)

Diagnosis and treatment of the most treatable vertigo at the bedside

► Why BPPV matters

Commonest cause of vertigo (lifetime 2.4%). 80–90% single-Epley cure rate — the highest-yield bedside intervention in outpatient vestibular medicine. <25% of eligible primary care patients get Dix-Hallpike.

Classic BPPV history — seconds, positional, no hearing / neuro Sx

- Duration: seconds per attack (10–30 s typical, rarely >60 s). Continuous vertigo = NOT BPPV.
- Trigger: rolling over in bed, lying flat, sitting up, looking up ("top shelf"), bending forward.
- Between attacks: asymptomatic when head still and upright (residual foggy feeling in elderly OK).
- No hearing loss, tinnitus, aural fullness → if present, rethink diagnosis.
- No diplopia, dysarthria, weakness, severe headache → red flag for central cause.

► Pseudo-constant pattern

BPPV often described as "constant" because each head movement re-triggers it. Ask: "between attacks, when your head is still, do you feel normal?" Discrete attacks + asymptomatic periods = BPPV.

Dix-Hallpike — diagnostic test for posterior canal BPPV (80–90% of BPPV)

- Seat patient, legs extended on couch so head clears the end when supine. Warn; have emesis bag.
- Rotate head 45° toward tested side. Lie rapidly supine, head 20° below horizontal.
- Observe eyes ≥30 s (ideally 60 s) — do NOT stop early. Return slowly; observe reversal nystagmus.

Finding	Interpretation
Upbeat-torsional, latent, <60 s, fatigable	Posterior canal BPPV (tested side)
Horizontal nystagmus on Dix-Hallpike	Lateral canal BPPV — do supine roll test
Pure downbeat, no latency, persistent	Central positional — image + refer
Purely torsional, persistent	Rare anterior canal BPPV or central mimic
No nystagmus despite reproduced vertigo	Equivocal — re-test; else alternative Dx

► False-negative Dix-Hallpike

Commonest cause of missed Dx = premature termination. Nystagmus can take 5–10 s to emerge. Hold ≥30 s (ideally 60 s) with eyes continuously observed.

Supine roll test — for lateral (horizontal) canal BPPV (10–15%)

- Indication: typical BPPV history with NEGATIVE Dix-Hallpike.
- Supine, head elevated ~20°. Rapidly turn head 90° each side, observe ≥30 s.
- Geotropic (toward ground-ward ear): canalithiasis → STRONGER side = affected.
- Apogeotropic (away from ground-ward ear): cupulolithiasis → WEAKER side = affected.

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Epley manoeuvre — right posterior canal (mirror for left) — 80–90% single-Tx cure

#	Action	Hold
1	Sit upright, head rotated 45° right (affected side)	—
2	Lie supine, head 45° right, 20° below horizontal (Dix-Hallpike)	30–60 s
3	Rotate head 90° left (now 45° left of midline, still extended)	30–60 s
4	Roll onto left shoulder; face rotates 45° below horizontal	30–60 s
5	Sit up with head still rotated left; return head to neutral	—

► Expected outcomes (AAO-HNS 2017)

Single Tx: 80–90% resolution. Second Tx at 1–2 wk review: cumulative >95%. Post-Tx activity restriction (sleeping upright, avoiding affected side) NOT required or helpful.

► Avoid vestibular suppressants in confirmed BPPV

Prochlorperazine, betahistine, diazepam are NOT effective BPPV treatments. They suppress symptoms without treating the cause, delay central compensation, and increase falls risk in older adults. The Epley is the treatment.

Lateral canal BPPV — treatment

- Gufoni: first-line for both geotropic and apogeotropic variants (70–80% single-Tx success).
- Barbeque (Lempert 360°) roll: alternative for geotropic canalithiasis.
- Forced prolonged position: overnight on unaffected side, if in-clinic manoeuvres fail.

Red flags → imaging + vestibular physician referral

- Pure downbeat / purely vertical nystagmus on positional testing.
- Nystagmus with NO latency, persistent >60 s, NOT fatigable.
- New severe headache, neurological deficit, truncal ataxia, progressive hearing loss.

Treatment failure & when to refer

- Two correctly performed Epleys fail — consider cupulolithiasis, multi-canal, secondary cause.
- Consistently NEGATIVE Dix-Hallpike + typical history → supine roll test; else VM / PPPD / central.
- Recurrent BPPV (>2 episodes/year) → Ménière's, migraine, vitamin D deficiency; refer.
- Residual unsteadiness >4 weeks despite negative Dix-Hallpike → consider PPPD.
- Paediatric BPPV or post-trauma multi-canal — lower threshold to refer and image.