LR 11 CHEAT SHEET

Sudden Sensorineural Hearing Loss with Vertigo

Recognising and treating an otological emergency at first contact

WHY IT MATTERS

Otological emergency. Treatment window is the first 72 h; meaningful benefit unlikely after 4–6 weeks. Vertigo lowers recovery rates by 10–20 percentage points and widens the differential to AICA stroke, schwannoma, autoimmune disease.

AAO-HNSF DEFINITION OF SSNHL

- **At least 30 dB sensorineural loss across 3 contiguous frequencies.**
- **Onset over 72 hours or less.**
- **No identifiable cause after initial evaluation (idiopathic until proven otherwise).**
- **Where audiometry not immediate — abrupt unilateral loss + abnormal tuning forks = presumed SSNHL.**

♦ **AICA infarction can present with sudden hearing loss + vertigo + a peripheral HINTS pattern. Vascular risk + SSNHL + vertigo always warrants MRI-DWI regardless of HINTS findings. Have a low threshold for stroke pathway transfer.**

TUNING FORK INTERPRETATION (512 Hz)

Test	SSNHL | Conductive loss
Weber (forehead)	Lateralises to GOOD ear | Lateralises to AFFECTED ear
Rinne — affected ear	Air over bone (positive) | Bone over air (negative)
Rinne — good ear	Air over bone (positive) | Air over bone (positive)
Otoscopy	Normal eardrum | Effusion / wax / perforation
Speech tests	Whispered voice or finger rub at distance localises the loss; not specific
Tinnitus	Common in affected ear | Variable
Aural fullness	Common in affected ear | Common in eustachian tube dysfunction

RED FLAGS — SAME-DAY ESCALATION

Red flag	Concern
Any new neurological sign	Posterior circulation stroke — urgent stroke pathway
Severe occipital headache / neck pain	Vertebral artery dissection
Bilateral or sequential SSNHL	Autoimmune, infective, malignant
Fever, rash, meningism	Meningitis (bacterial/TB/fungal)
Profound (over 90 dB) loss	Worse prognosis, urgent ENT + intratympanic

DIFFERENTIAL DIAGNOSIS — QUICK TRIAGE

Cause	Distinguishing feature
Idiopathic SSNHL	Most common — start corticosteroid; arrange MRI IAM + audiogram in parallel.
AICA stroke	Vascular risk + facial weakness or cerebellar signs — MRI-DWI mandatory.
Vestibular schwannoma	Asymmetric or stepwise loss + persistent unilateral tinnitus — MRI IAM with gadolinium.
Autoimmune inner ear disease	Bilateral or sequential loss + autoimmune history — ENT + rheumatology.

♦ **Start the steroid before the audiogram, before the MRI, before the clinic letter. Idiopathic SSNHL is the commonest cause and the steroid is the same as for most identified causes. Workup runs in parallel — not in series.**

INVESTIGATIONS — TARGETED, NOT ROUTINE

- **Pure-tone audiogram within 14 days — confirms diagnosis, baseline for response.**
- **MRI internal auditory meati with gadolinium — MANDATORY in EVERY patient (3–5% schwannoma yield) [8].**
- **MRI brain + DWI + MRA — same-day if any central feature, severe headache, or major vascular risk [9,10].**
- **Routine bloods NOT recommended in idiopathic SSNHL [6]. Targeted workup ENT-led (autoimmune, syphilis, HIV).**

TREATMENT — ORAL CORTICOSTEROID < 72 h

Start oral prednisolone within 72 h. Co-prescribe PPI. Phone ENT same day. Audiogram + MRI in parallel — do NOT wait for them to start steroid [6,12,13].

Intervention	Regimen / principle
Oral corticosteroid	Prednisolone 1 mg/kg/day (max 60 mg), 7 days, taper 5–10 d. Start within 72 h.
Gastroprotection	Co-prescribe a PPI for the duration of steroid course.
Diabetic care	Increase home glucose monitoring; liaise with GP/endocrinology if needed.
Phone ENT same day	"SSNHL with vertigo, steroid started, urgent audiogram + intratympanic consideration."
Intratympanic steroid	ENT-administered. Primary if oral contraindicated; combined for profound loss; salvage if incomplete recovery 2–6 wks.
Audiogram	Within 14 days. Baseline + serial for response.
MRI IAM with gadolinium	EVERY patient. Excludes schwannoma + retrocochlear pathology.

♦ **DO NOT withhold systemic corticosteroid for well-controlled diabetes or hypertension without first phoning ENT. The evidence for steroid in SSNHL is strong, the regimen is short, and the cost of delay is permanent hearing loss.**

REFERRAL & FOLLOW-UP PATHWAY

Phase	Timing	Actions / milestones
First contact	Day 0	History, otoscopy, tuning forks; screen central red flags; PREDNISOLONE 1 mg/kg + PPI; phone ENT.
Acute investigations	Day 1–14	Audiogram (≤48 h ideal); MRI IAM with gadolinium; MRI-DWI same-day if central features.
Expert review	Week 2	ENT review with repeat audiogram; intratympanic salvage if incomplete recovery; vestibular assessment.
Long-term	1, 3, 6 months	Audiology follow-up; vestibular rehab if residual imbalance; hearing aid; contralateral ear counselling.

Audiology follow-up at 1, 3, 6 months. Vestibular rehabilitation for residual imbalance [11]. Hearing aid fitting where loss affects function. Counsel on contralateral ear protection.

♦ **Counselling — "Sudden hearing loss is treated like a stroke of the ear. The first 72 hours decide the outcome. The other ear must be protected — avoid loud noise, return immediately for any new symptom on either side."**

WHEN TO REFER + RED FLAGS

- ► **Any new neurological sign (diplopia, dysarthria, weakness, ataxia) — STROKE pathway.**
- ► **Severe occipital headache or neck pain — vertebral artery dissection.**
- ► **Bilateral or sequential SSNHL — autoimmune, infective, malignant aetiology — emergency workup.**
- ► **Profound (90 dB or worse) loss — worse prognosis; same-day ENT + intratympanic.**
- ► **Any incomplete recovery at 2–6 weeks — intratympanic salvage candidate.**
- ► **Persistent vertigo at 8–12 weeks despite rehab — vestibular physician review.**

♦ **Outlook — Pooled recovery 50–75% with corticosteroid in time; vertigo lowers this by 10–20 pp. Most recovery in first 2 weeks; possible up to 6 months. Modifiable levers: time-to-steroid, MRI yield (schwannoma), rehab uptake.**