AVS
CHEAT SHEET

Acute Vestibular Syndrome

ED Diagnosis & Stroke Exclusion

▸ What is AVS?

Continuous vertigo/unsteadiness lasting hours–days with nausea, vomiting, gait instability, and nystagmus at rest.
Key question: peripheral cause (vestibular neuritis) vs central cause (posterior fossa stroke/TIA)?

AVS — Clinical Features at a Glance

Feature	Peripheral (Vestibular Neuritis)	Central (Stroke/TIA)
Onset	Sudden, often post-viral	Sudden, may have vascular risk factors
Nystagmus	Unidirectional, horizontal, suppressed by fixation	Direction-changing or purely vertical
Head Impulse Test	Abnormal (catch-up saccade) — reassuring	Normal — HIGH RISK
HINTS	Peripheral pattern — safe to monitor	Central pattern — stroke protocol
Gait	Impaired but can walk with support	Often severely impaired; may not stand

Differential Diagnosis of AVS

Diagnosis	Key Distinguishing Features	Action
Vestibular neuritis	Post-viral, HIT abnormal, normal skew/gaze	Steroids, vestibular rehab, GP follow-up
Posterior fossa stroke	HIT normal, skew deviation, direction-change nystagmus	Immediate stroke protocol + MRI
Cerebellar haemorrhage	Severe ataxia, headache, hypertension	CT head urgent — neurosurgical emergency
Wernicke encephalopathy	Alcohol, malnutrition, ophthalmoplegia, confusion	IV thiamine before glucose
MS relapse	Younger patient, prior neurological episodes	MRI brain + spine, neurology
Labyrinthine infarct	Sudden hearing loss + vertigo, vascular risk	Stroke workup, MRI DWI

Red Flags — Central AVS

Red Flag	Significance
Normal head impulse test (HIT)	Most sensitive sign of central pathology in AVS
Direction-changing or purely vertical nystagmus	Never peripheral — assume central until proven otherwise
Skew deviation (vertical ocular misalignment)	Brainstem/cerebellar lesion until excluded
Severe truncal ataxia — cannot stand	Cerebellar stroke risk; periless to discharge
Acute headache + vertigo	Posterior fossa haemorrhage or dissection
Diplopia, dysarthria, dysphagia	Brainstem involvement — stroke
Vascular risk factors (age, AF, HTN, DM)	Raises pre-test probability of stroke

Acute Vestibular Syndrome — *continued*

HINTS Exam in AVS — Summary

Test	Peripheral Result	Central Result (High Risk)
Head Impulse (H)	Abnormal — catch-up saccade seen	Normal — no catch-up saccade
Nystagmus (N)	Unidirectional, fast phase away from lesion	Direction-changing or vertical
Test of Skew (TS)	No vertical deviation on cover-uncover	Skew deviation present

▸ **HINTS interpretation**

ALL THREE peripheral = vestibular neuritis pattern — MRI not immediately needed.
ANY ONE central sign = stroke protocol — MRI DWI (note: may be falsely negative < 24–48 h).
HINTS outperforms early MRI DWI for posterior fossa stroke sensitivity.

Investigations

Investigation	When	Key Points
CT head	Any red flag, headache, hypertension	Excludes haemorrhage; poor posterior fossa sensitivity for ischaemia
MRI DWI + FLAIR	Central HINTS or clinical uncertainty	Gold standard — best after 24–48 h if initial negative
ECG	All AVS	AF is a stroke risk factor; may need anticoagulation
BSL, UEC, FBC	All AVS	Exclude metabolic causes of dizziness
Pure tone audiogram	If hearing loss present	Sudden SNHL + vertigo — labyrinthine infarct or Ménière's

Management & Disposition

Diagnosis	Management	Disposition
Vestibular neuritis (confirmed peripheral HINTS)	Prochlorperazine or ondansetron for N&V; consider oral prednisolone 50 mg x 5 days; early mobilisation	Discharge with GP follow-up; vestibular physio referral
Central AVS / stroke suspected	Stroke protocol; dual antiplatelet or anticoagulation per neurology; BP management	Admit under stroke/neurology; MRI DWI
Cerebellar haemorrhage	Urgent BP control; reverse anticoagulation; neurosurgical consult	ICU / neurosurgery
Uncertain / cannot exclude central	Symptom control; close observation	Admit for serial HINTS, delayed MRI at 24–48 h

Documentation Essentials

Document	Required Elements
Neurological exam	Cranial nerves, cerebellar signs, gait assessment, Romberg
HINTS result	Each component recorded: H (normal/abnormal), N (direction), TS (present/absent)
Vascular risk factors	HTN, DM, AF, prior stroke/TIA, smoking, dyslipidaemia
Disposition rationale	Why peripheral vs central; imaging result or rationale if not done