

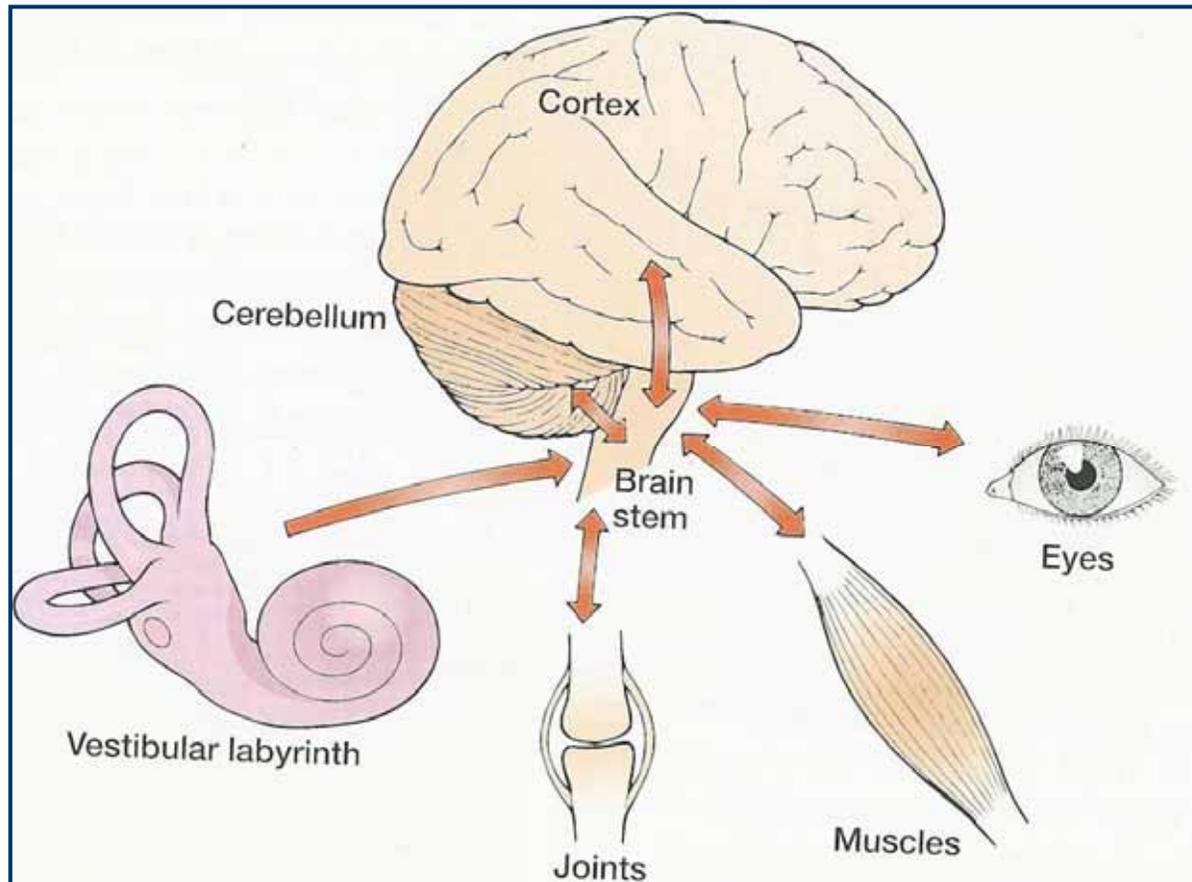
DYSEQUILIBRIUM:

A Practical Approach to the Dizzy Patient



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Maintenance of Balance



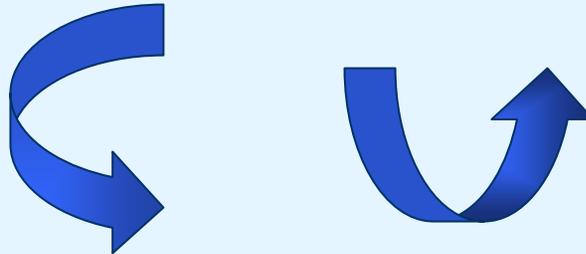
Vestibular Apparatus



Saccul/Utricle (Macula) = Linear Acceleration



Semicircular Canals (A. Crista) = Angular Acceleration



HISTORY

True Vertigo vs General “Dizziness”

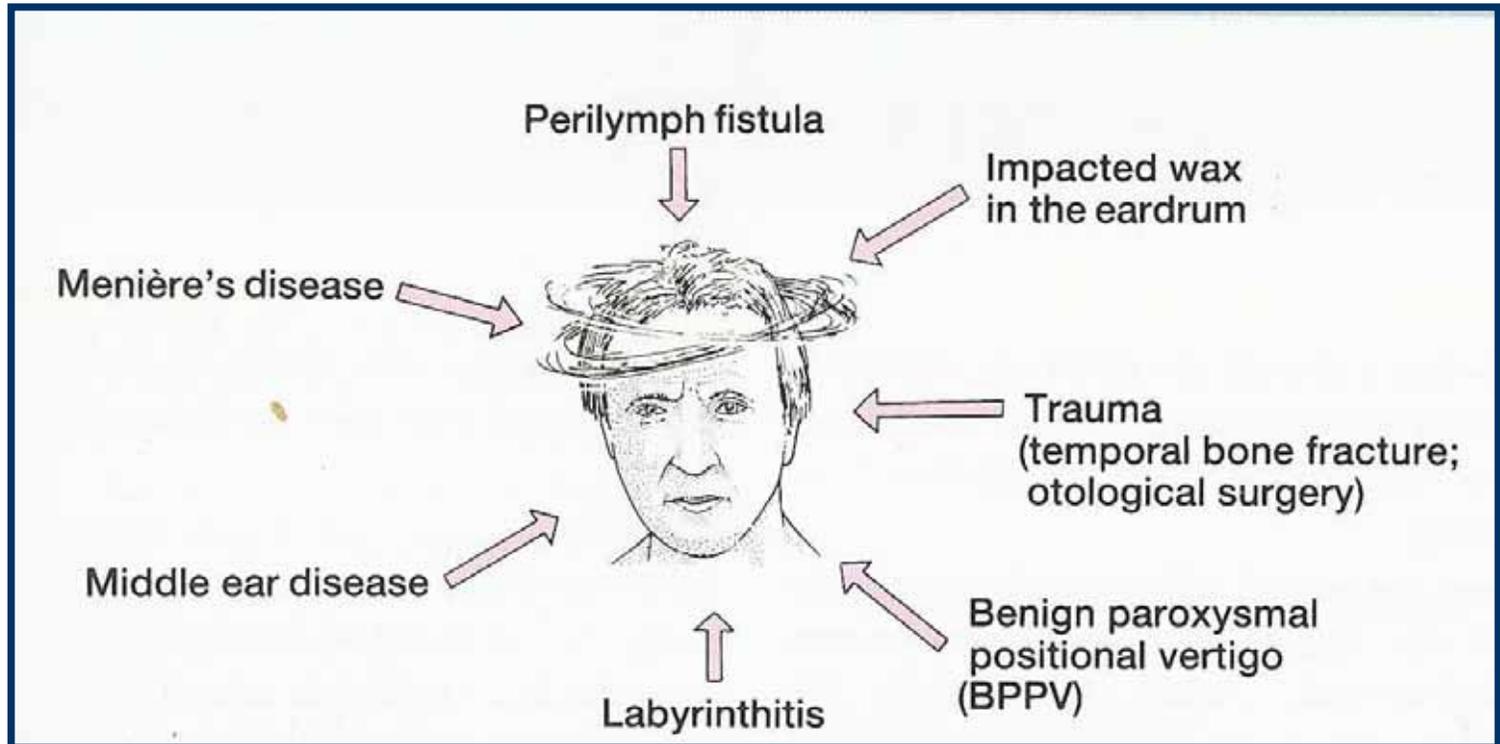
- Onset and Duration
- Hearing loss and Tinnitus
- Relation to Activity
- Cardiovascular Disease
- Drugs (Anti-HT / Aminoglycosides)
- Alcohol
- Anxiety



EXAMINATION

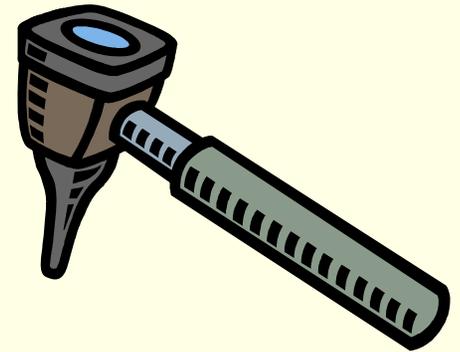
1. **ENT Examination**
2. **Cranial Nerves**
3. **Nystagmus**
4. **Cerebellar Function**
5. **Neck and Cervical spine**
6. **Romberg and Unterberg**
7. **Gait (Heel-toe / Rapid Turning)**
8. **BP (seated and supine)**
9. **Peripheral pulses and Carotid Bruit**
10. **Dix-Hallpike**

Differential Diagnosis: Peripheral



BPPV

Hx: ~ Episodic acute onset of vertigo
~ Positional association (often in bed)
~ Lasts seconds to mins.



Exam: ~ Dix-Hallpike manoeuvre
[Delayed onset, horizontal/rotational nystagmus, centripetal,
direction constant, fatigable]

Pathology: ~ Otoliths in semicircular canals

Treatment: ~ Otolith Reposition. Manoeuvre and Reassurance

VESTIBULAR NEURONITIS



Hx: ~ Episode of continuous severe vertigo, without hearing loss.

Exam: ~ Labyrinthine nystagmus

Path: ~ Viral Neuronitis of vestibular nerve resulting in Neuropraxia/Nerve Degeneration

Treatment: ~ Labyrinthine sedatives

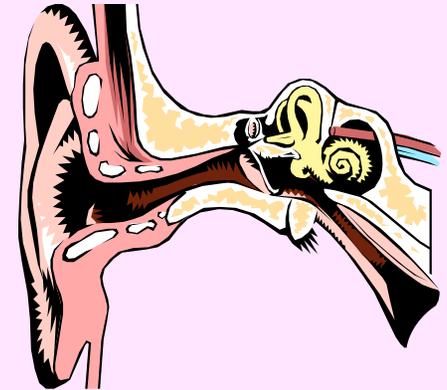
Neuropraxia: Resolves over weeks

Nerve Degen.: Central Compensation over months

LABYRINTHITIS

Hx: ~As for Vest. Neuronitis BUT severe hearing loss/tinnitus
~Hx of preceding O.Media/ Meningitis

Exam: ~Labyrinthine Nystagmus
~ Signs of Otitis Media



Path: ~Extension of infection from middle ear into
Temporal bone = Cochlea/ Vestibular damage

Treat: ~ i.v. Antibiotics
~ Surgery for cholesteatoma/ middle ear disease

MÉNIÈRE'S DISEASE

Hx: • Episodes (30-60yrs):

→ True Vertigo → SN Hearing Loss

→ Tinnitus → Aural fullness

Exam: ~ *During*: Nystagmus + Hearing loss

~ *Between*: Gradual ↓ Hearing

Path: ↑ Endolymph Hydrops = haircell damage

Treat: Lab. Sedatives, Diuretics, Vasodilators

$\frac{2}{3}$ Complete Remission

Surgery if severe + persistent

PERILYMPH FISTULA

Hx: Severe Vertigo following trauma/ surgery
May follow CSOM (with Cholesteatoma)

Exam: Fistula Test (push Tragus)

CT scan

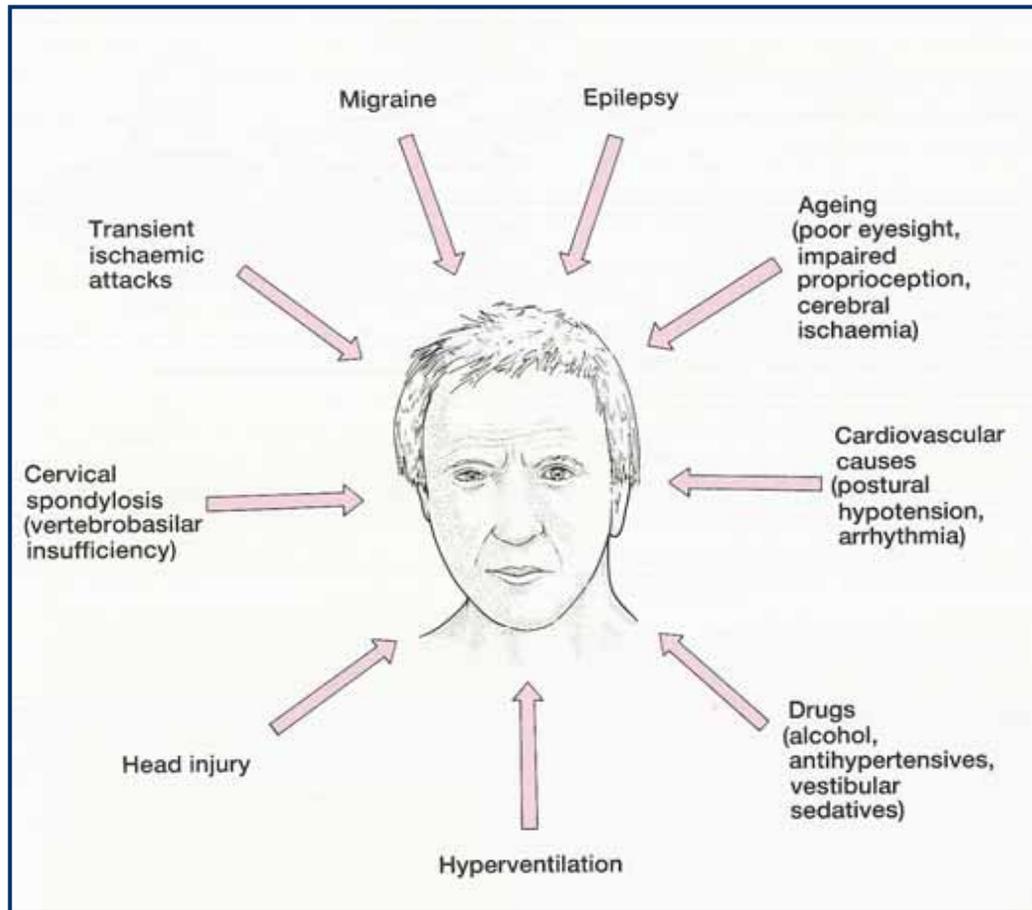
Treat: Bedrest

Head Elevation

Surgery

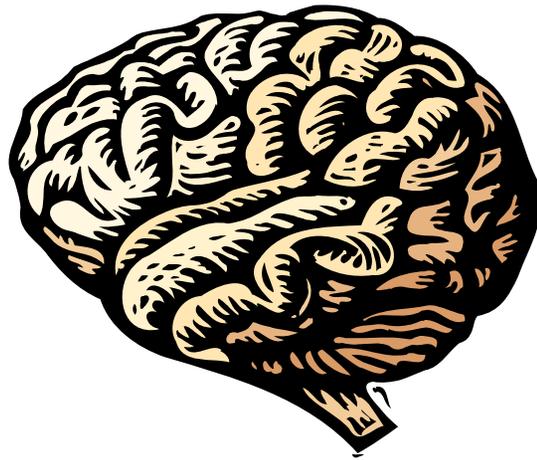


Non-Otological causes:

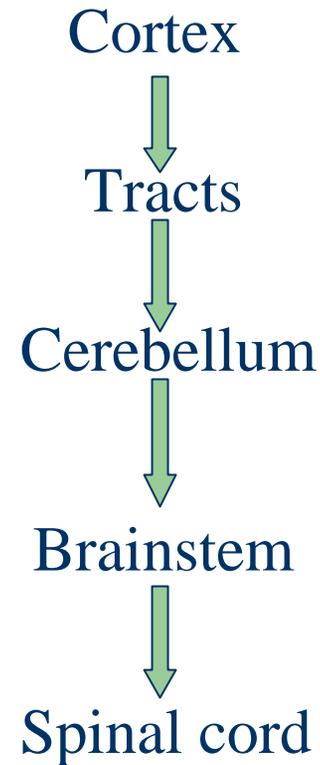


Light
headedness/
unsteadiness

Central Neurophysiological causes:

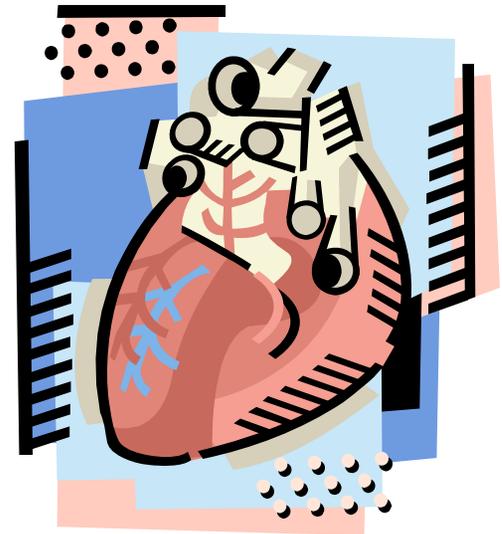


Eg: Trauma
Tumours
MS
Drugs/Alcohol



Cardiovascular causes:

- Postural hypotension
 - Arrhythmias
- } Syncope/Fainting
- TIA
 - Vertebro-basilar insufficiency
 - Migraine



Other causes:

1. CERVICAL – osteophytes compress vertebral arteries
2. PSYCHOGENIC/ANXIETY – “out-of-body” experience
 - hyperventilation
3. AGEING – multifactorial

SUMMARY:



DURATION	AETIOLOGY
Seconds	BPPV Post. Hypotension Cervical Spondylosis
Mins - Hours	Labyrinthitis Menière's
Hours - Days	Central vestibular disease Labyrinthine failure Drugs

When to Refer...?



1. Presence of auditory associations (↓hearing, tinnitus etc.)
2. Signs of suppurative middle ear disease
3. Symptoms triggered by pressure changes (barotrauma/valsalva) suggesting possible perilymph fistula.