

Dizziness

SUBJECTIVE HISTORY	OBJECTIVE HISTORY
<ul style="list-style-type: none"> • History of presenting complaint (when, where, what, how long etc.) • Severity of symptoms • Frequency of symptoms • Nature – how do they describe it? • Aggravating factors • Past history/medical history 	<p style="text-align: center;">Global</p> <ul style="list-style-type: none"> • Balance <ul style="list-style-type: none"> ○ Static: Rhomberg, timed stance, OLST ○ Dynamic: functional reach, multidirectional reaching ○ Sensory manipulation: CTSIB ○ Functional tests: TuG, DGI, berg balance scale • Gait • Neurological signs: babs and clonus • Observe them doing the problematic movement – look for nystagmus. What is happening? How bad are the symptoms and how long do they last?

Specific tests

- Hallpike-Dix
- Nystagmus
- SCC function
- Visual acuity
- Oculomotor tests
- Fukuda stepping test

Physio treatment for dizziness

- Habituation/ compensation
 - Patients perform exercises which gradually and systematically expose them to stimuli which make them dizzy
 - Repeated provocation causes dizziness to lessen
 - Be careful not to make the patient sick
- Changing the calibration of the VOR
 - Challenge the VOR to work in situations of ever increasing complexity
 - Eye fixation exercises
- Balance retraining especially under differing sensory situations E.g. close eyes, change surface In a crowded subway etc
- Particle repositioning manouvres E.g. canalith repositioning for BPPV etc
- Environmental management
 - E.g. carry a torch at night for extra vision
- Education/advice/reassurance
 - Vestibular conditions

- Unilateral Vestibular Hypofunction (UVH)
 - Cause: often result of trauma/ TBI associated or infections such as neuritis
 - Where one vestibular organ doesn't work
 - The CNS has to make sense of a new situation, and in the interim, the patient experiences dizziness

Assessment

- Symptoms
 - In acute phase, nystagmus is present, gait is slow and wide based, balance is decreased, and VOR is affected. The patient feels acutely dizzy
- Specific Tests
 - **Head shake nystagmus**
 - Head tilted back 30 degrees
 - Shake back and forth for 30 seconds as quickly as possible
 - Unilateral vestibular deficit causes nystagmus to the side of the lesion
 - **Head thrust test**
 - Head tilted 30 degrees
 - Rapid head movements to either side with focus on the examiner's nose
 - Patients have catch-up saccade when rotated to the side of weakness
 - **Fukuda stepping test**
 - Originally described by Fukuda using 100 steps on a marked floor
 - Patients are asked to take 100 steps with eyes closed and hands out in front
 - Note: excursion, rotation and spin
 - Excursion = distance away from start
 - Rotation = angle away from start
 - Spin = degree of self rotation from start
 - Mark out semicircle on ground in tape
 - **Rotation by more than 45 degrees is abnormal**
 - Rotation occurs to the side of the lesion
 - Rotation is often found in asymptomatic patients

Treatment

- **Compensation** /habituation
 - Enhanced by early movement (as tolerated only!)
 - Eye motion, head motion, ambulation if safe
 - Further challenges to balance and the VOR if compensation has not occurred spontaneously.
 - Cawthorne Cooksey Exercises
 - Eye movements with head fixed
 - Head movements with eyes closed
 - Start in sitting, and movements slowly, then progress to faster and then standing

- Incorporate both together, STS with eyes open then closed, then moving eyes while STS, etc.
- Look at habituation exercises and VOR calibration exercises on sheet.
 - Learn 3 good ones
 - Can do general eye movements and head movements
 - Diagonals
 - In sitting bring head towards the right or left knee
 - Wait till symptoms stop, then bring head back up in extension to opposite shoulder
 - Progress from slow to fast
 - STS
 - Head tilting with fixed eyes/ eyes closed
 - Jumping or bouncing on an exercise ball while looking at snellen chart/ fixed object
 - E.g. when seasick, focus on horizon – give another cue to take information from
 - If unsuccessful try **substitution**
- **Substitution**
 - Visual, auditory, tactile
 - Electro-tactile substitution
 - Supply the patient with additional info about head position via tongue biofeedback
 - Improved postural control
 - Can be used for balance training tool or assistive aid during ADL's
- CNS compensates but often symptoms remain in certain environmental situations