**BACK-TO-CAMPUS - PRACTICAL SKILLS**

**BACK TO CAMPUS – Vertigo assessment**

**Learning Objectives**

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| * Identify the clinical setting when a Dix-Hallpike examination is required versus HINTS * Demonstrate the Dix-Hallpike and HINTS manoeuvres * Discuss the management of BPPV – three techniques – Epley, Brandt-Darroff |

**OVERVIEW**

In this session students will focus on performing the examination techniques for vertigo assessment and in identifying in which clinical settings each should be used. They will also focus on performing the three management techniques for vertigo – Epley, Brandt/Daroff

All students should see the technique demonstrated and also have the opportunity to perform each on their colleagues – with feedback.

This session may benefit from the Peyton teaching 4 step approach:

1. Demonstration of whole examination by tutor
2. Tutor repeats demonstration but describes all steps
3. The student talks the teacher through the steps and the tutor performs them
4. The students carry out the examination on their peers – tutor feedback +/- peer feedback

The students have been taught these in year 3 so step 1 may not be required.

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| **SUGGESTED TUTOR PREPARATION FOR THIS WEEK**   1. Dommaraju S, Perera E. (2016) An approach to vertigo in general practice. AFP   <https://www.racgp.org.au/afp/2016/april/an-approach-to-vertigo-in-general-practice>   1. Vertigo – Dix hallpike testing. Emergency care Institute   <https://aci.health.nsw.gov.au/networks/eci/clinical/procedures/procedures/576352>   1. BPPV Dix Hallpike test and Epley manoeuvre   <https://youtu.be/LxD-lgqix-s>   1. The Epley manoeuvre: vertigo HANDI Interventions RACGP   <https://www.racgp.org.au/clinical-resources/clinical-guidelines/handi/handi-interventions/procedures/the-epley-manoeuvre-vertigo>   1. The HINTS exam – Peter Johns. Video. Who to perform it on, how to perform it, how to interpret it   <https://youtu.be/1q-VTKPweuk> |

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| **MATERIALS NEEDED**   * couches |

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| **Timing** | **Activity** |
| 5 mins | **Overview of vertigo**  True vertigo versus presyncope, disequilibrium, light headness/dizziness  History:   * Onset and duration of attack – seconds to minutes, hours, days * Provoking factors – change in head position, recent URTI, * Associated features – tinnitus, hearing loss   Differential diagnosis of vertigo    <https://www.racgp.org.au/getattachment/36a9e3e3-c8d0-444c-a9e9-ee4af418ac00/attachment.aspx> |
| 10 mins | **Dix-Hallpike manouevre**  Indications   * no neurological findings * Vertigo initiated by head movement * Short duration * Not dizzy if still * No spontaneous nystagmus)   Manoeuvre   * Quickly from sitting to lying with head extended 30 degrees and turned 45 degrees on one side * Sit up * Repeat manoeuvre on opposite side   Positive test   * Latency * Crescendo>decrescendo lasting 10-30 sec * Vertical upward and rotatory nystagmus to the downward ear (affected ear) * Normal on other side   4 step process and students practice with feedback |
| 15 minutes | **HINTS test**  Indications   * + If hours/days of ongoing vertigo   AND   * + Spontaneous nystagmus   Head impulse   * Gently move the patient’s head side to side, making sure the neck muscles are relaxed. * Then ask the patient to keep looking at your nose whilst you turn their head left and right. * Turn the patient’s head 10-20° to each side rapidly and then back to the midpoint   + A positive test indicates there is a disruption to the vestibulo-ocular reflex, so the eyes move with the head, then saccade rapidly back to the point of fixation on the clinician’s nose (a ‘corrective saccade’). Patients will also have difficulty fixating on the clinician’s nose. If there is a corrective saccade (a positive head-impulse test) this is reassuring that the pathology is most likely a problem with the vestibulocochlear nerve on the ipsilateral side – that is, it is peripheral and not central.   Nystagmus   * Observe the patient’s primary gaze while they look straight ahead. * Then ask the patient to look to the left and to the right without fixating on any object (which can minimise nystagmus).   + Unidirectional nystagmus is reassuring – likely peripheral   + Bidirectional nystagmus highly specific for stroke   + Nystagmus changes direction or is vertical – likely central   Test of skew   * Ask the patient to look at your nose and subsequently cover one of their eyes. * Then, quickly move your hand to cover the patient’s other eye. During this process, observe the uncovered eye for any vertical and/or diagonal corrective movement. * Repeat this manoeuvre on the other eye.   + Abnormal movement – often vertical diplopia – central cause   Findings implications     * 4 step process and students practice with feedback |
| 15 mins | **Epley, Brandt-Daroff, manoeuvres**  Management for BPPV  **Epley**   * Dix-Hallpike manoeuvre from sitting to affected (positive) side) * Wait 1-2 minutes or until nystagmus settles plus 30 secs * Move head to other side (negative Dix Hallpike) without sitting up * Wait 1-2 minutes or until nystagmus settles plus 30 secs * Roll 90 degree onto side with face down * Wait 1-2 minutes or until nystagmus settles plus 30 secs * Sit up with head facing the floor   **Brandt Daroff**   * Sit on edge of bed, turn head to left side (45 degree rotation) * Lie down quickly on right side (head remains 45 rotated) wait 30 sec or until vertigo resolves * Sit up straight and wait 30 sec or until vertigo resolves * Turn head to right side (45 degree rotation) * Lie down quickly on left side (head remains 45 rotated) wait 30 sec or until vertigo resolves * Sit up straight and wait 30 sec or until vertigo resolves * Repeat cycle 5 times |