

Benign Paroxysmal Nystagmus (BPN)

AKA:

Benign Paroxysmal Positional Nystagmus (BPPN)
Benign Paroxysmal Positional Vertigo (BPPV)
Benign Positional Vertigo (BPV)

- Brief attacks of rotatory vertigo +/- nausea (\leq 60seconds)
- Triggers include:
 - Lying down/sitting up in bed/getting out of bed
 - Rolling over in bed
 - Bending, as to tie the shoelaces
 - Extending neck eg to look up to a high shelf.
- Treated with specific exercises/manoeuvres
- Relief is obtained in ~80 percent
- No place for labyrinthine sedatives eg prochlorperazine

BPN aetiology

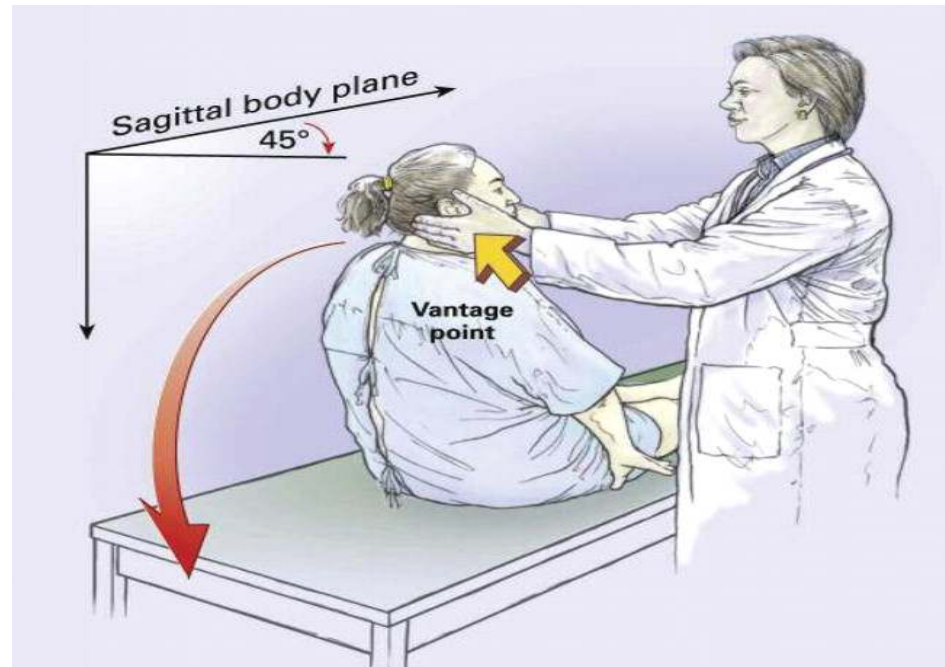
- Debris (“crystals”) in vestibular system
- Usually posterior semi-circular canal.
- Generally accepted explanation is that posterior canal is most dependant, so debris gravitates to this region
- Aetiology: head injury, infection, surgery or out of the blue

Dix-Hallpike test

- To diagnose BPN
- Explain beforehand
- Ensure no neck/back problems that would be aggravated by sudden change in posture
- See also:
 - <http://www.youtube.com/watch?v=Ew14aZqiUrw&feature=related>

- **Dix Hallpike Test**

- Stand to the side of the patient
- Pt sitting with head turned to examiner
- Pt sat so that when supine, the head will be beyond the end of the couch
- Patient lain flat in one quick, smooth movement
- Eyes must stay open
- Repeat on other side



Interpretation of Dix Hallpike Test

- 90% are posterior semicircular canal BPN
 - Rotatory upbeat nystagmus with the diseased ear down
 - Fast phase toward undermost ear
 - reversal of nystagmus direction on sitting up
- If atypical features, consider central problem

Dix-Hallpike test continued

- Positive test:
 - Rotatory nystagmus (& vertigo):
 - Diseased ear downmost
 - 3 features of BPN:
 - Latency – delay of up to 20 seconds before onset of nystagmus
 - Fatigueability – nystagmus fades if head held in provoking position
 - Habituation – Repeating DH test produces less vigorous response



Red flags

- Refer in for need to exclude central cause of positional nystagmus
 - Atypical nystagmus:
 - Non-rotatory nystagmus
 - Triad of latency, fatigueability and habituation not present
 - Other otological/neurological symptoms/signs
 - (Failure to improve with 2-3 Epleys)
 - (Failure to improve with Brandt & Daroff)

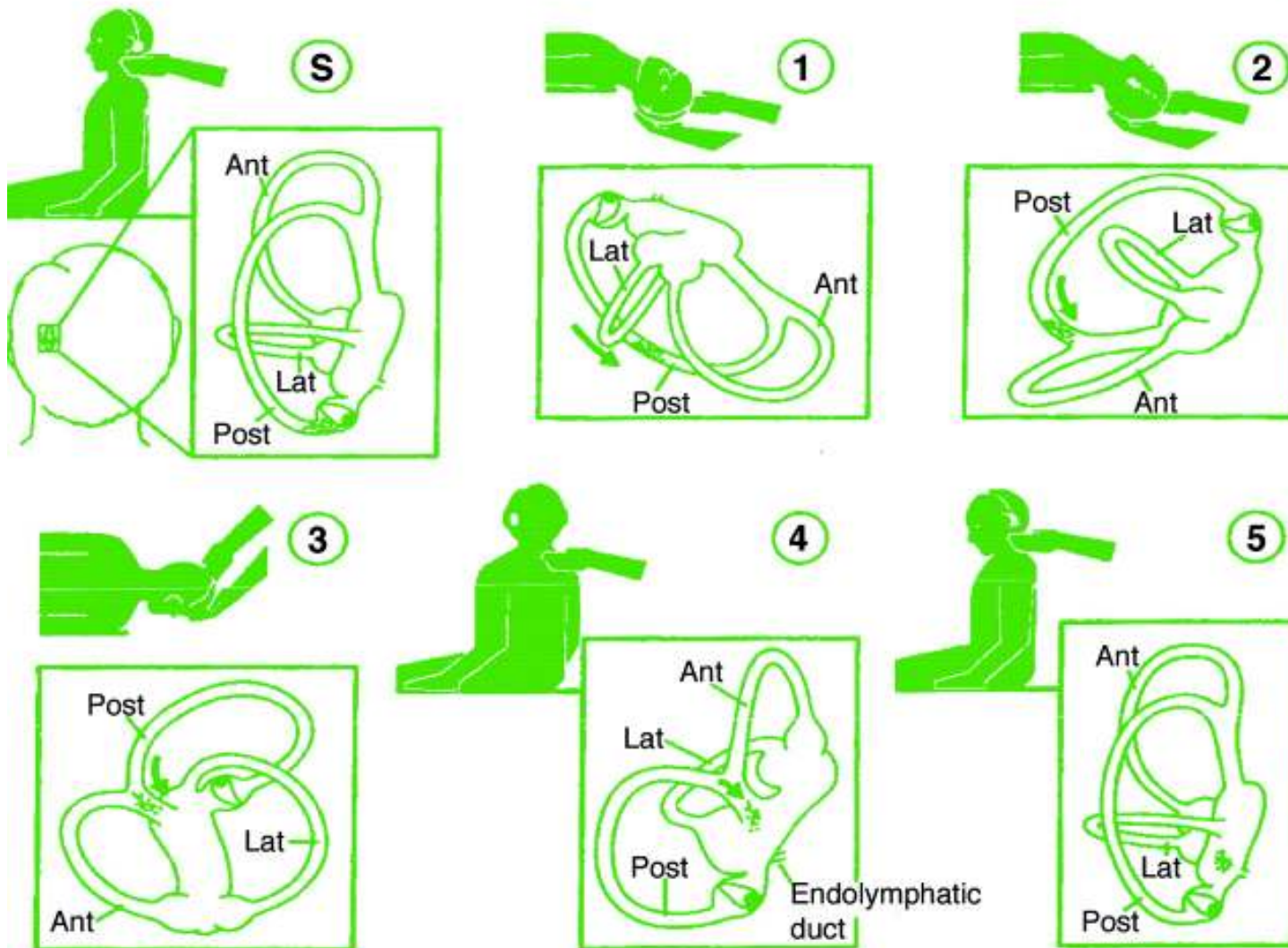
BPN treatments

- Epley manoeuvre
- Brandt & Daroff exercises

See separate documents for quick view and patient leaflets

Epley manoeuvre

- 80% quoted success rate
- Easy to perform
- Repositions “crystals”
- Explain to patient beforehand
- Some post-manoevre instructions also



EPLBY Manoeuvre – see following slides

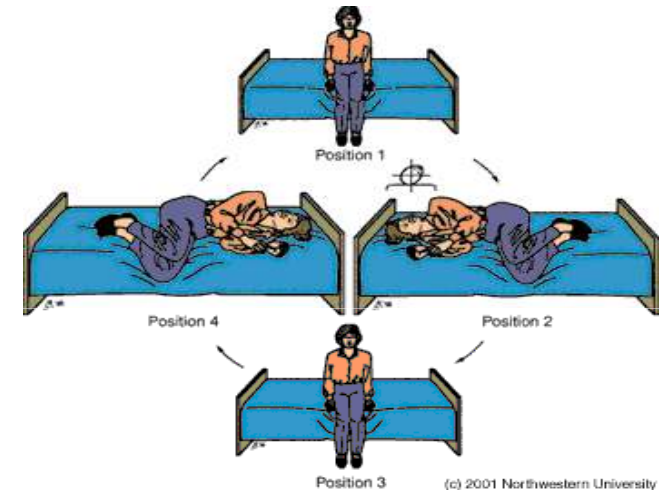
Epley manoeuvre

Post-manoeuvre instructions

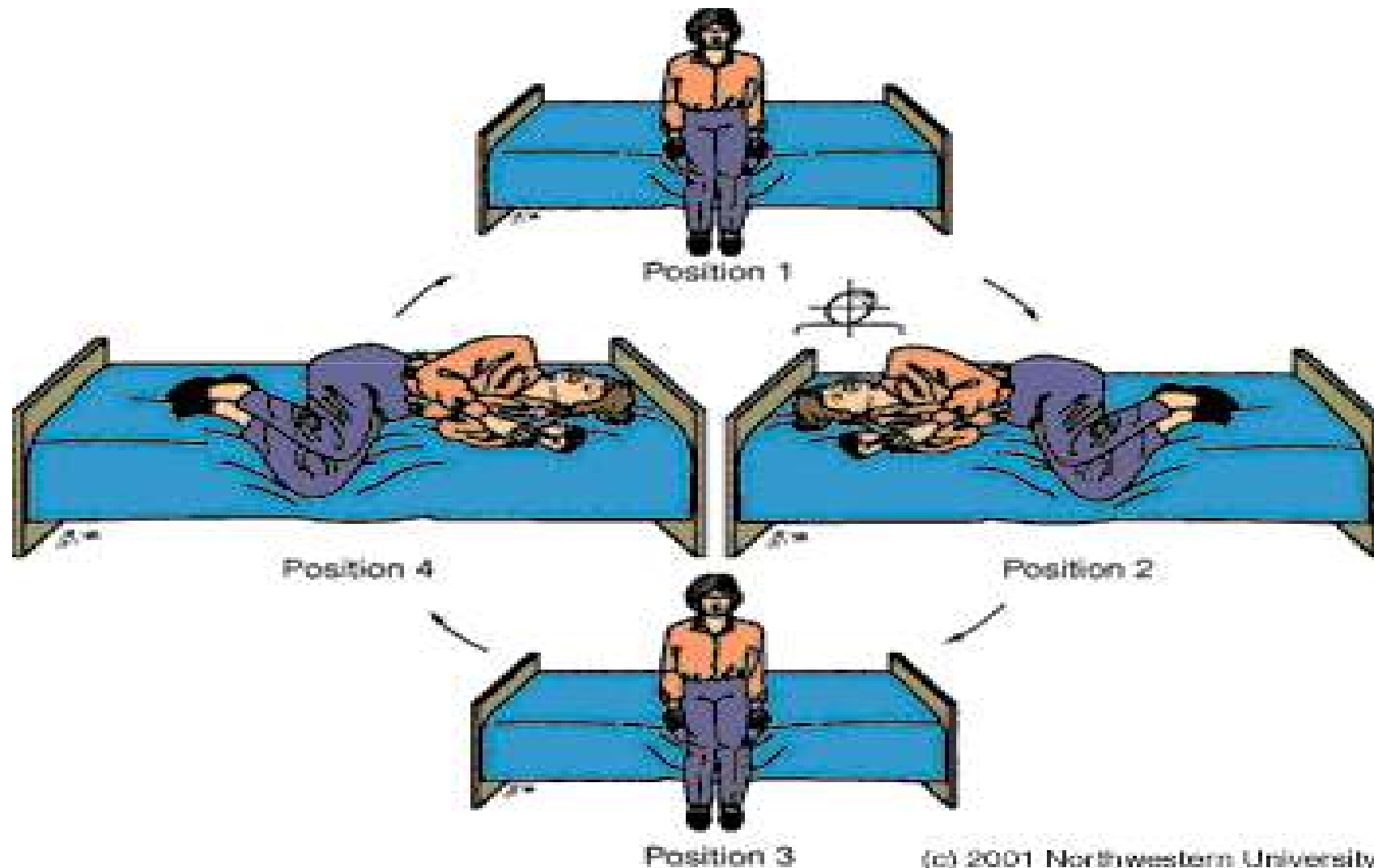
- Patient not to drive home after Epley
- Patient to avoid lying flat for 2 nights after
- For a further 5 nights, avoid lying on bad side:
 - Sleep on good side with pillow behind back to act as a barrier to rolling over

Brandt & Daroff Exercises

- Can be done at home
- High success rate
- Breaks up “crystals”
- Arduous:
 - 3 sets per day for 2 weeks
 - 1 set = 5 repetitions of the exercise
 - Each set takes 10 minutes
- See following slides for detail



Brandt & Daroff Exercises



Brandt & Daroff Exercises

- Begin by sitting upright on bed (**position 1** above)
- Lie down onto side. Take no more than 1-2 seconds to do this
- Keep head looking up at 45 degree angle. Imagine someone standing about six feet in front of you, and keep looking at the person's head at all times (**position 2**)
- Remain on this side for thirty seconds, or until dizziness subsides.
- Return to an upright position and wait for thirty seconds (**position 3**)
- Now lie down onto the other side. Again, it should take one or two seconds to get into position
- Keep the head at a 45 degree angle (**position 4**)
- Stay down for another thirty seconds, or until vertigo subsides
- Return to an upright position and wait for another thirty seconds.

Atypical BPN

- Not common - 10%
 - Lateral Canal
 - Anterior Canal
 - Cupulolithiasis
 - Vestibulolithiasis
 - Multicanal patterns
- May arise following Epley or Brandt & Daroff
- Because of need to exclude central cause, refer in to ENT for assessment