



# BPPV & the Melbourne Health Falls Clinic

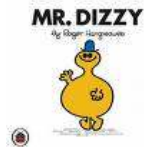
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I wish to acknowledge Anne McGann who developed some of these slides



## Overview

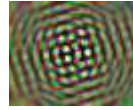


- What is BPPV?
- Assessment of BPPV (and other vestibular conditions) in MH Falls and Balance Clinic
- Use of equipment to assess BPPV in MH Falls and Balance Clinic

Examples of vestibular videos



## What is BPPV?



- Calcium carbonate crystals originating from the otolith organs break away and fall into the semi circular canals (SCC)
- The most common canal effected is the posterior SCC – 63%

### Predisposing Factors

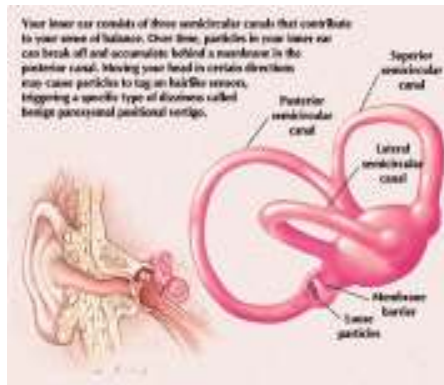
- Hereditary component/preceding episode of neuronitis 15%
- History of head injury 18%
- Prevalence is greater in people >65yrs

**Approximately 50% of all dizziness in older people is due to BPPV**

It's a biomechanical problem!!!



## Anatomy of BPPV





## Physiology



- Canalithiasis
  - Crystals freely floating in the long arm of the SCC
- Cupulolithiasis
  - Crystals adhering to the cupula of the SCC



## Common characteristics:

- Bouts of vertigo lasting < 60secs
- Occurs with change in head position
- Occurs when:
  - Rolling over
  - Sitting ⇌ lying
  - Leaning forward
  - Looking up
- often more marked first thing in the morning
- +/- postural instability/unsteady gait/falls
- +/- Anxiety+++



## Diagnosis: Hallpike-Dix



## .....Hallpike-Dix.....

- Vertigo and nystagmus of short duration
- Reversal of nystagmus on sitting up
- Fatiguing nystagmus with repetition
  
- *Diagnosis of the site/canal of BPPV is dependent upon the Nystagmus observed*



## Treatment Options

- **Canalith Repositioning Technique**
- Liberatory technique (Semont)
- **Brandt-Daroff exercises**
- Horizontal canal repositioning technique
- Modified Brandt Daroff



## Brandt Daroff Exercises





## Variables affecting outcome

- Bilateral/multi canal disease
- location other than posterior canal
- Cupulolithiasis
- Common recurrence
- Need to modify assessment and treatment
- Differential diagnosis:
  - Central nystagmus
  - Perilymphatic fistula
  - Intracranial tumours



## Vestibular Screening in MH Falls & Balance Clinic

VESTIBULAR ASSESSMENT		SURNAME		UWPH	
FALLS and BALANCE CLINIC ROYAL MELBOURNE HOSPITAL ROYAL PARK		GIVEN NAME	DOB	SEX	
		ADDRESS			
		CITY	POSTCODE	TELEPHONE	
		Yes	No	Some-times	
	Do you ever get dizzy?				
	Do you ever feel light-headed?				
	Do you ever have a spinning sensation?				
	Does turning over in bed make you dizzy?				
	Do you get dizzy getting out of bed?				
	Do quick movements of your head make you dizzy?				
	Does bending over make you dizzy?				
	Do you get dizzy looking up?				
TOTAL SCORE from last 5 questions _____/20		X4	X0	X2	
Convert to % by multiplying by 5 _____ %					
<p>Whitney et al 2005 Otology&amp;Neurology</p>					
<b>Oculomotor Assessment:</b> Nystagmus: Spontaneous Smooth Pursuit: Horizontal Saccadic Mvts: Horizontal VOR: Horizontal VCR: Suppression RTT: Left Right Other:		Gaze Holding Vertical Vertical			
<b>Position Tests</b> (Sidelie Test if cannot perform Hallpike)		Instruction	Duration		
	Hallpike L	Instruction	Duration		
	Hallpike R	Instruction	Duration		
	Roll Test L	Instruction	Duration		
	Roll Test R	Instruction	Duration		
<b>SUMMARY</b>					
Signature/Date					



## “VestiTest” Video Mask

- VestiTest Video Mask
- Video displayed on laptop via “Snazzi” USB2 video converter
- Video currently saved to MH shared drive with limited access to Vestibular clinicians



## Tests Conducted with VestiTest Video Mask

- Hallpike / Side Lying Test
- Roll Test
- Head shaking Test
- Spontaneous nystagmus screen
- Gaze-evoked nystagmus screen



## Video Examples



## Issues and Future Directions



- Patient confidentiality
- Filing of clinician report rather than saving videos (until e-records introduced)
- Signal problems
- Assess prevalence of BPPV in our Falls Clinic demographic
- Assess effectiveness of BPPV management in Falls Clinic
- Use of videos for education