



Vestibular and Ocular Balance Evaluation

(adapted from UPCM Vestibular Ocular Motor Screen)

INSTRUCTIONS

For each test below, on a scale of 1-10, assess symptoms of headache, dizziness, nausea, foggyess:

1. Prior to administering the assessment to establish baseline
2. After each component (please see attached chart)

• **Smooth Pursuits**

- Patient and examiner seated
- 3ft distance between patient and examiner
- Midpoint is at patient's nose. Use fingertip as target. Move horizontally 1.5 feet to the left, then back to midline and then 1.5 to the right in smooth motion. Should take two seconds to complete. Repeat two times and then do the same vertically (1.5 ft above midline to 1.5 ft below midline x2)

• **Saccades - Horizontal**

- Patient and examiner seated
- 3ft distance between patient and examiner
- Examiner's fingertips serve as targets; held 3 ft apart
- Patient instructed to look side to side for a total of 10 reps (head stays still, only eyes move)

• **Saccades - Vertical**

- Patient and examiner seated
- 3ft distance between patient and examiner
- Examiner's fingertips serve as targets; held 3 ft apart (1.5 ft above midline, 1.5 ft below midline)
- Patient instructed to look side to side for a total of 10 reps (head stays still, only eyes move)

• **VOR (Vestibular Ocular Reflex) - Horizontal**

- Patient and examiner remain seated
- Examiner holds 14 pt font target 3 ft from pt; eyes remain fixed on target
- Head moves back and forth 20 degrees each side (metronome set at 180 bpm)
- 10 reps @ 180 bpm metronome

• **VOR (Vestibular Ocular Reflex) - Vertical**

- Patient and examiner remain seated
- Examiner holds 14 pt font target 3 ft from pt; eyes remain fixed on target
- Head moves up and down 20 degrees each side (metronome set at 180 bpm)
- 10 reps @ 180 bpm metronome

• **Visual Motor Sensitivity**

- Patient stands, examiner stands just behind and to the side to allow patient to move freely but examiner can act as spotter
- Patient arm extended with thumb up
- Trunk, head, eyes move as one unit, rotating 80 degrees to the right and 80 degrees to the left
- 10 reps @ 50 bpm

- **Accommodation**

- Patient and examiner seated
- Target is 14 point font
- Patient covers R eye with hand
- Patient holds target and moves slowly towards nose
- When patient reports target is blurry, examiner takes measurement (from target to tip of nose)
- Complete three times, then repeat with L eye

- **Convergence**

- Patient and examiner seated
- Target is 14 point font
- Patient covers R eye with hand
- Patient holds target and moves slowly towards nose
- Upon target becoming double OR witnessed exophoria, examiner takes measurement (target to tip of nose)
- Repeat three times

- **Balance**

- Patient stands on stable surface, feet together, hands on hips with eyes closed for 20-30 seconds
- Patient then stands in tandem stance (one foot in front of the other, heel touching toe) on stable surface with eyes closed and hands on hips. Patient holds this position for 20-30 seconds. Feet are then changed positions where opposite foot in front.
- All three stances are repeated on an unstable surface (feet together, tandem, opposite tandem)

Vestibular/Ocular Motor Exam	Not Tested	Headache (0-10)	Dizziness (0-10)	Nausea (0-10)	Fogginess (0-10)	Comments
Baseline (pre-VOMS)						
Smooth Pursuits						
Saccades-Horiz						
Saccades-Vert						
VOR-Horiz						
VOR-Vert						
Visual Motor Sensitivity						
Accommodation						
Convergence						
Balance						

- **Examples (Ocular movement abnormalities)**

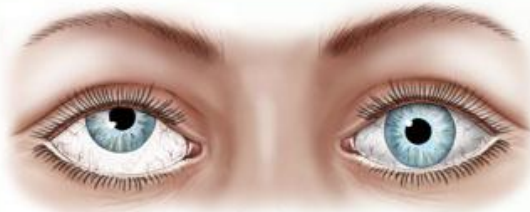
Strabismus



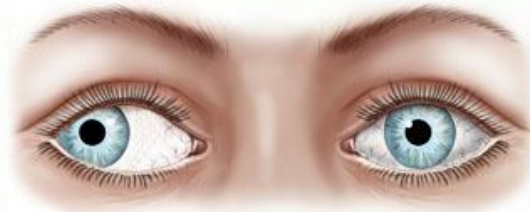
Normal



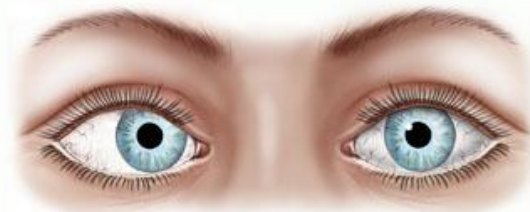
Hypotropia (eye turns down)



Hypertropia (eye turns up)



Exotropia (eye turns out)



Esotropia (eye turns in)

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- **BESS testing**

A



B



C



D



E



F

