Vestibular Assessment & Management Certification Workshop

Course Director: Richard E. Gans, Ph.D.

Faculty:
Brttany Fauble Au.D., Kim Rutherford, PT, DSc., COMT,
Joseph Sakumura, Au.D., Steven Spinks, PT, DPT, OCS, COMT, FAAOMPT

*Faculty may vary based on availability and location

Day 1 8:30 AM – 5:00 PM

Morning Session 8:30 AM – 12:00 PM (Break 10:00 – 10:15 AM)

• Welcome and Introductions
  ▪ Statement of need and demographics
  ▪ Historical perspective

• Review of the theory of human equilibrium: Integration of vestibular, vision and somatosensory modalities and central processing

• Anatomy and physiology of peripheral and central vestibular mechanism
  ▪ Vestibulo-Ocular Reflex (VOR)
  ▪ Nystagmus- definition and description
  ▪ Corrective Saccades
  ▪ Vestibulo-Collic Reflex (VCR)
  ▪ Vestibulo-Spinal Reflex (VSR)

Lunch (on your own)

Afternoon Session 1:00 PM – 5:00 PM (Break 3:00 – 3:15 PM)

• A & P (continued)
  ▪ Cervico-Ocular Reflex (COR)
  ▪ Cervico-Collic Reflex (CCR)
  ▪ Cervico-Spinal Reflex (CSR)

• Central Vestibular Mechanism anatomy and physiology

• Central Vestibular Compensation

• Evaluation & Treatment – BPPV
  ▪ Demonstration of Canalith Repositioning Maneuvers (CRM)
Manual practice hands-on - CRMs

- Posterior/Anterior Canal
  - Modified Canalith Repositioning (CRM Epley/Herdman style)
  - Semont Liberatory Maneuver (SLM)
  - Gans Repositioning Maneuver (GRM)

**Day 2 8:30 AM – 5:00 PM**

**Morning Session 8:30 AM – 12:00 PM (Break 10:00 – 10:15 AM)**

- BPPV Treatment (continued)
  - Horizontal Canal
    - Appiani
    - Casani
    - Horizontal Hybrid Maneuver
  - CRM Treatment Considerations
    - Restrictions Post BPPV treatment
    - Complications of treatment

- Pathophysiology of common vestibular and balance disorders
  - Migraine
  - Psychiatric
  - Otologic Disorders
  - Trauma
  - Toxicity
  - Neurologic
  - Rheumatology/Autoimmune
  - Cervical
  - Other
Lunch (on your own)

Afternoon Session 1:00 PM – 5:00 PM *(Break 3:00 – 3:15 PM)*

- Disorders (continued)
- Concussion
  - Definition of concussion
  - Most common symptoms experienced post concussion
  - Post Concussion Symptom Scale
  - Structural and metabolic changes post concussion
  - Labyrinthine concussion
  - Chronic Traumatic Encephalopathy (CTE)
  - Defense Automated Neurobehavioral Assessment (DANA)
  - Return to Activities

**Day 3  8:30 AM – 5:00 PM**

Morning Session 8:30 AM – 12:00 PM *(Break 10:00 – 10:15 AM)*

- Concussion (continued)

- Evaluation & Assessment Protocols
  - Clinical Pathways
    - Important Definitions
      - Stabilized vs. Non-stabilized
      - Compensated vs. Non-Compensated
    - Goal Examples
    - Plan of Care
    - Billing
  - Initial Evaluation: Step 1 - Interview
    - Case History
    - Medical History
    - Selecting Tests and Integrating Results
    - Outcome Measures - Clinimetrics
- Evaluation & Assessment Protocols – Postural Stability
  - Vestibular Spinal Reflex (VSR) Evaluation
    - Gans SOP
    - Computerized Dynamic Posturography

Lunch (on your own)

Afternoon Session 1:00 PM – 5:00 PM (*Break 3:00 – 3:15 PM*)

- Vestibulo Ocular Reflex (VOR) Bedside Evaluation: Hands on practice and interpretation
  - Gaze Evoked Nystagmus
  - Halmagyi Head Thrust
  - Evaluation & Assessment Protocols – Video Head Impulse Testing (vHIT)
    - Protocols
    - Interpretation
    - Hands on Lab
    - Dynamic Visual Acuity using Snellen chart and AIB CDVAT
  - Optokinetic Test (bedside)
  - Motion Sensitivity Index
  - Hands on practice

- Evaluation & Assessment Protocols – Cervical
  - Definition of Cervicogenic Dizziness
  - Incidence & Prevalence
  - Cervical Dizziness Test
Day 4 8:30 AM – 5:00 PM

Morning Session 8:30 AM – 12:00 PM *(Break 10:00 – 10:15 AM)*

- (Cervical Continued)
  - Objective Examination
    - Upper Cervical Instability (UCI)
      - Sharp-Purser Test
      - Alar Ligament Stress Test
      - Transverse Ligament Test
    - Cervical Range of Motion
    - Cervicogenic Dizziness Tests
    - Cervical Proprioception Testing
      - Joint Position Sense
      - Treatment for Cervicogenic Dizziness

Lunch (on your own)

Afternoon Session 1:00 PM – 5:00 PM *(Break 3:00 – 3:15 PM)*

- Evaluation & Assessment Protocols – VideoNystagmography (VNG)
  - Protocols
  - Interpretation
  - Hands on Lab
- Evaluation & Assessment Protocols – Active and Passive Head Rotation Tests
  - Rotary Chair
  - Vestibular Autorotation Testing (VAT)
  - Hands on Lab
- Evaluation & Assessment Protocols – Cervical Vestibular Evoked Myogenic Potentials (cVEMP)
  - Protocols
  - Interpretation
  - Hands on Lab
Day 5 8:30 AM – 1:15 PM

Morning Session 8:30 AM – 1:15 PM  (*Break 10:00 – 10:15 AM*)

- (Evaluation and Assessment Protocols, continued)

- **Diagnosis Based Strategies: Vestibular Rehabilitation Therapy**
  - Theories of Adaptation, Habituation, and Substitution
  - Identification of functional impairment
  - Evidence-based Clinical Pathways: Using VRT protocols and creating patient-centered therapy
  - Identification of functional impairment by categories
    - Oscillopsia
    - Vestibular Recruitment
    - Vestibular Visual Integration- vision/surface dependence
  - Measuring Outcomes
  - AIB Vestibular Cognitive Integration (AIB-VCI)
  - Manual Practice
  - Summary and Conclusions

*Syllabus timeline is for general purposes only. Depending on interest of the class, depth of discussions, questions, demonstrations and any hands-on, timeline may be adjusted. All content, however, will be covered.*