Vestibular Assessment & Management Certification Workshop

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

Faculty: Jeff Konin, Ph.D., PT, ATC, FACSM, FNATA, Spencer Reeder, 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 PM)

- 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
- Benign Paroxysmal Positioning Vertigo (BPPV)
  - Pathophysiology of BPPV
  - Importance of Vertebral Artery Screening Test (VAST)
o Demonstration of Canalith Repositioning Maneuvers (CRM)
  ▪ Posterior/Anterior Canal
  ▪ Horizontal Canal
o Manual Practice of CRMs
  ▪ Modified Canalith Repositioning Maneuvers (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 PM)**

- BPPV Treatment (continued)
  o Treatment Considerations
    ▪ Post CRM Restrictions
    ▪ AIB Protocol for PC-BPPV Treatment
    ▪ Complications of BPPV Treatment
  o Horizontal Canal Manual Practice
    ▪ Appiani/Casani
    ▪ Horizontal Hybrid Maneuver
- Pathophysiology of common vestibular and balance disorders
  o Migraine
  o Psychiatric
  o Otologic Disorders
  o Trauma
  o Toxicity
  o Neurologic
  o Rheumatology/Autoimmune
  o Cervical
  o Other

**Lunch (on your own)**
Afternoon Session 1:00 PM – 5:00 PM (Break 3:00 – 3:15 PM)

- Disorders (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: Bedside examination or using technology
    - Gans SOP
    - Computerized Dynamic Posturography
  - Vestibulo Ocular Reflex (VOR) Evaluation: Hands on practice and interpretation
    - Gaze Evoked Nystagmus
    - Halmagyi Head Thrust
    - Video Head Impulse Test (vHIT)
    - Dynamic Visual Acuity using Snellen chart and AIB CDVAT
  - Optokinetic Test (bedside)
  - Motion Sensitivity Index
  - Hands on practice
Day 3 8:30 AM – 5:00 PM

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

- Evaluation & Assessment Protocols – Cervical
  - Definition of Cervicogenic Dizziness
  - Incidence & Prevalence
  - Cervical Dizziness Test

Rehabilitation Specialists

- 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

Diagnostic Specialists

- Evaluation & Assessment Protocols – Active and Passive Head Rotation Tests
  - Rotary Chair
  - Vestibular Autorotation Testing (VAT)

Lunch (on your own)

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

Rehabilitation Specialists

- Evaluation & Assessment Tests
  - Active and Passive Head Rotation
  - VideoNystagmography (VNG)
  - Cervical Vestibular Evoked Myogenic Potentials (cVEMP)

Diagnostic Specialists

- Evaluation & Assessment Protocols – VideoNystagmography (VNG) (continued)
  - Protocols
  - Interpretation

- Evaluation & Assessment Protocols – Cervical Vestibular Evoked Myogenic Potentials (cVEMP)
  - Protocols
  - Interpretation
Day 4  8:30 AM – 5:00 PM

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

- Evaluation & Assessment Protocols (continued)
- Concussion
  - Definition of concussion
  - Most common symptoms experienced post concussion
  - Post Concussion Symptom Scale
  - Structural and metabolic changes post concussion

Lunch (on your own)

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

- Concussion
  - Labyrinthine concussion
  - Chronic Traumatic Encephalopathy (CTE)
  - Defense Automated Neurobehavioral Assessment (DANA)
  - Return to Activities
- Diagnosis Based Strategies: Vestibular Rehabilitation Therapy
- Theories of Adaptation, Habituation, and Substitution
- Identification of functional impairment
Day 5 8:30 AM – 1:15 PM

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

- 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
- VRT: Building a management strategy
  - 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.