Vestibular Rehabilitation and Concussion Certification Workshop

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*Faculty may vary based on availability and location

Day 1 8:00 am – 6:00 pm

Morning Session: 8:00 am – 12:00 pm (Break 10:00 - 10:15 am)

- Welcome and Introduction
- Statement of need and demographics
- Anatomy and Physiology of the Vestibular System
  - Peripheral
  - Central
- Understanding sensory integration of equilibrium
  - Eye Movements
    - Pendular Pursuit
    - Saccades
    - Optokinetic
    - Vergence
    - Corrective Saccades
    - Nystagmus
  - Vestibular Reflex systems
    - Vestibulo-ocular (VOR)
    - Vestibulo-collic reflex (VCR)
    - Vestibulo-spinal reflex (VSR)
- Central Vestibular Compensation

Lunch 12 – 1 pm (on your own)

Afternoon Session: 1:00 – 6:00 pm  (Break 3:15 – 3:30 pm)

- Common disorders affecting vestibular function
  - Benign Paroxysmal Positional Vertigo (BPPV)
  - Migraine
  - Psychological Considerations
  - Otologic
  - Trauma
  - Toxicity
  - Neurologic
  - Rheumatology/Autoimmune
  - Cervical
  - Other
- Concussion
  - Prevalence of sports-related concussions and the societal impact
  - Berlin Consensus Statement on Concussion in Sport
  - Most common symptoms post concussion
  - Structural vs. Metabolic Damage
o Chemical Cascade
o Chronic Traumatic Encephalopathy (CTE)
o Labyrinthine Concussion

- Psychosocial aspects of mTBI
  o Pre-morbid psych issues
  o Cognitive problems
  o Personality changes
    ▪ Emotional responses
    ▪ Inappropriate, embarrassing, impulsive behaviors
    ▪ Angry outbursts & irritability
  o Anxiety
  o Depression
  o PTSD
  o Sleep problems
  o Alcohol use & TBI
  o Supplemental interventions

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**Day 2  8:00 am – 6:00 pm**

**Morning Session: 8:00 am – 12:00 pm  *(Break 10:00 - 10:15 am)*

- Evaluation & assessment protocols
  o Stabilized vs. non-stabilized
  o Compensated vs. non-compensated
  o Goals and plan of care
  o ICD-10 and CPT codes
  o Interview
    ▪ Pertinent medical history and symptoms
    ▪ Selecting appropriate evaluation tools
  o Clinimetrics
  o Outcome Measures
  o Postural Stability
    ▪ Balance Error Scoring System (BESS)
    ▪ Single Leg Stance
    ▪ Sway Balance
    ▪ Gans Sensory Organization Performance (SOP) Test
  o Oculomotor & VOR
    ▪ Gaze evoked nystagmus
    ▪ Vestibular/Ocular-Motor Screening (VOMS)
    ▪ Skew Deviation Test
    ▪ Head Thrust Test/Head Impulse Test (HIT)
    ▪ Dynamic Visual Acuity (DVA)
    ▪ Post-Headshake Nystagmus
    ▪ Optokinetic Test
    ▪ Motion Sensitivity Index

**Lunch 12 – 1 pm (on your own)**
**Afternoon Session: 1:00 – 6:00 pm  (Break 3:15 – 3:30 pm)**

- Evaluation & assessment protocols
  - Benign Paroxysmal Positional Vertigo (BPPV)
    - Posterior Canal BPPV Treatment Outcomes
    - Importance of Vertebral Artery Screening Test (VAST) prior to BPPV evaluation
    - Techniques to elicit BPPV symptoms
    - Demonstration of Canalith Repositioning Maneuvers (CRMs)
  - Manual practice hands-on – CRMs
    - Posterior/Anterior Canal
      - Modified Canalith Repositioning Maneuvers (CRM Epley/Herdman)
      - Semont Liberatory Maneuver (SLM)
      - Gans Repositioning Maneuver (GRM)
    - Horizontal Canal
      - Appiani
      - Casani
      - Horizontal Hybrid Maneuver
  - CRM Treatment Considerations
    - Restrictions post BPPV treatment
    - Complications of treatment

**Day 3  8:00 am – 6:00 pm**

**Morning Session: 8:00 am – 12:00 pm  (Break 10:00 - 10:15 am)**

- Evaluation & assessment protocols
  - Cervicogenic Dizziness
    - Incidence and Prevalence
    - Subjective History
    - Cervical Dizziness Screening Test
    - Objective Examination
    - Upper Cervical Instability (UCI)
      - Sharp-Purser Test
      - Alar Ligament Stress Test
      - Transverse Ligament Test
    - Cervical Dizziness
    - Cervical Proprioception Testing
    - Joint Position Sense
    - Lab
  - Cortical Assessment
    - Post Concussion Symptom Scale (PCSS)
    - Baseline Testing
    - SCAT 5
    - King-Devick Test
    - Aerobic exercise and brain function
    - Buffalo Concussion Treadmill Test

*Lunch 12 – 1 pm (on your own)*
Afternoon Session: 1:00 – 6:00 pm  (Break 3:15 – 3:30 pm)

- Concussion Management
  - The Role of Vestibular Rehabilitation Therapy in Concussion Patients
  - 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
  - Building and implementing Concussion protocols
    - Understanding the dynamics of cognitive load vs. vestibular central compensation, differentiation of protocols
    - Scoring the AIB Vestibular Cognitive Integration Protocols (AIB-VCI)
    - Manual Practice
  - Return to Activity, Return to Play, & Return to School Strategies
    - Recovery & the Role of Rest
    - Special Considerations
    - The Future
      - Sport Rule Changes
      - Legal Considerations
  - Summary and Concluding Remarks

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