

Vestibular Rehabilitation and Concussion Certification Workshop

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

Faculty:

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

**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
- Chemical Cascade
- Chronic Traumatic Encephalopathy (CTE)
- Labyrinthine Concussion
- Psychosocial aspects of mTBI
 - Pre-morbid psych issues
 - Cognitive problems
 - Personality changes
 - Emotional responses
 - Inappropriate, embarrassing, impulsive behaviors
 - Angry outbursts & irritability
 - Anxiety
 - Depression
 - PTSD
 - Sleep problems
 - Alcohol use & TBI
 - Supplemental interventions

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
 - Stabilized vs. non-stabilized
 - Compensated vs. non-compensated
 - Goals and plan of care
 - ICD-10 and CPT codes
 - Interview
 - Pertinent medical history and symptoms
 - Selecting appropriate evaluation tools
 - Clinimetrics
 - Outcome Measures
 - Postural Stability
 - Balance Error Scoring System (BESS)
 - Single Leg Stance
 - Sway Balance
 - Gans Sensory Organization Performance (SOP) Test
 - 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
 - Anterior Canal
 - CRM Treatment Considerations
 - Restrictions post BPPV treatment
 - Complications of treatment

Day 3	8:00 am – 6:00 pm
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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.