Post-Concussion Management Certification Workshop

Course Director: Jeff G. Konin, PhD, ATC, PT, FACSM, FNATA
Faculty: Richard E. Gans, PhD, 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 – 6:00 pm

Morning Session: 8:30 am – 12:00 pm (Break 10:00 – 10:15 am)

Introduction
- Epidemiology of Mild Traumatic Brain Injury
- The Concussion Continuum & Rehabilitation Team
- The AIB Approach to Comprehensive Concussion Management

Anatomy & Physiology
- Structural vs. Metabolic Damage
- Chemical Cascade & Physiological Changes
- Second Impact Syndrome in Return to Activity/Sport/Work/Environment
- Role of Diagnostic Imaging in Concussion Management – Current & Future
- Chronic Traumatic Encephalopathy (CTE) & Societal Concerns

Classification of Concussion
- Terminology & Grading of Concussion
- Clinical Trajectories of Concussion
  - Vestibular
  - Ocular
  - Cognitive/Fatigue
  - Post-Traumatic Migraine
  - Cervical
  - Anxiety/Mood

Assessment & Examination Tools
- Post-Concussion Symptom Scale (PCSS)
- Neuropsychological Testing - Computer-based Neurocognitive Testing
- Postural Stability Testing
- Buffalo Concussion Treadmill Test (BCTT)
- King-Devick
- Sport Concussion Assessment Tool Version 5 (SCAT5)
  - Pediatric SCAT5

Lunch 12 – 1 pm (on your own)

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

- Anatomy of the Ear
- Labyrinthine Vs. Cortical Concussion -
- Benign Paroxysmal Positional Vertigo (BPPV) -
  o Pathophysiology of BPPV
  o Evaluation of BPPV and Nystagmus Patterns
  o Gans Repositioning Maneuver (GRM)
  o Central Vestibular Compensation
- Symptoms of Impaired Vestibulo-Ocular Reflex (VOR) and Vestibulo-Spinal Reflex (VSR)
  o VOR Evaluation
    ▪ Gaze evoked nystagmus
    ▪ Head Thrust Test
    ▪ Dynamic Visual Acuity
    ▪ Post Head Shake Nystagmus
  o Postural Stability (VSR)
    ▪ Gans SOP
  o Motion Intolerance

Clinical Trajectory: Oculomotor

Vestibular & Ocular Assessment and Rehabilitation Strategies
- VOMS
- Convergence and Insufficiency
- VOR & VRT Rehabilitation Strategies

Day 2  8:30 am – 6:00 pm

Morning Session: 8:30 am – 12:00 pm (Break 10:00 – 10:15 am)

Clinical Trajectory Cervical

- Definition, Incidence and Prevalence
- Subjective History
- Objective Examination
  o Relevance of Vertebral Artery Screening
  o Upper Cervical Instability Screen
  o Joint Positioning Sense Testing

  ▪ Integrated Cervical Rehabilitation Approaches

Lunch 12 – 1 pm (on your own)

Afternoon Session 1:00 - 6:00 pm (Break 3:15 – 3:30 pm)
Clinical Trajectory: Cognitive/Fatigue
- Recognition of Signs & Symptoms for C/F Trajectory
- Reaction Time for Task Oriented Activities
- Memory Assessment & Rehabilitation Interventions
- Exertional Interventions

Clinical Trajectory: Post-Traumatic Migraine
- Definition Post-Traumatic Headache (PTH)
- Risk factors to Develop PTH (pre-existing, gender)
- Differential Diagnosis
- Role of Medications & Diet

Clinical Trajectory: Anxiety/Mood
- Mental Health Related Issues
  - Depression, cognitive, language & communication, personality, sleep, memory difficulty, anxiety, learning difficulties, inability to concentrate
  - Fear Avoidance

Day 3 8:30 am – 12:15 pm

Morning Session: 8:30 am – 12:15 pm (Break 10:00 - 10:15 am)

Returning to Activity
- Return to Learn Strategies
  - Communication with Academic Personnel
  - Symptom-based Accommodation Strategies
  - Short-term vs. Long-term Accommodations
- Return to Sport Strategies
  - Familiarity with International Guidelines
  - Knowledge of Associated Risk (Lower Extremity, Repeated Concussion)
- Return to Work Strategies
  - Knowledge of Worksite and Physical Requirements
  - Accommodations for Desktop Employment Settings
  - Accommodations for Physical Exertion Employment Settings

Developing a Concussion Center of Excellence
- Personnel
- Equipment
- Education & Documentation
- Reimbursement Options
- Marketing & Promotion