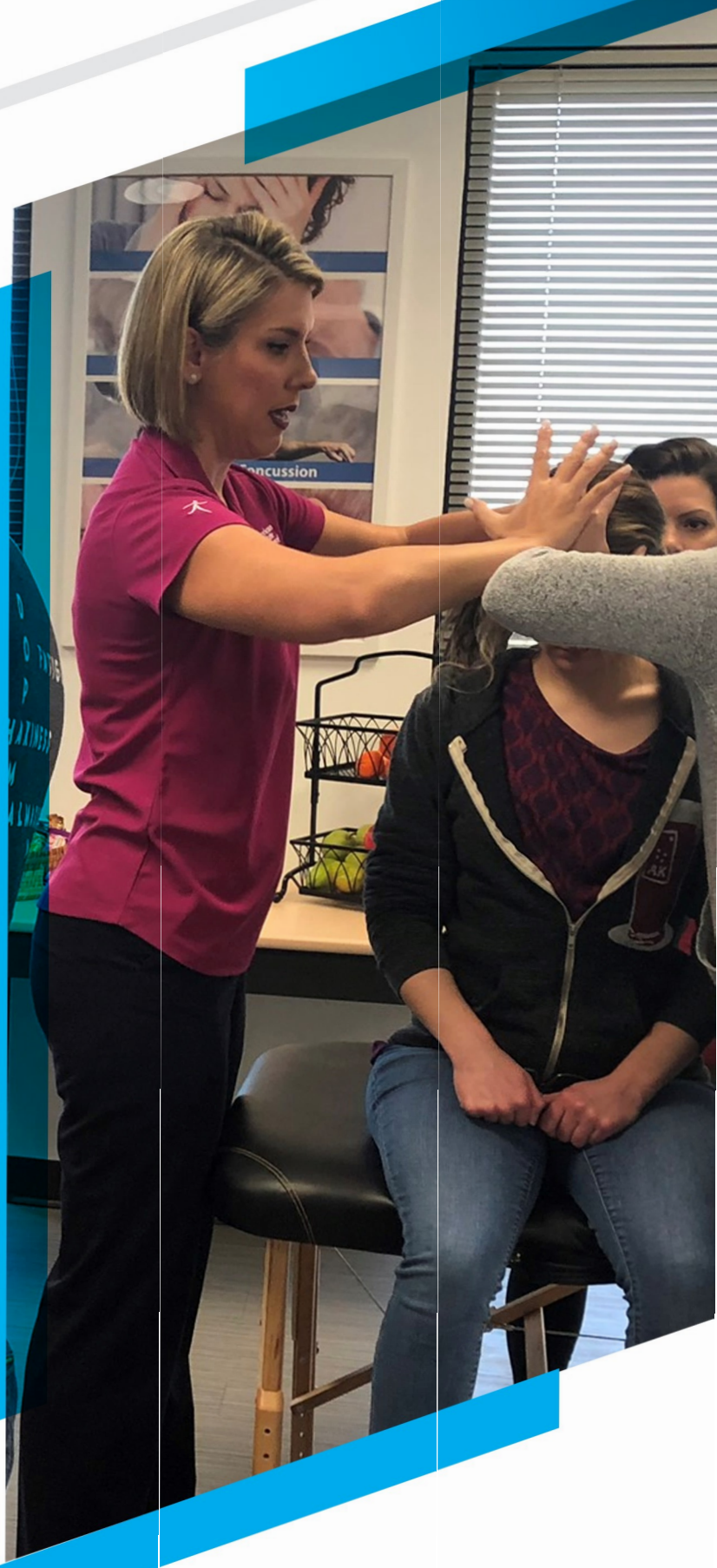
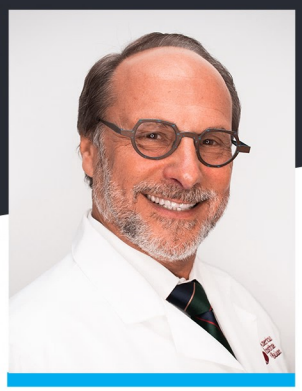
The American Institute of Balance®

Vestibular Rehabilitation & Concussion Certification

Hybrid Course



dizzy.com



CEO & FOUNDER

Richard E Gans

Richard E Gans, PhD

VP OF EDUCATION

Kim Rutherford

Kim Rutherford, PT, DSc, COMT

Dear friends and colleagues

The American Institute of Balance (AIB) is a global healthcare company based in Tampa Bay, Florida. AIB is internationally recognized as the proven leader in the evaluation, treatment, and education of Vestibular and Equilibrium Science and Concussion Management. Since 1992, The American Institute of Balance has provided the worldwide healthcare community with the most current and scientifically robust clinical protocols and information through workshops, online, education, and corporate training programs.

To date, AIB has trained and certified over 15,000 practitioners worldwide. Our evaluation protocols and therapy programs are used by physicians, rehabilitation specialists, and audiologists worldwide.

As respected colleagues, you spoke, and we listened! We are excited to announce the launch of our new hybrid certification programs, incorporating both online and live education platforms to deliver a comprehensive, quality education experience. The content remains the same as the well-respected AIB live Certification Workshops, with less travel and time away from home and work required! This new platform allows the clinician the flexibility to complete the online portion of the course at a self-paced without the scheduling demand of a pre-determined, scheduled workshop. Our classroom is now available to you, anywhere in the world, at any time of the day!

AIB remains committed to you, our friends, and colleagues to provide an exceptional educational experience and to help you better serve your patients. We look forward to seeing you in the future!

COURSE DESCRIPTION

This 25.5-hour course is geared towards the clinician interested in learning evidence-based management for both the Vestibular and Concussion (m-TBI) patient. This workshop is comprised of the Vestibular Rehabilitation Certification Workshop and a comprehensive Concussion Management module, consisting of evaluation and management tools for sports and non-sports related m-TBI. Evidence-based protocols will be presented, demonstrated, and practiced throughout both the online and live components of the course to ensure clinicians produce excellent outcomes.

CONTENT OVERVIEW

- An overview of vestibular anatomy and physiology
- Understanding sensory integration of equilibrium
- Disorders affecting vestibular function
- Neurophysiology of central compensation
- VRT protocols: adaptation, habituation, and substitution for patient-centered therapy
- Psychogenic factors affecting VRT outcomes
- BPPV diagnosis & treatment – Canalith Repositioning Maneuvers (CRM) with manual training
- Evaluation and management of Vestibular Disorders, including BPPV
- Cortical and labyrinthine concussion differentiation
- Evaluation and management of cortical concussion (m-TBI), including vestibular, ocular, cervical, anxiety/mood, post-traumatic migraine, and cognitive/fatigue trajectories.
- Interactive concussion management strategies
- Extensive training materials for therapy programs

LEARNING OBJECTIVES

- Describe peripheral and central vestibular anatomy and physiology
- Discuss the functional anatomy of the central nervous system and balance system
- Explain the concept of central compensation and those factors affecting it
- Name the most common otologic and non-otologic conditions which may cause dizziness, vertigo, and imbalance
- Demonstrate the most sensitive bedside/clinical evaluation protocols which identify candidates for treatment and proper triage and management
- Differentiate vestibular test abnormalities that identify patients who are “appropriate” candidates for therapy.
- Integrate cortical and vestibular rehabilitation into a comprehensive management program with longitudinal therapeutic outcome measures
- Select and perform the appropriate Canalith Repositioning Maneuvers for all forms of BPPV.
- Describe the relationship of the cervical spine in the management of the “dizzy” patient.
- Explain the pathophysiology of a cortical concussion and labyrinthine concussion
- Recognize who is most at risk of sustaining a concussion
- Recognize the differences between the cortical recovery process and central vestibular compensation
- Recognize the signs and symptoms of a concussion, second impact syndrome, and chronic traumatic encephalopathy
- Identify the need for removal from activity and evaluation
- Understand the classification of injury and clinical trajectories associated with concussion (m-TBI)
- Describe and develop management strategies around the seven clinical trajectories of concussion (m-TBI)
- Describe and develop return-to-play, learn, and work decisions based on your therapeutic intervention.

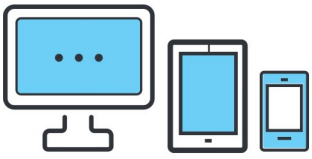
TARGET AUDIENCE

- Physical Therapists
- Physical Therapist Assistants
- Occupational Therapists
- Certified Occuptaional Therapy Assistants
- Audiologists
- Physicians (MD, DO)
- Athletic Trainers

ONLINE, SELF-PACED CONTENT

SYLLABUS

VESTIBULAR REHABILITATION



MODULE 1

ANATOMY & PHYSIOLOGY OF THE VESTIBULAR SYSTEM

Welcome and Introduction

- Statement of need and demgraphics
- Historical perspective

Anatomy and Physiology of the Vestibular System

- Peripheral
- Central

Central Vestibular Compensation: How and Why VRT works

Understanding Sensory Integration of Equilibrium

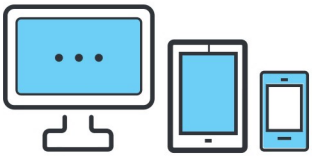
- Eye movements
  - Pendular Pursuit
  - Saccades
  - Optokinetic
  - Corrective Saccades
  - Nystagmus
- Vestibular Reflex systems
  - Vestibulo-ocular (VOR)
  - Vestibulo-collic (VCR)
  - Vestibulo-spinal (VSR)

MODULE 2

COMMON DISORDERS AFFECTING VESTIBULAR AND BALANCE FUNCTION

Common disorders affecting vestibular and balance function

- Benign Paroxysmal Positional Vertigo (BPPV)
- Migraine
- Psychological Considerations
- Concussion
- Otologic
- Trauma
- Toxicity
- Neurologic
- Rheumatology/Autoimmune
- Cervicogenic
- Other



MODULE 3

EVALUATION AND ASSESSMENT PROTOCOLS VESTIBULOPATHY

Evaluation & assessment protocols

- Stabilized vs. Non-stabilized
- Compensated vs. Non-compensated
- Goals and plan of care
- ICD-10 and CPT codes

Evaluation - Interview

- Clinical Pathways
  - Pertinent medical history
  - Selecting appropriate vestibular evaluation tests
- Clinimetrics

Evaluation – Postural Stability

- Gans SOP

Evaluation – Oculomotor & VOR

- Bedside gaze assessment
- Head Thrust/Impulse Test
- Dynamic Visual Acuity
- Post headshake nystagmus
- Optokinetic test
- Motion Sensitivity Index

MODULE 4

CERVICOGENIC CONSIDERATIONS

Evaluation – Cervicogenic Considerations

- Vertebral artery compromise
- Cervical Dizziness and Joint Position Sense Test(s)

MODULE 5

VESTIBULAR REHABILITATION THERAPY PROTOCOLS

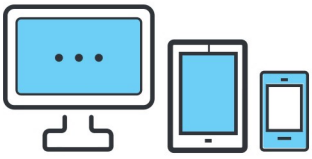
Vestibular Rehabilitation Therapy (VRT)

- Diagnosis Based Strategies
- Theories of Adaptation, Habituation, and Substitution
- Role of Attention and Cognition
- 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 VRT Protocols
- Manual Practice
- Precautions to VRT

Summary and Concluding Remarks

SYLLABUS

CONCUSSION



MODULE 1

INTRODUCTION TO CONCUSSION MANAGEMENT

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 Concussiont
- Clinical Trajectories of Concussion
  - Vestibular
  - Ocular
  - Cognitive/Fatigue
  - Post-Traumatic Migraine
  - Cervical
  - Anxiety/Mood

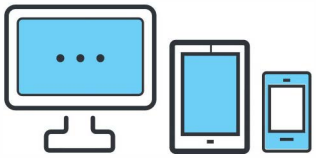
MODULE 2

ASSESSMENT & EXAMINATION TOOLS

- BESS Test
  - King-Devick
- Sport Concussion Assessment Tool Version 5 (SCAT5)
  - Pediatric SCAT5
- Neuropsychological Testing - Computer-based Neurocognitive Testing
- Buffalo Concussion Treadmill Test (BCTT), Bike Test
- Post-Concussion Symptom Scale (PCSS)
- Components of Comprehensive Exam
- Post Concussion Syndrome: Risks and Management
- Outcome measures

SYLLABUS

CONCUSSION



MODULE 3

VESTIBULAR TRAJECTORY

- Review of the role of Vestibular System and Concussion
- BPPV-Incident and Prevalence with Concussion
- Vestibular Hypofunction-review of Labyrinthine Concussion
- Building a Concussion Management Strategy
  - AIB Vestibular-Cognitive Integration (AIB-VCI)

MODULE 4

OCULOMOTOR TRAJECTORY

- Ocular Assessment and Rehabilitation Strategies
  - VOMS
  - Convergence Insufficiency
  - Accommodation Insufficiency
  - Ocular Rehabilitation Strategies

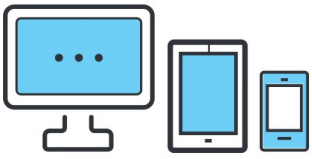
MODULE 5

CERVICAL TRAJECTORY

- Definition, Incidence, and Prevalence
- Subjective History
- Objective Examination
  - Relevance of Vertebral Artery Screening
  - Upper Cervical Instability Screen
  - Cervicogenic Dizziness
  - Joint Positioning Sense Testing
  - Cervical Strength Assessment
- Integrated Cervical Rehabilitation Approaches

SYLLABUS

CONCUSSION



MODULE 6

COGNITIVE/FATIGUE TRAJECTORY

- Recognition of Signs & Symptoms for C/F Trajectory
- Reaction Time for Task Oriented Activities
- Memory Assessment & Rehabilitation Interventions
- Exertional Interventions

MODULE 7

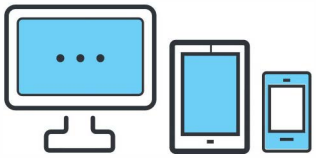
POST-TRAUMATIC MIGRAINE TRAJECTORY

- Definition Post-Traumatic Headache (PTH) and Migraine
- Risk factors (pre-existing, gender)
- Differential Diagnosis
- Role of Medication, Diet and Rehabilitation

MODULE 8

COGNITIVE/MOOD TRAJECTORY

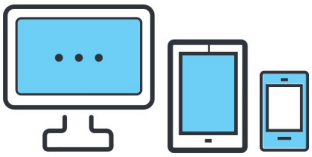
- Mental Health Related Issues
  - Depression, cognitive, language & communication, personality, sleep, memory difficulty, anxiety, learning difficulties, inability to concentrate
  - Fear Avoidance



MODULE 9

RETURNING TO ACTIVITY AND FUTURE MANAGEMENT

- 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
    - Return to Play Protocol
- Return to Work Strategies
  - Knowledge of Worksite and Physical Requirements
  - Accommodations for Desktop Employment Settings
  - Accommodations for Physical Exertion Employment Settings
- Next Steps
  - Advances in Diagnostic and Rehabilitation Strategies
    - Virtual Reality
    - Billing/Coding
    - Concluding Remarks



MODULE 10

PATIENT CARE RESOURCES

Self-directed Case Studies

Vestibular and Concussion Evaluation and Clinical Forms

Balance and Equilibrium Outcome Measurement Tools

Patient Education Forms

Self-directed Vestibular Rehabilitation Program and Protocols

- Includes 30 patient education forms with pictures and written instructions

Clinician-directed Vestibular Rehabilitation Program and Protocols

- Includes 40 patient education forms with pictures and written instructions

ON-SITE/LIVE ONE-DAY HANDS-ON
SYLLABUS

Vestibular Rehabilitation
8:00 am to 4:30 pm

Concussion
4:30 pm to 6:00 pm

VESTIBULAR REHABILITATION CERTIFICATION

Morning

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

- **Welcome and Introductions**
- **Review of Anatomy and Physiology of the Vestibular System**

  Peripheral vs. Central Presentation

  Eye movements

  - Pendular Pursuit
  - Saccades
  - Optokinetic
  - Corrective Saccades
  - Nystagmus

Bedside Evaluation Demonstration and Practice

- Gans SOP
- Bedside gaze assessment
- Head Thrust/Impulse Test
- Dynamic Visual Acuity (DVA)
- Post-Headshake Nystagmus Test
- Optokinetic Test
- Motion Sensitivity Index
- Cervicogenic Testing
  - Vertebral Artery Screen
  - Cervical Dizziness Test(s)
  - Joint Position Sense Test

Vestibular Rehabilitation Therapy (VRT)

- Review of 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 VRT Protocols
- Manual Practice

ON-SITE/LIVE, ONE-DAY HANDS-ON
SYLLABUS

Vestibular Rehabilitation
8:00 am to 4:30 pm

Concussion
4:30 pm to 6:00 pm

Lunch

LUNCH ON YOUR OWN: 12:00 PM – 12:30 PM

Afternoon

VESTIBULAR REHABILITATION CERTIFICATION

Afternoon Session: 12:30 – 4:30 pm (Break 3:00 – 3:15 pm)

- Demonstration of Canalith Repositioning Maneuvers (CRM)
- Manual practice hands-on - CRMs
  - Posterior Canal
    - Modified Canalith Re-positioning (CRM Epley/Herdman style)
    - Semont Liberatory Maneuver (SLM)
    - Gans Repositioning Maneuver (GRM)
  - Horizontal Canal
    - Appiani
    - Casani
    - Horizontal Hybrid Maneuver
    - Barbeque Roll
  - Anterior Canal
- Summary and Concluding Remarks-Vestibular Certification
- Questions and Answers-Vestibular Certification

Late Afternoon

CONCUSSION COMPONENT

Required for Concussion Certification: 4:30-6:00 pm

- Concussion Assessment and Examination Tools
  - Upper Cervical Instability Testing (UCI)
  - VOMS Testing
  - Postural Stability Testing: BESS, SOP
- Questions and Answers-Concussion Certification

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.

Certification & CEUs

16.5 CONTACT HOURS
Online, self-paced course

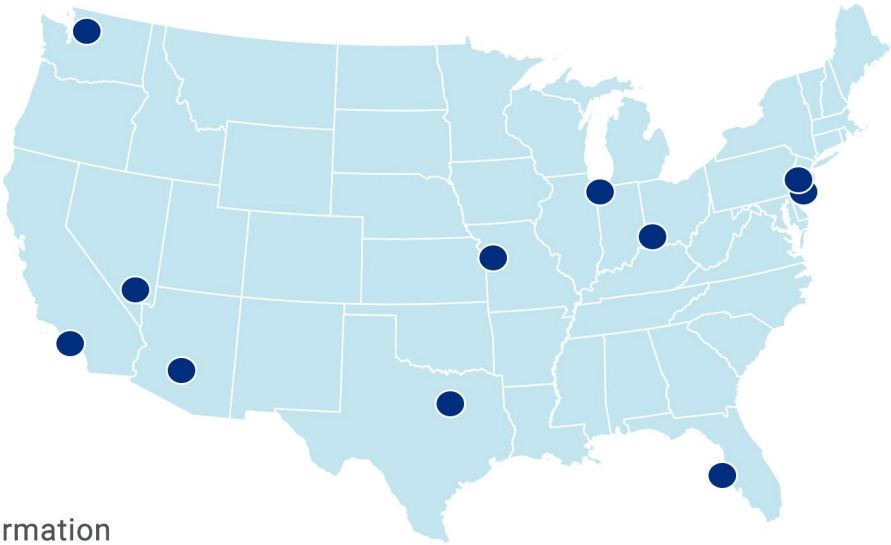
9 CONTACT HOURS
One-Day LIVE Hands-on Course

After completion of the online component, participants have the option to attend the one-day hands-on clinical competency course. This will be conducted in 11 major US cities as the final component for certification. To ensure a complete, comprehensive learning experience, we encourage participants to attend the one-day, live, hands-on course **AFTER** completion of the online course.

CEUs for the online component and the one-day live component will be individually issued upon completion. Please note, CEU approval may vary state to state.
Certification is earned after completion of BOTH the online and live course, combined with a passing score on the written AND competency-based exams.

2021 ONE-DAY LIVE HANDS-ON COURSE CITIES

Cherry Hill, NJ
Chester, PA
Chicago, IL
Cincinnati, OH
Dallas, TX
Kansas City, MO
Las Vegas, NV
Los Angeles, CA
Mesa, AZ
Seattle, WA
Tampa Bay, FL



For additional information regarding this course, please visit

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