



## E-Learning Level 1 Course

### BEST PRACTICES IN CONCUSSION MANAGEMENT

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*Note: Printable slides/notes are available for download for each section of the course*

#### **Introduction**

*Brief review of what we know about concussions and what we will discuss during this course*

- Why Shift?
- Introduction to the Shift Concussion Management Program and Shift Team

#### **Acute Pathophysiology of Concussion (59:18)**

**Scott Haller, Osteo MP**

*Our Concussion in Sport Consensus group defines it as “A complex pathophysiological process affecting the brain, induced by biomechanical forces.” This is a rather vague definition – so let’s break this injury down:*

- Review of Injury Mechanism and Neurochemical Cascade
- Recovery Timelines, Persistent Symptoms and Post-Concussion Syndrome

#### **Clinical Assessment of Concussion (53:58)**

**Kailin Walter, DC**

*The way in which we approach the clinical evaluation of the concussion patient has changed considerably over the years. Where we used to rely heavily on symptom reporting alone, thanks to recent clinical research, we have a new perspective on functional testing that can provide more objective evidence of impairment in our patients.*

- Key components of the clinical exam for the medical-rehabilitation professional (introductory)
- Video demonstration

#### **Rest & Early Concussion Management Guidelines (41:08)**

**Kailin Walter, DC**

*The concept of advising “rest” as a treatment approach for traumatic brain injury has been the mainstay of concussion management for years. For a long time, this treatment strategy was widely accepted and undisputed. As simple and logical as the concept sounds, there has been a lot of research in this area over the past decade and it turns out that providing your patients with a prescription to “rest” may not be so straightforward after all*

- Activity Restriction in Concussion Management: A Review of the Research
- Do’s and Don’ts, Sleep and Schedule Regulation
- Active rehabilitation in concussion

#### **Mental Health Challenges and Concussion (6:39)**

**Carlos Lalonde, MD, FRCPC**

*Special interest segment (Psychiatry): Mental health disorders and concussion*

- Mental Health & Concussion



### **Role of Optometry (15:32)**

**Mark Lukito, HBSc, OD**

*Special interest segment: Concussion through the lens of Optometry*

- Role of Optometry and the comprehensive visual examination in Concussion Management

### **Return to Learn and Work Interventions (65:10)**

**Ryan Sleik, MSc KIN, MSc PT**

**Jaskiran Kaur, HBSc, OD**

*Work and school commitments are a reality for concussion patients and seldom do we find ourselves in a position where we do not need to provide at least some level of guidance in this area. Return to learn and return to work planning may for many cases be Physician directed, but often we find ourselves, as rehabilitation professionals, also assisting in the development of recommendations, timelines, and accommodations – so it's important to understand all of these moving parts to better support your patient through their recovery.*

- Building individualized plans for return to learn and work
- Understanding the relationship between accommodations, and physiological presentation

### **Cervical Injury and Concussion (11:33)**

**Ryan Sleik, MSc KIN, MSc PT**

*The neck is something that definitely requires special attention from an evaluation and management standpoint in concussion. As we've learned already, significantly less force is required to injure structures in the cervical spine than is required to sustain a concussion. If you're not looking at the neck, you're missing out on a potentially huge symptom driver.*

- Considerations for assessment of cervical and whiplash injury in concussion

### **Vestibular-Ocular Rehabilitation: Introductory Principles (76:00)**

**Kailin Walter, DC**

*What can we do for patients with persisting vestibular-ocular impairments in the rehabilitation setting? Let's introduce you to some basic clinical principles you can utilize in your practice as part of a team approach (alongside Optometry, Psychology, Audiology/ENT etc). This is not meant to replace more comprehensive vestibular rehabilitation training but will provide you with foundational knowledge to build upon.*

- Anatomical and Pathophysiological Considerations
- Rehabilitation concepts using a three-phase approach

### **Optometry: TBI & Visual Consequences (4:19)**

**Dipty Acharya, BSc, OD**

*Special interest segment: How does Vision Therapy play a role in concussion rehabilitation and how can you connect with an Optometrist with training in this area?*

- TBI & Visual Consequences

### **Exercise and Exertion Testing in Concussion (58:14)**

**Scott Haller, Osteo MP**

*Exercise in concussion is a really hot topic right now and the research has been exploding in the past few years – at the forefront is Dr. Leddy and colleagues out of the University of Buffalo. So, let's take a closer look at what this means for you and your concussion patients*

- Physical Exertion Testing and Return-to-Play Preparation
- Exercise Prescription in PCS



### **Sideline Assessment & Concussion Baseline Testing (24:39)**

**Kailin Walter, DC**

*A review on the topic of baseline testing and the recent controversies surrounding the practice. We'll explore important questions such as: when might baseline testing may be indicated? Under what conditions? What tools/measures should I consider? How can I offer support both pre-season and on the sideline?*

- Current controversies and important considerations
- Using a comprehensive approach

### **Perceptual-Cognitive Training: NeuroTracker (12:58)**

**Frances MacInnes, MSc PT**

*Special interest segment: exploring NeuroTracker, a cognitive training program designed to improve mental health performance*

- Enhancement of attention, peripheral awareness and working memory

### **Interdisciplinary Care Pathways (40:41)**

**Kailin Walter, DC**

*Course summary and decision-making framework for approaching your concussion patients (for the introductory provider). Establishing your multidisciplinary network*

- A Guide to Start-to-Finish Patient Management (working with the Medical Physician and others involved in patient care "team")
- Utilizing an interdisciplinary approach

### **Closing Remarks**

**Scott Haller, Osteo MP**

*Following completion of the course you will be provided with a certificate of completion.*