Concussion Syllabus:

Evaluation and Management,
From Work to Working out

Shirley Ryan
AbilitylΛb

Continuing Education Credits
Course: 18.5 hours (12.0 On-Demand/4.5 Self-study/2.0 live)

Facilitator
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Location
This course is taught virtually using an online meeting platform, Zoom, and the Academy Learning Portal (https://ric.litmos.com) where participants will utilize discussion boards, and other online learning materials. There will be live question and answer sessions and discussions with the faculty.

Course Description
This online on-demand series is intended primarily for physical and occupational therapists, athletic trainers, physicians, and physiatrists. Over seven weeks, this course explores the observation, analysis and management of adult individuals with concussive symptoms. A systems-based approach will be utilized with particular reference to management, rehabilitation programs and preventative strategies. Exertional training, return to play and return to work strategies will help the clinician manage a general population of patient presentations with concussions. The emphasis of patient cases will focus on concussion management in individuals in the workforce as well as athletes. Participants will have the opportunity to interact and discuss patient cases with course faculty through conference calls and an online discussion board.

Successful completion:
Participants will attend 8 online lectures and will complete at least 16.5 hours of self-study and on-demand activities. The self-study activities for the course will consist of readings, questions, discussion board postings, case studies and experiences with classmates and faculty. Live sessions will feature discussion opportunities with the faculty. Participants must sign in and complete all required assignments for full course credit.

Minimum Student Preparation
It is expected that students enrolled in the course are proficient in using an internet browser, sending an email, creating word processing documents, and attaching documents to email.

Prerequisite Courses: None

Course Goal

Upon successful completion of this course, students will feel comfortable evaluating an entry-level patient with a concussion [either from a sports or work-related injury] in order to provide a basic rehabilitation program to their client. Students will assess initial impairments, discuss appropriate referral sources for concussion, and create discipline specific intervention plans.

Course Objectives

Upon completion of this course participants will be able to:

- **Identify** concepts related to clinical management of patient's with concussion.
- **Formulate** a patient history and objective examination for a patient with a concussion.
- **Summarize** the elements of a comprehensive medical evaluation of concussion.
- **Identify** evidence-based research for concussion.
- **Implement** evaluation and treatment techniques in concussion using a case-based approach.
- **Integrate** a systems based approach to management of concussion.
- **Explain** the role of cognitive rehabilitation in facilitating recovery from concussion.

Technology Requirements:
To participate, you will need access to a computer with an Internet connection. High-speed broadband access (LAN, Cable or DSL) is highly recommended.

- Internet connection: broadband wired or wireless (3G or 4G/LTE)
- Web browser: Windows: Internet Explorer 11+, Edge 12+, Firefox 27+, Chrome 30+
    - Mac: Safari 7+, Firefox 27+, Chrome 30+
    - Linux: Firefox 27+, Chrome 30+
- JavaScript and Cookies enabled
- Flash Player 9+
- Speaker or headset to listen to audio files and participate in Zoom calls

*NOTE: You can find a printable version of these instructions under "*Additional References" in the Learning Portal

MODULE SCHEDULE & LEARNER EXPECTATIONS

INTRODUCTION: Online introduction to the course - Melissa Kolski   *Available April 8, 2020*

1. Describe course logistics
2. Review submission of assignments
3. Locate the discussion board in order to participate in an online forum
4. Discuss course expectations for interacting in a collegial learning environment

SELF-STUDY WORK   DUE: April 15th, 2020
- Discussion Board Post: What is one treatment evaluation/intervention you would like to learn in this course?

Week 1A: Overview of Concussion-   *Prakash Jayabalan*   *RELEASE DATE: April 15, 2020*
1.5 online hours

The physiology of concussion, medical management, medical tests, acute v long-term effects of concussion, Chronic traumatic encephalopathy (CTE)

1. Review the pathophysiology of concussion
2. Discuss sideline testing in sports concussion, or issues facing worker's compensation on the job
3. Analyze prognostic factors and issues involved in predicting recovery in patients with concussion
4. Examine the interdisciplinary approach to concussion management
5. Discuss medical testing and current guidelines involved in medical concussion management
6. Review acute versus long term effects of concussion
7. Identify issues facing chronic traumatic encephalopathy

Week 1B: Neuropsychology of Concussion /   *RELEASE DATE: April 15, 2020*
The Neuropsychology Evaluation - Elizabeth Pieroth   *1.5 online hours*
Appropriate roles and referral

1. Review the role of the neuropsychologist in concussion management
2. Discuss when a neuropsychologist may refer to other disciplines
3. Review when it is appropriate to refer to a neuropsychologist
4. Integrate the emotional impairment and role that anxiety may play in concussion
5. Identify evidence related to processing speed and verbal or visual memory and the patient response to concussive disorders

SELF-STUDY WORK   DUE: April 22
- Review the case online after watching both modules 1 & 2. Identify 3 (or more) prognostic factors related to this case that may affect patient recovery and enter them into online learning path for this week.
- Review the following two articles & answer the two questions posted in the course for this week.

Mucha A, Collins MW, Elbin RJ, Furman JM, Troutman-Enseki C, DeWolf RM, Marchetti G, Kontos A. A Brief Vestibular/Ocular Motor Screening (VOMS) Assessment to Evaluate Concussions: Preliminary Findings. *Am J Sports Med.* 2014 Oct; 42(10):2479-86. doi:10.1177/0363546514543775. Epub 2014 Aug 8.

Strupp M, Kremmyda O, Adamczyk C, Böttcher N, Muth C, Yip CW, Bremova T. Central ocular motor disorders, including gaze palsy and nystagmus.*J Neurol.* 2014 Sep; 261 Suppl 2:S542-58. doi: 10.1007/s00415-014-7385-9.

Week 2:   *DATE: April 22, 2020*
2A: Questions with the Expert - Prakash Jayabalan   *30 minutes Live Minutes : Zoom   Platform*
2:00-2:30 PM CST

2B: Oculomotor Vestibular Assessment – Janet Helminski   *1.5 online hours*
Vestibular assessment and screening of eye movements / VOMS
Time Subject to change

1. Analyze a targeted history and interpret findings to identify and differentiate vestibular and visual symptoms in patients.

2. Perform and interpret findings from an oculomotor examination that includes basic vision testing, screening of ocular alignment, and ocular motility testing based on knowledge of actions of eye muscles, innervation to eye muscles, supranuclear control of eye movements, and 6 types of eye movements.
3. Describe the components and clinical use of the Vestibular/Ocular Motor Screening Assessment (VOMS) and differences between the VOMS and oculomotor examination.
4. Recognize signs and symptoms of concussion that suggest referral to specialists.

Week 3: Oculomotor Vestibular Intervention   *RELEASE DATE April 29, 2020*
Laura Morris and Heidi Roth   *1.5 online hours*
Postural stability, How assessment guides treatment, balance, visual endurance

1. Identify 3-4 key theories of recovery of oculomotor and vestibular dysfunction
2. Integrate assessment results with patient goals to identify problems to be addressed
3. Identify potential evidenced based interventions based upon problems identified during assessment
4. Formulate a progression of interventions based on patient response to reach patient's goals

SELF-STUDY WORKDUE: May 5th

Week 4A: Migraine Assessment, Headache & Intervention   *RELEASE DATE May 6, 2020*
Laura Morris   *1.5 online hours*
Assessment of headaches, migraines and differential diagnosis

Discussion Board Post (*OPTIONAL*): How do you experience migraine concussion patients as different from non-migrainous concussion patients in your current practice? Do you think that migraine is consistently identified in your patients? If Yes, Why? If No, Why not?
1. Identify the criteria for migraine headaches as described by the International Classification of Headache Disorders
2. Identify the criteria for vestibular migraine
3. Describe the typical symptoms associated with vestibular migraine in concussion patients
4. Identify differences in the clinical management of migraine vs. non-migraine concussion patients

SELF STUDY Due May 12th: Review the case online & answer the questions posted in the course for this week.

Week 4B: Musculoskeletal Cervical Spine Assessment – Jim Elliott   *RELEASE DATE: May 6, 2020*
1.5 online hours

Trauma to the neck, cervicogenic dizziness, positional training, joint mobility,
how to structure a stabilization program

1. Provide an overview of soft tissue injury associated with traumatic head/neck injuries (e.g. whiplash/concussion)
2. Discuss the musculoskeletal assessment of the cervical spine following traumatic head/neck injuries
3. Identify signs/symptoms consistent with Kinesthetic joint position sense deficits

4. Identify any prognostic musculoskeletal factors that may delay the patient with concussion and cervical spine injury and determine best management

Week 5:   *DATE: May 13, 2020*
5A: Questions with the Expert - Heidi Roth   *30 minutes Live Minutes *12:00-12:30PM CST*
                                                                          Zoom Platform

5B: Managing Cognition is Managing Concussion: *1.5 online hours*
Harnessing Metacognition to Promote Recovery - Katy O'Brien
Cognitive Complaints, Interactive effects, Early management benefits, Goal Attainment Scaling
*Time Subject to change

1. Identify common cognitive complaints associated with concussion
2. Discuss how other concussion effects interact with cognitive symptoms
3. Summarize benefits of early management of cognition to promote overall recovery from concussion.
4. Describe the use of Goal Attainment Scaling to describe change over time following concussion

   SELF-STUDY WORK   **DUE: May 19**
   • Discussion Board Post (*OPTIONAL*): What challenges do you experience in returning athletes to sport?

Week 6: Sports Concussion - Laura Morris   *RELEASE DATE: May 20, 2020*
Exertional training, balance for performance, video task analysis   *1.5 online hours*

1. Identify appropriate patients for exertion assessment and training, including timing and mode
2. Describe the key sport-specific tasks that are required for return-to-play
3. Integrate patient-specific sport tasks into the intervention plan for recovery
4. Identify key outcome measures for successful return to play

   SELF-STUDY WORK   **DUE: May 26**
   • Watch Video Task Analysis with case scenario & answer the questions posted in the course for this week.

Week 7: Case Questions with the Faculty   *DATE: May 27, 2020*
Janet Helminski, Prakash Jayabalan & Heidi Roth   *12:00-1:00PM CST*
                                                    60 minutes Live Minutes : Zoom Platform

Concussion discussion

1. Review case studies on sport and work-related concussion and discuss treatment and assessment parameters
2. Summarize major issues surrounding provider assessment and treatment with individuals with concussion
3. Synthesize content using alternative complex case examples

SELF-STUDY WORK   DUE: June 5th, 2020
- Complete Final Reflection, Assessment and Course Feedback that is posted in the course for this week

Grading & Conduct Overview

The learning in this course is built on the ongoing exchange of ideas and information through online seminars and discussion board posts on the Academy Learning Portal. The required assignments will be available during the 7 weeks that the course content is available. Students will be required to complete the course satisfactorily by the June 5th deadline.

We seek to foster a cordial, collaborative, and supportive learning community. Diversity of opinions, conflicting perspectives, variable experiences and abilities are all respected and encouraged. In order to honor these traits please conduct yourself with a high level of professional and academic standards within this instructional setting.

Please reflect upon Discussion Board questions with thoughtful answers and non-biased, critical statements of your colleagues' learning. For the student to receive credit for a course and receive a passing grade attendance (9/9 modules) is required on all components of the Live Lectures. Please refer to each module for the specific rubric. Partial CEU credit will be rewarded based on completed modules <u>only</u>. Lecture or discussion content will be made available on demand 2 days after the live date and must be completed before June 5th for course credit. Any content that is missed will be recorded and available for download through August 31st.

Feedback

Each live web-based module will feature an opportunity for feedback immediately upon completion. Please fill out this information that explicitly asks
1. What went well?
2. What could have been better?
3. What other details would you like to provide feedback on from the course module?

Upon conclusion of the entire course, we will ask for your feedback as well regarding the course as a whole. Thank you for reflecting on the course as you work through the educational experience.

Accessibility

Please contact the academy if you require special accommodations for this course.

Cancellations

All cancellations must be in writing. Refunds less a 20% administrative charge will be given until **April 8, 2020.** The Academy reserves the right to cancel or change any programs for due cause. Cancellation of a program by the Academy will result in a full refund of tuition.

Before Attending Live Lectures

Check Your Computer for the Needed Software:
If you have never used Zoom on your device, you will need to test the set-up on your device (takes 1-2 minutes):

1. Enter this web address in your web browser: https://zoom.us/test

2. Click the Join button, and follow all of the prompts to test your connections.

3. If your test is successful, you will join a Zoom test session and see a black screen with your name in the center of that screen.

4. To exit the test meeting, select Leave Meeting located at the bottom right corner of the test window.

If you are having difficulty, please check that your computer and browser are supported by Zoom: https://support.zoom.us/hc/en-us, and clicking the Contact Support button at the bottom of the screen.

On the Live Webinar Days

We recommend logging in 10 minutes prior to the start of the webinar.

Individual Login
1. Click the following link: (To be issued in advance of live events)
2. Follow the on-screen instructions to download the Zoom app, if necessary.
3. Enter your email address.
4. Enter your full name (first name and last name required for proper attendance credit).
5. Click Join Webinar.

Group Login
1. Click the following link: (To be issued in advance of live events)
2. Follow the on-screen instructions to download the Zoom app, if necessary.
3. Enter 1 email address.
4. Enter your group's name (i.e. Illinois Masonic Group)
5. Click Join Webinar.

All groups must email a sign-in sheet with the names of the attendees to Mary Eugene at meugene@sralab.org. The group leader should indicate on the sign-in sheet the email address that was used to login for the group. Your sign-in sheet must be received by 6:30 pm on the day of the webinar.

Important: Each member of the group must be registered for the webinar in order to receive the CEU's.
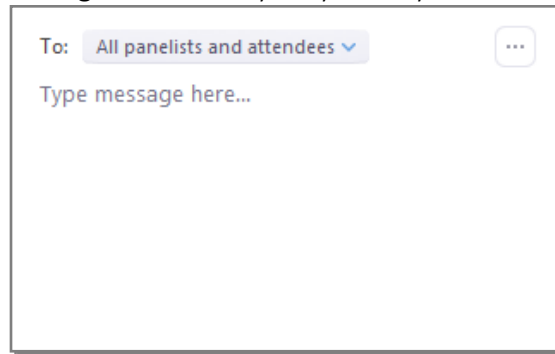
Connecting to Audio
When you join you will have a choice to join via phone or computer audio.
If you are using your phone for the webinar audio, select the Phone Call tab, dial one of the numbers displayed, and follow the prompts.

If your device has a microphone and speakers, you may use the Computer Audio by selecting the Computer Audio tab, and clicking the Join with Computer Audio button.
Test your speakers by clicking the Test speaker and microphone link.

Communicating with the Instructor during the Webinar
During the webinar you may use the Chat window to send questions to the instructor or to respond to the instructor's questions. To do this, type your message in the Chat box, then choose All panelists and attendees in the "To:" drop down box before pressing the Enter key on your keyboard: