



Sports Medicine Concepts, Inc

Concussion Management Specialist (CMS®) Syllabus

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Course Description

The CMS® certificate program offered through Sports Medicine Concepts, Inc., has been designed to be a comprehensive and advanced on-line course of study addressing practical issues related to the full spectrum of care, management, and prevention of sports-related concussions. This program of study has been designed by, and is presented by, practicing sports health care professionals with a practical knowledge base, and who are dedicated to raising the standard of care provided to athletes who have sustained a sports-related concussion. Participants in this program are expected to have a similar disposition. There are only 25 seats available per session. We ask that only serious candidates take part in this course of study.

Course Objectives

1. Demonstrate a thorough understanding of the mechanical forces and mechanisms of injury resulting in SRC;
2. Relate the neurometabolic cascade of concussion to the origins of signs and symptoms of sports related concussion and post-concussion syndrome;
3. Incorporate differential diagnosis concepts to help discern between traumatic brain injury and sports related concussion during acute and follow-up assessments.
4. Understand predictive signs and symptoms patterns and how they can be used to direct management;
5. Express the influence that rest, physical activity, and cognitive activity has on recovery;
6. Incorporate symptom provocation into current typical recovery, post-concussion syndrome management, and vestibular therapy models;
7. Develop and employ an evidence-based, yet practical, on-field management strategy that represents a higher standard of care;
8. Develop and employ an evidence-based clinical assessment battery,
9. Identify concussion modifying conditions resulting in protracted recovery, and explain how to mediate these conditions;
10. Apply a thorough yet practical recovery criteria that incorporates both physical and cognitive components;

Pre-requisites

Program participants will be sports health care professionals currently in good standing with their respective professional boards and whom have completed a formal educational curriculum that includes entry-level sports concussion management principles. Participants will also hold current certification in CPR for the professional rescuer, including AED.

Concussion Management Specialist On-line Program of Study Syllabus

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Program Requirements

Failure to complete any of the requirements below will result in loss of credit and forfeit of all fees. No rescheduling is permitted.

1. Completion of 4 – 1.5hr live on-line webinar sessions.

Participants must complete all 4 live webinar sessions. Registration in, as well as in-session time, is automatically tracked during each session. Only those participants who register for, and are in session for, the entire program will receive credit.

Recorded Sessions Option: Participants who miss a live session for any reason may elect to complete the live sessions via review of the post-session recordings but should notify the instructor as soon as possible. The recorded sessions are generally available 1hr after completion of the live session and are accessible via the CMS Resource page. Participants may also elect to complete the entire program via viewing of the recorded sessions. To do so, participants should notify the instructor of their intent as soon as possible.

2. Completion of 3- 1 hr Pre-recorded webinar sessions.

Participants must complete all 4 pre-recorded sessions prior to submitting their final application. Registration in, as well as in-session time, is automatically tracked during each session. Only those participants who register for and are in session for the entire program will receive credit. All program participants will receive a series of links to the recorded sessions on the first day of programming. Recorded sessions can be completed at the participant's leisure, but one should note that tests include pre-recorded program material. Upon completion of each recorded session a certificate of completion for 1 hr of credit will be provided.

3. Scholarship Review and Open Quiz Completion

The CMS program is an evidence-based practice program requiring an annual systematic review. Seminal scholarly works are provided in support of the didactic sessions. Participants are to review the seminal works provided. 3 open book quizzes are provided to guide participants through the seminal literature provided and to help participants focus on the most clinically relevant points from the literature. All 3 quizzes must be completed.

4. Completion of a case report / Essay

A case report will be discussed on the first day of programming. Case report topics must be submitted to the instructor for approval prior to the end of the program week. Program instructors may elect to review case studies individually with participants. The completed case report is due within 30 days of program completion.

The case report will include the following:

- Objective--Problem or need for the case to be presented.
- Background--On the particular injury or illness.
- Differential Diagnosis--What was it or what could it possibly have been?
- Treatment--What was done for it? What is normally expected for this condition?
- Uniqueness--What was different from the expected, or was it the same?
- Conclusions--Clinical applications of the information.
- Key Words--Three to six words to describe the article.

Alternatively, candidates may choose to answer 3 concussion related questions. Candidates will be provided 1 mandatory essay question, and 3 elective essay questions; of which 2 must be chosen.

5. Submission of final application

A final application form will be provided to each participant on the first day of programming. Participants will complete the entire form, included with the form will be

- a. Open quizzes;
- b. Copy of certification/licensure card;
- c. Copy of CPR certification card;
- d. Case report.

The final application will be reviewed and verified by the program instructor. Successful completion of all the requirements will result in award of the CMS® Certificate. Participants may also submit individual certificates of completion for continuing education credit in accordance with their respective certifying body. This program of study involves a total of 15 hours of credit.

6. Program Evaluation

All participants will be asked to complete a program evaluation following submission of the final application for credentialing. Participants will receive an email with a link to the electronic program evaluation.

Typical Program of Study: All times ET

Monday

10:45am-11:00am: Program Introduction

11:00am – 12:00pm: Neurometabolic Injury Cascade

12:00pm – 12:30pm: Q & A Forum

Session Materials

Recordings:

1. On- Field Management: Mechanism of Injury, On-Field Management, and Differential Diagnosis

Seminal Readings:

1. McCrory P, Meeuwisse W, Dvorak J. *et al.* Consensus statement on concussion in sport-the 5th international conference on concussion in sport held in Berlin, October 2016. *Br J Sports Med*. Published Online First: [April 26, 2017]. doi:10.1136/ bjsports-2017-097699
2. Giza CC, Hovda DA. The neurometabolic cascade of concussion. *J Athl Train*. 2001;36(3):228-235.
3. Cendoma MJ. A sideline assessment strategy that uses vital signs trending as a mechanism for identification of intracranial hematoma resulting from head trauma in sports. *Unpublished manuscript, Sports Medicine Concepts, Livonia, NY. 2013.*
 - a. SMC Enhanced Differential Diagnosis Report©

Ancillary Readings / Materials:

1. Echemendia RJ, Meeuwisse W, McCrory P, *et al.* The sport concussion assessment tool 5th edition (SCAT5). *Br J Sports Med*. Published Online First: [April 26, 2017]. doi:10.1136/ bjsports-2017-097506
 - a. SCAT5© Sport Concussion Assessment Tool – 5th Edition
2. Davis GA, Purcell L, Schneider KJ, *et al.* The child sports concussion assessment tool 5th edition (Child SCAT5). Published Online First: [May 24, 2017]. doi:10.1136/ bjsports-2017-097492.
 - a. Child SCAT5© Sport Concussion Assessment Tool
3. SMC Cranial Nerve Assessment Guide©
4. SMC Head Injury Warning Sheet©

Tuesday**10:45 am – 12:30 pm: Rest, Return to Activity, and Protracted Recovery***Session Materials*

Recordings:

2. Step-wise recovery and modifying conditions
3. Modifying conditions

Readings:

1. Tee EF, Marshall SW, Shankar V, *et al.* Predicting recovery patterns after sport-related concussion. *J Athl Train.* 2017;52(3):288-298.
2. Valovich-McLeod TC, Lewis JH, Whelihan K, Welch-Bacon CE. Rest and return to activity after sports-related concussion: a systematic review of the literature. *J Athl Train.* 2017;52(3):262-287.
3. Zuckerman SL, Yengo-Kahn AM, Buckley TA, Solomon GS, Sills AK, Kerr ZY. Predictors of postconcussion syndrome in collegiate student-athletes. *Neurosurg Focus.* 2016 Apr;40(4):E13.

Ancillary Readings / Materials:

1. Cameron KL, *et al.* Predicting the development of post concussion syndrome from initial signs and symptoms following mild traumatic brain injury. *J Athl Train.* 2000;35(2): S-54.
2. Lau, BC, *et al.* Which on-field signs and symptoms predict protracted recovery from sports-related concussion among high school football players? *Am J Sports Med.* 2011;39(11):2311-2318.
3. A Brief VOMS Assessment to Evaluate Concussions: Preliminary Findings
4. SMC enhanced VOMS for concussion
5. VOMS Video
 - Smooth Pursuits Test
 - Abnormal Pursuits
 - Horizontal and Vertical Saccades Test
 - Abnormal Saccades
 - Near Point Convergence Test
 - Visual Motion Sensitivity Test
6. BESS manual 310

Quiz#1

Wednesday**10:45 am – 12:30 pm: Symptom Provocation in Expose-Recover Exercise and Vestibular Therapy Models***Session Materials*

Recordings:

Seminal Readings:

1. Leddy J, Kozlowski K, Fung M, Pendergast DR, Willer B. Regulatory and autoregulatory physiological dysfunction as a primary characteristic of post concussion syndrome: implications for treatment. *Neuro Rehab.* 2007;22:199-205.
2. Leddy J, Baker JG, Haider MN, Hinds A, Willer B. A physiological approach to prolonged recovery from sports-related concussion. *J Athl Train.* 2017;52(3):299-308
3. Leddy J, Willer B. Use of graded exercise testing in concussion and return to activity management. *Curr Sports Med Rep.* 2013;12(6):370-376.
4. Kontos AP, Deitrick, JA, Collins, MW, Mucha, A. Review of vestibular and oculomotor screening and concussion rehabilitation. *J Athl Train.* 2017;52(3):256-261.
5. Vidal PG, Goodman AM, Colin A, Leddy JJ, Grady MF. Rehabilitation strategies for prolonged recovery in pediatric and adolescent concussion. *Pediatric Ann.* 2012;41(9):1-6.

Ancillary Readings / Materials:

1. SMC Medically Supervised Exercise Prescription©
2. SMC Step-Wise Concussion Recovery Progression©
3. VOM Rehab Videos
4. BPPV
 - Hallpike-Dix
 - Canalith Repositioning

Quiz #2

Thursday

Webinar Session IV (10:45 am – 12:15 pm): Implementation of Model Policy

Program Conclusion: 12:15 pm – 12:45 pm

Session Materials

Recordings:

3. HIPPA/FERPA and Sec 504

Seminal Readings:

Ancillary Readings / Materials:

1. Sec 504 Fact Sheet
2. FERPA Regulations
3. Sample Policy Binder
4. Physician Concussion Evaluation Form
5. Emergency department discharge form
6. Coaches Guidelines for management of acute concussions
7. Facts and Fallacies

Quiz#3

Within 30 days of course completion

Essay Requirement Due

Request for Credential Form Due

Quizzes 1-3

Copy of CPR certification