

# CCSP Course Syllabus

**Course Name:** *Emergency Procedures in Sport*

**Hours:** *12.5 Hours (General includes one hour of universal precautions/blood borne pathogens)*

**Dates:**

## Course Description

This 12.5-hour course will provide the Doctor of Chiropractic with current information concerning the evaluation and management of serious spinal and other physical injuries and acute illnesses requiring urgent intervention in the athletic setting. The field of prehospital emergency medical care at an athletic event is continuing to evolve. The reality of life and death decisions can be encountered at a moment's notice in the sporting arena. Doctors of chiropractic who are interested in providing sports chiropractic services outside the typical clinical setting must develop a far more sophisticated approach outside the office setting to successfully manage serious injury and illness. The public expects the D.C. working an athletic event to work side by side with other health care professionals to help deliver professional prehospital emergency medical care. This course is designed to help the new doctor of chiropractic gain the knowledge, skills and attitude necessary to be a competent, productive, and valuable member of the emergency medical services team at an athletic event.

The course emphasizes and utilizes a lecture format followed by hands-on-learnings that build upon the previous emergency procedure task to assist in developing both the didactic and psychomotor skills required to meet the standard of care in the management of emergent illness and injury in the sporting arena. The presentation is designed to assist the doctor of chiropractic to manage emergent trauma in a setting outside the office.

## ***Intended Results and Learning Objectives:***

At the completion of this lesson, the learner will be able to:

1. Demonstrate required knowledge of the psychomotor objectives required for scene size up of a sports trauma or serious illness.
2. Demonstrate required knowledge and the psychomotor skills required to perform the initial assessment of individuals with sports related trauma and serious illness.
3. Demonstrate required knowledge and the psychomotor skills required to perform the secondary assessment of individuals with sports related trauma and serious illness.
4. Demonstrate required knowledge and the psychomotor skills required to assess and manage an individual with a compromised airway, including patient position, airway selection and placement, and the safe operation of oxygen delivery devices.
5. Demonstrate the required knowledge and decision making related to the sequence of managing the seriously injured or ill individual.
6. Demonstrate the required knowledge and skills required to manage significant hemorrhage in the out of office setting.

7. Demonstrate the required knowledge and skills required to manage significant head injury, including concussion, in the out of office setting.
8. Demonstrate the required knowledge and skills required to manage shock in an out of office setting.
9. Demonstrate the required knowledge and skills required to manage extremity injury, including fracture and dislocation, in a sporting environment.
10. Demonstrate the required knowledge and skills required to implement serial examinations in the sporting arena.
11. Demonstrate the required knowledge and skills required to manage an individual with spinal trauma.
12. Demonstrate the required knowledge and skills required to evaluate, manage and make return to play decisions for athletes with neurological injury that specifically included sports related concussion.
13. Demonstrate the required knowledge and skills required to protect the provider and others from contracting blood borne pathogens.

## **Course Outline:**

### **Hour**

1. Review the duties of a team physician related to the care of the seriously injured athlete. Define standards of care and the importance of building trauma related knowledges and skills before engaging in sporting situations where others are dependent upon the doctor's knowledge and skillsets. An overview of the Emergency Management System (EMS) is provided including regulations policies, emergency action plans, communications, personal protection (biohazard skills) and trauma systems. An introduction to the basic and advanced equipment used in sporting arenas is discussed.
2. The development of knowledge and skills related to personal and patient safety in regard to approaching the initial management of seriously injured athletes/individuals. Primary assessment techniques and skills include scene assessment, personal safety, patient assessment, airway assessment, indications of breathing function, and cardiac function through the evaluation for the circulatory system.
3. Practical skills workshop on primary assessment skills that include the psychomotor training of checking airway, breathing and circulation. The cornerstones of progression and patient assessment are demonstrated by the presenter and each course participant working in small group settings.
4. Lecture on the assessment and management of airway or compromised respiratory function. The correct techniques for the management, assessment, and preservation of the ill or injured individual's airway is discussed in detail. The principles of examination to recognize the absent of or inadequate ventilation and airway dysfunction is the focus of this hour.
5. Practical workshop for the clinicians to develop and demonstrate minimal competency centered on the psychomotor skills required to assess and maintain an airway is presented by the instructor and then demonstrated by the attendees in small group settings. Patient positioning and the selection and appropriate implementation of airway devices is the focus of this presentation. The learner will demonstrate how to maintain an airway, set up oxygen delivery devices (O2 tank, regulator, air delivery), oral and

- nasopharyngeal airway device selection and applications of proper placement.
6. Lecture on the next steps of the emergency management of an ill or injured individual after the airway, breathing and circulation are stabilized is presented. The purpose, process and care pathway for the implementation of the secondary survey is described. The recognition, examination and management strategies related to serious compromise include hemorrhage, shock, fracture, dislocation, and other serious presentations are discussed. The concept of serial examination is emphasized. recognition and care interventions.
  7. A practical workshop is presented for the clinicians to observe and then perform the necessary procedures and psychomotor skills to further develop and demonstrate minimal competencies centered on performing a successful secondary assessment of a seriously injured or ill individual without a spinal injury is the focus of this section of the presentation. Learners will demonstrate the processes of identifying a general assessment of the patient's status regarding mental status, physical finding and stability of their health. Special emphasis is provided in regard to managing hemorrhage, fracture and dislocation is offered.
  8. Lecture on the next steps of the emergency management of the individual with a potential or confirmed spinal trauma after the airway, breathing and circulation are stabilized is presented. The goal in assessing neck injuries is to detect spinal cord injury and the potential for such injury resulting from instability of the cervical spine. The purpose, processes (techniques) and care pathways for the preservation of central nervous system function is described. The recognition, examination and management strategies related to serious head or spinal trauma resulting in patient compromise include recognition of levels of consciousness, spinal axis pain, focal neurological deficits, sensory abnormality is discussed. The concept of spinal stabilization including log rolling techniques, management of athletic equipment, and serial examination is emphasized. recognition and care interventions.
  9. A practical workshop is presented for the clinicians to observe and then perform the necessary procedures and psychomotor skills to further develop and demonstrate minimal competencies centered on performing a successful assessment of a seriously injured or ill individual with a spinal injury who has stables ABCs, is the focus of this section of the presentation. Specific skills that are demonstrated and then performed by learners in small group workshops include the demonstration of both cognitive and psychomotor skills related to the assessment of levels of consciousness, management of unresponsive athletes, assessments for peripheral strength and sensation without moving the athlete's head or neck, physical examination of the cervical spine, assessments of recent memory and postural instability, identification of symptoms such as headache, nausea, dizziness, or blurred vision, and the practical workshop on cervical spine stabilization, helmet removal processes and decision making, and log rolling technique and applications is covered in detail. This is a two-hour practical workshop using teaching techniques with an emphasis on an algorithmic approach to managing the spine injured athlete.
  10. Hour nine is continued for an additional 60 minutes in hour ten. The complexities of developing and successfully demonstrating these serious knowledges, decision making skills, variable assessments and practicing of

the above described psychomotor skills are not able to be appropriately achieved in a one (1) hour time block.

11. A discussion of universal precautions and blood borne pathogens is presented. Specific components include the identification of body fluids that may lead to exposure, risks of infection, types of pathogens, methods of hand washing and glove removal, exposure management and prevention procedures are discussed and demonstrated.
12. Higher level case-based synthesis using both knowledge based and psychomotor skills are presented using representative cases. The learners are separated into small groups to demonstrate didactic and psychomotor skills of the presented cases. A progress from single to multi-trauma management that develops higher level thinking and skills is the focus of this section of the course. Specific case presentations include the demonstration of assessment and management (care pathways) that focus on the initial assessment, secondary assessment, airway management, recognition and management of shock, concussion, spinal trauma, penetrating chest injury, hemorrhage, helmet removal, multi-trauma including return to play decisions are presented.
13. Hour 12.5 is an extension of the topics and psychomotor skills demonstrated in hour twelve for an additional 30 minutes (1/2 hour). The depth and complexities of the case presentations requires an additional thirty minutes.

## ***Course Materials***

The presentation includes oral, practical and visual teaching aids consisting of PowerPoint presentations, video and hands on skills that are supported with the required equipment. The distribution of complete course notes and associated references is provided before the course onset to assist the learner in understanding the presented materials.

Key references include the following:

- Emergency Care (13th Edition) (EMT) by Daniel Limmer and Michael F. O'Keefe Pub Pearson. Feb 21, 2015.
- Workbook for Emergency Care 13th Edition. by Daniel Limmer and Michael F. O'Keefe Pub Pearson. Feb 21, 2015.
- Brukne & Khan's Clinical Sports Medicine. 2009 Edition 4 by Peter Brukner, Karim Khan
- ACSM's Primary Care Sports Medicine Second Edition. 2007 McKeag DB MD MS (Editor), Moeller J MD FACSM (Editor)
- Meehan WP 3rd, Mannix R. Pediatric concussions in United States emergency departments in the years between 2002 to 2006. J Pediatr. 2010;157(6):889–893.
- American Red Cross Emergency Medical Response. Washington, DC: StayWell Health & Safety Solutions; 2011
- Bell K. On-field issues of the C-spine-injured helmeted athlete. Curr Sports Med Rep.6:32-35, 2007.
- Waninger KN. Management of the helmeted athlete with suspected cervical spine injury. Am J Sports Med.32:1331-1350, 2004.
- Maron BJ, Shirani J, Poliac LC, et al. Sudden death in young competitive athletes. Clinical, demographic, and pathological profiles. JAMA.276:199-204, 1996.
- Almquist J, Valovich McLeod TC, Cavanna A, et al. Summary Statement: Appropriate Medical Care for the Secondary School-Aged Athlete. J Athl Train. 2008;43(4):416-427.

- Andersen J, Courson RW, Kleiner DM, McLoda TA. National Athletic Trainers' Association position statement: emergency planning in athletics. *J Athl Train.* 2002;37(1):99–104.
- Courson RW. Preventing sudden death on the athletic field: the emergency action plan. *Curr Sports Med Rep.* 2007;6:93–100.
- Courson RW, Goldenberg M, Adams KG, et al. Inter-Association Consensus Statement on Best Practices for Sports Medicine Management for Secondary Schools and Colleges. *J Athl Train.* 2014;49(1):128-137.
- Drezner JA, Courson RW, Roberts WO, et al. Inter-Association Task Force recommendations on emergency preparedness and management of sudden cardiac arrest in high school and college athletic programs: a consensus statement. *J Athl Train.* 2007;42(1):143–158.
- Hazinski MF, Markenson D, Neish S, et al. Response to cardiac arrest and selected life-threatening medical emergencies: the medical emergency response plan for schools. A statement for healthcare providers, policymakers, school administrators, and community leaders. *Circulation.* 2004;109(2):278–291.

### ***Remediation***

Identification of learners that are having difficulty with this subject content will be made by the instructor(s). If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives, or demonstrating proficiency in psychomotor skills, the students should be counseled, remediated and re-evaluated.