

Lexington Christian Academy Sports Medicine

Concussion Guidelines

Consensus Statement on Concussion in Sport: The 4th International Conference on Concussion in Sport, Zurich, November 2012:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3715021/pdf/i1062-6050-48-4-554.pdf>

Purpose:

The following policy and procedures on assessment and management of concussions as well as return to play guidelines has been developed in accordance to the Lexington Christian Academy Sports Medicine's mission statement to provide quality healthcare services and assure the well-being of each student-athlete at LCA.

The LCA Sports Medicine Department recognizes that sport induced concussions pose a significant health risk for those student-athletes participating in athletics at LCA. With this in mind, the Sports Medicine Department has implemented policies and procedures to assess and identify those student-athletes who have suffered a concussion.

Definition:

Concussion, a subset of a traumatic brain injury (TBI), is a violent shaking or jarring action to the brain, usually as a result of impact with an object or ground. This results in immediate partial or complete impairment of neurological function. As defined by the Zurich 2012 consensus statement, a concussion "is a brain injury and is defined as a complex pathophysiological process affecting the brain, induced by biomechanical forces. Several common features that incorporate clinical, pathologic, and biomechanical injury constructs that may be utilized in defining the nature of a concussive head injury include:

1. Concussion may be caused by a direct blow to the head, face, neck, or elsewhere on the body with an "impulsive" force transmitted to the head.
2. Concussion typically results in the rapid onset of short-lived impairment of neurologic function that resolves spontaneously. However, in some cases, symptoms and signs may evolve over a number of minutes to hours.
3. Concussion may result in neuropathologic changes, but the acute clinical symptoms largely reflect a functional disturbance rather than a structural injury, and as such, no abnormality is seen on standard structural neuroimaging studies.
4. Concussion results in a graded set of clinical symptoms that may or may not involve loss of consciousness. Resolution of the clinical and cognitive symptoms typically follows a sequential course. However, it is important to note that in some cases symptoms may be prolonged."

Signs and Symptoms of Concussion:

Certified athletic trainers and coaches all need to be aware of the signs and symptoms of concussions to properly recognize and intervene on behalf of the student-athlete.

Physical Symptoms

Headache
Vision Difficulty
Nausea & Dizziness
Fatigue
Balance Difficulties
Light Sensitivity

Cognitive Symptoms

Memory Loss
Attention Disorders
Reasoning Difficulty

Emotionality

Irritability
Sadness
Nervousness
Sleep Disturbances

Concussion Management and Return to Play Guidelines:

In any circumstance where a concussion is suspected in an athlete, the first priority is to remove the athlete from further competition until a thorough sideline assessment can be made. Furthermore, if there is a question about the state of mental clearing it is best to err in the direction of conservative assessment and withhold the athlete from further competition until a physician assessment can be arranged.

The recommendations in this document for the management of concussion are based on review of the medical literature including, but not limited to, statements by the Consensus Statement on Concussion in Sport held in Zurich (2012), American Academy of Neurology, Robert C. Cantu, MD, the KHSAA Rulebook, and the NCAA Manual of Sports Medicine.

While there is no clear consensus regarding prognostic significance of many physical manifestations in the post-concussion setting, there is general agreement that these symptoms do assist in the grading of concussion severity. This grading is pivotal management of concussion.

Proposed Concussion Grading Scale

- Grade I: Transient Confusion
 No Loss of Consciousness
 Post-Concussive Symptoms Lasting < 15 minutes
- Grade II: Transient Confusion
 No Loss of Consciousness

Post-Concussive Symptoms Lasting > 15 minutes

Grade III: Any Loss of Consciousness
Confusion or Concussive Symptoms Lasting 60 minutes

Guidelines and Procedures for Coaches:

Recognize: All coaches should become familiar with the signs and symptoms of concussion

Remove: If a coach suspects the athlete has sustained a concussion, the athlete should be removed from activity until evaluated medically

Any athlete who exhibits signs or symptoms of a concussion should be removed immediately, assessed, and should not be allowed to return to activity that day

Refer:

1. Coaches should report all head injuries to the LCA Certified Athletic Trainer as soon as possible for medical assessment and management, and for coordination of home instructions and follow-up care.
2. Coaches should seek assistance from the host site ATC if at an away contest
3. If the ATC is unavailable, or the athlete is injured at an away contest, the coach is responsible for notifying the athlete's parents of the injury
4. In the event that an athlete's parents cannot be reached, and the athlete is able to be sent home (rather than directly to MD):
 - a. The coach or ATC should insure that the athlete will be with a responsible individual, who is capable of monitoring the athlete and understanding the home care instructions, before allowing the athlete to go home
 - b. The coach or ATC should continue efforts to reach the parent
 - c. If there is any question about the status of the athlete, or if the athlete is not able to be monitored appropriately, the athlete should be referred to the emergency department for evaluation. A coach or ATC should accompany the athlete and remain with the athlete until the parents arrive.
 - d. Athletes with suspected head injuries should not be permitted to drive home.

Follow-Up Care of the Athlete During the School Day:

Responsibilities of the Student's Guidance Counselor:

1. Monitor the student closely and recommend appropriate academic accommodations for students who are exhibiting symptoms of post-concussion syndrome
2. Communicate with the teachers to provide the most effective care for the student
3. Notify the student's P.E. teacher immediately that the athlete is restricted from all physical activity until further notice

Return to Play Guidelines:

Neuro-cognitive testing in conjunction with a physical exam and additional diagnostic tests as needed will determine when a student-athlete will return to activity. Neuro-cognitive testing will be scheduled and performed until the student-athlete scores a baseline level is acceptable by the Sports Medicine Department. It is important to note that this timeline could last over a period of days to weeks, or potential medical disqualification from LCA athletics. All cases will be handled on a case-by-case basis. The decision by the Team Physician for all cases of an athlete's return to activity is final.

<u>Rehabilitation Stage</u>	<u>Functional Exercise</u>	<u>Objective of Each Stage</u>
1. No Activity	Complete physical and cognitive rest	Recovery
2. Light Aerobic Exercise	<70% of Max Heart Rate No Resistance Training	Increase Heart Rate
3. Sport-Specific Exercise	Sport-Specific Exercises No Head Impact Activities	Add Movement
4. Non-Contact Training Drills	Progression to More Complex Drills; May Start Resistance Training	Exercise, Coordination, and Cognitive Load
5. Full-Contact Practice	Following Medical Clearance; Participate in Normal Training	Restore Athlete's Confidence; Coaching Staff Assesses Functional Skills
6. Return to Play	Normal Game Play	

KHSAA Rule Change:



Kentucky High School Athletic Association and KHSAA Member Schools

IMPLEMENTATION OF NFHS PLAYING RULES CHANGES RELATED TO CONCUSSION AND CONCUSSED ATHLETES

Released: June, 2010, Commissioner Julian Tackett

In its various sports playing rules, the National Federation of High Schools (NFHS) has implemented a standard rule change in all sports dealing with concussions in student-athletes. The basic rule in all sports (which may be worded slightly differently in each rule book due to the nature of breaks in time intervals at contests in different sports) states:

Any athlete who exhibits signs, symptoms, or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the contest and shall not return to play until cleared by an appropriate health-care professional. (Please see NFHS Suggested Guidelines for Management of Concussion in the Appendix in the back of each NFHS Rules Book).

To implement this rule, the KHSAA has defined the following parameters to guide KHSAA licensed officials and member school representatives in implementing this change:

What is the role of contest officials in administering the new rule?

- Officials are to review and know the signs and symptoms of concussion and to direct immediate removal of any athlete who displays these signs or symptoms.
- Officials have no other role in the process dealing with this rules change.

Who decides if an athlete has been concussed (has had a concussion)?

- An MD (Medical Doctor), DO (Doctor of Osteopathy), PA (Physician's Assistant), ARNP (Advanced Registered Nurse Practitioner) or ATC (Certified Athletic Trainer) is empowered to make the on site determination that an athlete has received concussion.
- If any one of these individuals has answered that "yes", there has been a concussion, that decision is final.

Can an athlete return to play on the same day as he/she receives a concussion?

- No, under no circumstances can that athlete return to play in that event that day.
- If the event continues over multiple days, then the designated event physician has ultimate authority over return to play decisions.

Once the day has completed, who can issue authorization to return to practice / competition in the sport?

- Once a concussion has been diagnosed by one of the above listed on site providers, only an MD or DO can authorize subsequent return to play, and such shall be in writing to the administration of the school.
- School administration shall then notify the coach as to the permission to return to practice or play.

Fundamental Reminder about this change

- It has always been the ultimate responsibility of the coaching staff, in all sports, to ensure that players are only put into practice or contests if they are physical capable of performing.

NFHS Suggested Concussion Management by Health Care Professionals (once the "yes" answer has been determined on the night of competition)

1. No athlete should return to play (RTP) or practice on the same day of a concussion.
2. Any athlete suspected of having a concussion should be evaluated by an appropriate health-care professional that day.
3. Any athlete with a concussion should be medically cleared by an appropriate health-care professional prior to resuming participation in any practice or competition.
4. After medical clearance, return to play should follow a step-wise protocol with provisions for delayed return to play based upon the return of any signs or symptoms.

Other resources

The NFHS has developed a new 20-minute online coach education course – *Concussion in Sports – What You Need to Know*, the NFHS *Suggested Guidelines for Management of Concussion in Sports* brochure, the NFHS *Sports Medicine Handbook*, materials from the CDC Heads Up program and other materials should all be made available to officials, parents, athletes and schools.

Summary:

The LCA Athletic Department is committed to providing quality health care services for all student-athletes. As such, the LCA Athletic Department is very proactive in the assessment and management of concussions. To do so limits the risks of concussions associated with athletics, and the potential catastrophic and long-term complications from said concussions.

Approved by: _____ *Date:* _____
Team Physician