

University of Kentucky Concussion Management Plan

In response to the growing concern over concussion in athletics and the memorandum issued by the NCAA (dated April 29, 2010) requesting that “institutions shall have a concussion management plan on file”, the following document serves as such.

The Sports Medicine staff at the University of Kentucky proposes the following management plan. These are based on the most current recommendation from the NCAA, the CDC, and the 3rd International Conference on Concussion in Sport.

This policy represents a multi-faceted approach to treating concussion that includes educating the athletes, coaching staff, and strength/conditioning personnel. It also delineates the role of the members of the Sports Medicine staff and includes a baseline assessment for those who participate in sports with a meaningful risk of concussion. These are adopted from both NCAA guidelines (**) as well as the Inter-Association Consensus: Diagnosis and Management of Sport-Related Concussion Guidelines. This policy is reviewed annually. Examples from the NCAA Sports Medicine Handbook include but are not limited to:

- All University of Kentucky Student-Athletes will undergo a baseline assessment before the first practice.
- The baseline assessment consists of a symptoms checklist and the SCAT3 Standardized Cognitive and Balanced Assessment.
- The concussed student-athlete will be evaluated by a Team Physician regularly. Once asymptomatic and post-exertion assessments are within normal baseline limits return-to-play will follow a medically supervised stepwise process.

Education & Pre-participation Planning

- 1) All athletes are required to sign a waiver acknowledging they accept “responsibility for reporting their injuries to the medical staff, including signs and symptoms of a concussion.”** During this process, athletes will be presented education material regarding the signs and symptoms of concussion and will acknowledge they have reviewed the material and have had the opportunity to have any questions answered. Fact Sheet for student-athletes can be viewed at (http://web1.ncaa.org/web_files/health_safety/ConFactSheetsa.pdf).
- 2) All members of coaching, strength and conditioning, team physicians, administrative A.D’s who serve as liaisons, and athletic training staffs will receive educational material (NCAA Concussion Fact Sheet) to assist in identifying the signs and symptoms of a concussion. This educational material will also identify the steps to be taken once the injury has been recognized. A signed acknowledgment of document receipt will be required. Subsequent to the dissemination of the educational material, a form will be signed acknowledging they have received and understand the information. “Concussion, A Fact Sheet for Coaches” can be viewed at (http://web1.ncaa.org/web_files/health_safety/ConFactSheetcoaches.pdf).
- 3) The University of Kentucky will maintain an emergency action plan** for each venue to respond to catastrophic injuries and illnesses. This will include, but not limited to concussion and head injuries. (All athletics healthcare providers will review and practice the plan annually, while the coaches will review the plan annually).
- 4) Athletes participating in sports at the University of Kentucky or, an athlete who presents for their annual pre-participation exam with history of a concussion, will undergo pre-participation baseline screening. At this time, this will include SCAT3. Additionally, the Team Physician will determine pre-participation clearance and/or the need for additional consultation or testing. The NCAA has determined this to be “effective in the evaluation and management of concussion.” As our knowledge about the utility of these tests changes over time, we anticipate changes to our protocol as they become available.

Concussion Management Plan

1. When a student-athlete shows any signs, symptoms or behaviors consistent with a concussion, the athlete shall be removed from practice or competition and evaluated by an athletics healthcare provider with experience in the evaluation and management of concussion. This professional will have unchallengeable authority. The evaluation will consist of:
 - Symptom assessment
 - Physical and neurological exam
 - Cognitive assessment
 - Balance exam
 - Clinical assessment for cervical spine trauma, skull fracture, and intracranial bleed.
2. A student-athlete diagnosed with a concussion shall be withheld from the competition or practice and not return to activity for the remainder of the day.
3. The University of Kentucky will have an athletics healthcare provider with experience in the management of concussion on-site for all NCAA varsity competitions for the following sports (Football, Basketball, Pole Vault, Soccer) and, at minimum, on-call for all NCAA varsity practices for the following sports (Football, Basketball, Pole Vault, Soccer). A team physician with experience in the management of concussions and knowledge of the Inter-Association Consensus: Diagnosis and Management of Sport-Related Concussion Guidelines will be available for phone consultation. This access applies to all NCAA sports at the University of Kentucky.
4. If an athlete is determined to have a concussion, with any of the following associated signs and symptoms, the emergency action plan for that venue will be exercised (including transportation to nearest medical facility).
 - Glasgow Coma Scale <13
 - Prolonged loss of consciousness
 - Focal neurological...
 - Repetitive vomiting (emesis)
 - Persistent diminished/worsening...
 - Spine injury
5. The student-athlete will receive serial monitoring for deterioration. Athletes will be provided with instructions upon dismissal from practice/game that are consistent with the Inter-Association Consensus: Diagnosis and Management of Sport-Related Concussion Guidelines, preferably with a roommate, guardian, or someone that can follow the instructions provided.
6. Subsequent to suffering a concussion, SCAT3 testing will be repeated and reviewed by a team physician. Academic advisors will be notified once an athlete has suffered a concussion for academic adjustments and return-to-learn guidelines.
 - a. The Assistant Athletics Director for Academics & Eligibility will serve as the point person within our athletics department who will navigate return-to-learn with the student-athlete. He/she works in the departmental "CATS" Center.
 - b. A multi-disciplinary team consisting of a team physician, sport ATC, Assistant Athletics Director for Academics & Eligibility, academic counselor, and representative from the Office of Disability Resources will navigate more complex cases of return-to-learn. The inclusion of the Office of Disability Resources will ensure compliance with The Americans with Disabilities Act Amendments Act of 2008 guidelines.
 - c. The student-athlete diagnosed with a concussion shall be withheld from classroom activity and tutoring/study hall the remainder of the day.

- d. The team physician will determine individualized cases that include, but not limited to, remaining at home/dorm if a student-athlete cannot tolerate light cognitive activity and the ensuing gradual return-to-learn activities.
 - e. A modification of schedule/academics accommodations for up to two weeks will be implemented with help from the Assistant Athletics Director for Academics & Eligibility (point person) in collaboration with the sport ATC and team physician. Campus resources to include either the Office of Disability Resources or a CATS Learning Specialist will be consulted.
 - f. Should the student-athlete describe symptoms lasting greater than two weeks, the student-athlete will be re-evaluated by the Team Physician (and members of the multi-disciplinary team as determined necessary by the Team Physician) **in order to consider additional diagnoses and best management options.**
7. Once a concussion is diagnosed, the athlete will be evaluated by a team physician or medically qualified physician designee with experience in the management of concussions who will outline a plan for a return to play. The plan will follow these steps and be supervised by the above professional to ensure a step wise progression is being followed. Should symptoms reoccur during any step in the progression, the activity will be halted and the athlete will be re-evaluated the following day.
- **Limit physical & cognitive activity until athlete has returned to baseline.**
 - Light aerobic exercise
 - Sport specific exercise
 - Non-contact training drills
 - Full contact training after medical clearance**
 - Return to competition (game play)
 - Return-to-learn guidelines
 - i. A multi-disciplinary team (team physician, ATC, Assistant Athletics Director for Academics & Eligibility, academic counselor) will communicate on more complex cases of prolonged return-to-learn.
- **The final decision for return to play rests with the physician and is unchallengeable.**
8. For those athletes who are not improving in an expected fashion, the team physician will arrange for appropriate consultations and/or testing to consider additional diagnoses and best management options.

Reducing Exposure to Head Trauma

The University of Kentucky acknowledges the importance of emphasizing ways to reduce exposure to head trauma. Coaches and athletes will be responsible for taking a “safety first” approach to their sport and exercise proper technique. Specific to the sport of football, the Sports Medicine Staff will incorporate the NCAA Inter-Association Consensus: Year-Round Football Practice Contact Guidelines.

Resources

- NCAA Memorandum on Concussion Management Plan, April 29, 2010
- NCAA and CDC Educational Material on Concussion in Sport. www.ncaa.org/health-safety
- Consensus Statement on Concussion in Sport. 3rd International Conference on Concussion in Sport. Zurich, 2008. Clinical Journal of Sports Medicine, 2009; 19(3) 185-200.
- NCAA Sports Medicine Handbook 2014-2015, Guideline 2I; pgs. 56-64.
- Concussion Safety Protocol Checklist (NCAA document 2015).
- McCrory P, Meeuwisse WH, Aubry M, et al. Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, November 2012. Br J Sports Med 2013; 47:15-26.
- “Concussion and Mild Traumatic Brain Injury.” Centers for Disease Control and Prevention. Centers for Disease Control and Prevention, 15 Aug. 2013. Web. 10 Sept. 2013.

APPENDICES

- Appendix 1 -** Personnel Roles
- Appendix 2 -** Concussion/Assumption of Risk Waiver
- Appendix 3 -** Concussion Management Plan Take Home Sheet
- Appendix 4 -** NCAA Concussion Fact Sheet for Coaches
- Appendix 5 -** NCAA Concussion Fact Sheet for Student-Athletes

PERSONNEL ROLES

Coach:

- Remove any student-athlete that shows signs of concussion after direct or indirect head trauma
- Make sure they are evaluated by the appropriate health care professional
- Allow the student-athlete to return to play only after receiving clearance from the appropriate health care professional

Certified Athletic Trainer:

- Remove any student-athlete that shows signs of concussion after direct or indirect head trauma
- Has unchallengeable authority
- Perform a concussion evaluation and subsequent evaluations as Physician desires
- Supervise activities during the return to play protocol, including exertion tests
- Make proper referral to Physician, provide home instructions to responsible care giver when athlete goes home
- Allow the student-athlete to return to play after receiving clearance from the Physician

Physician:

- When present, remove any student-athlete that shows signs of concussion after direct or indirect head trauma
- When present, perform a concussion evaluation and subsequent evaluations as needed
- Make proper referral to specialists if needed
- Direct the Certified Athletic Trainer in caring for the Student-Athlete
- Determine when the student-athlete can return to play and/or return-to-learn
- Has unchallengeable authority
- Stay contemporary with Inter-Association Consensus: Diagnosis and Management of Sport-Related Concussion Guidelines

Other Health Professionals:

Consulted by Physician to aid in diagnosis and treatment of concussions

UNIVERSITY OF KENTUCKY

Declaration of Student-Athlete Responsibility for Reporting Injuries/Illnesses

1) ASSUMPTION OF RISK

I accept the responsibility for reporting my injuries and illnesses to the institutional medical staff, including signs and symptoms of concussions. I have received educational material on the signs and symptoms of concussions, and understand these signs and symptoms.

2) CONCUSSIONS

A concussion is a brain injury and all brain injuries are serious. They are caused by a bump, blow, or jolt to the head, or by a blow to another part of the body with the force transmitted to the head. They can range from mild to severe and can disrupt the way the brain normally works. Even though most concussions are mild, all concussions are potentially serious and may result in complications including prolonged brain damage and death if not recognized and managed properly. In other words, even a "ding" or a bump on the head can be serious. You can't see a concussion and most sports concussions occur without loss of consciousness. Signs and symptoms of concussion may show up right after the injury or can take hours or days to fully appear. If you notice the symptoms or signs of concussion OR if your teammates, friends, coaches, or parents notice any of these symptoms, it is important to seek medical attention right away.

Signs and Symptoms of Concussion*

- *Loss of consciousness (LOC)
*Confusion
*Disequilibrium
*Delayed verbal and motor responses
*Inability to focus
*Headache
*Nausea/Vomiting
*Excessive drowsiness
*Visual Disturbances (Photophobia, blurry, Phono/photophobia vision, double vision)
*Post-traumatic amnesia (PTA)
*Retrograde amnesia (RGA)
*Feeling "in a fog," "zoned out"
*Vacant stare
*Emotional lability
*Dizziness
*Slurred/incoherent speech

*taken from NCAA 2008-09 Sports Medicine Handbook, table 1, page 49

It is important that if you, the student-athlete suffer any of the above signs or symptoms OR notice the same in a teammate, it is your responsibility to report this to the athletic training staff.

Once a concussion has been reported or identified, the athlete will be removed from activity and not allowed to return on that same day. Subsequently, the athlete will be evaluated by the athletic trainer as well as a team physician. Further observation and specific testing will be done as symptoms dictate to ensure a safe return to activity.

Continuing to play with the signs and symptoms of a concussion leaves the athlete especially vulnerable to greater injury. There is an increased risk of significant damage from a concussion for a period of time after that concussion occurs, particularly if the athlete suffers another concussion before completely recovering from the first one. This can lead to prolonged recovery, or even to severe brain swelling with devastating and even fatal consequences. It is well known that athletes will often under report symptoms of injuries and concussions are no different. As a result, education of administrators, coaches, and the athlete themselves is important to the student-athlete's safety.

Please take the time to review the material in this document as well as the NCAA "Concussion Fact Sheet for Student-Athletes" and ask any questions you may have. Additionally, it's our expectation that you are honest and thorough regarding any history of concussions you may have suffered prior to joining the University of Kentucky.

3) SIGNATURE OF STUDENT-ATHLETE RESPONSIBILITY

My signature below acknowledges that I have reviewed the material on concussions and head injuries along with my responsibility to report injuries/illnesses to the medical staff as it relates to student-athletes at the University of Kentucky. I have been given the opportunity to ask any questions and have them answered to my satisfaction. I further understand that I share the responsibility for honestly and promptly reporting the symptoms of a head injury to the athletic training staff.

Student-Athlete _____ Date _____

Witnessed by: _____ Date _____
University of Kentucky Athletic Training Staff

CONCUSSION MANAGEMENT PLAN TAKE HOME SHEET

You have sustained a concussion/or are exhibiting concussion like symptoms. This take home sheet will inform you, a roommate, responsible friend and/or parent of common signs and symptoms of a concussion. Additionally this form will outline some signs/symptoms that would warrant a trip to the emergency room and help explain the recovery process.

Common Symptoms an Athlete Feels:

Mental	Physical	Emotional	Sleep
Loss of consciousness "Don't Feel Right" Difficulty Remembering Confusion Feeling Slowed Down Amnesia Feeling like in a "fog" Difficulty concentrating	Balance Problems Nausea/Vomiting Fatigue/Low Energy Headache Dizziness Neck Pain Pressure in the head Blurred Vision Sensitivity to light/sound	More Emotional Irritability Sadness Nervous/Anxious	Drowsiness Sleeping more than usual Difficulty falling asleep or staying asleep

Common Signs a Parent/Coach/Teacher/Roommate May See:

- Appears dazed or confused
- Forgets instructions
- Unsure of game, score, opponent
- Clumsy
- Moves or answers questions slowly
- Shows mood, behavior, or personality changes
- Seizure or convulsion

When to seek Emergency Care:

- Repeated Vomiting
- Severe Headache that does not improve with Tylenol
- Increasing Confusion, Restlessness or Irritability
- Convulsions, Seizures, or Coma
- Trouble using arms or legs
- Blurry or Double vision
- Slurred or Garbled Speech
- Unusual sleepiness, decreasing alertness, or cannot be awakened

Is it OK to go to Sleep?

It is OK to sleep after sustaining a concussion. You should not be left alone for the first 24 hours after the injury. You should be with a parent, responsible friend or roommate.

May the Patient take something for Pain?

Generally, we do not advise using medications to treat concussion. If needed, Tylenol may be used for headache during the first several days. You may use ice packs for a sore or stiff neck. **You should avoid Advil/Motrin/Ibuprofen, Aspirin, Narcotics, Alcohol and Caffeine.**

How do We Treat a Concussion?

You should not drive any motor vehicle of any kind or bicycle while recovering from a concussion.

The initial treatment for concussion is relative physical and cognitive rest. Relative cognitive rest includes limiting "screen time" (TV, video games, iPads/computers, text messaging), listening or playing music, bright lights/sunlight. You may attend classes and do homework as long as symptoms are not increasing with these activities. If symptoms do increase with attendance in classes or with homework, modifications may need to be made with the teachers and administrators. Relative physical rest includes avoiding organized sporting events, physical education, recess, general play with friends/roommates before or after classes, and housework/yard work.

Return to Play/Physical Activity:

An individualized gradual return to play program is used to return athletes to your sport. Your athletic trainer and team physician will develop this program. If symptoms return at any step of the program you must rest until symptoms resolve then return to the prior step of the protocol. A patient must be off all medications without symptoms before considering a return to play.

Who to Contact/Notes:

All athletes and parents should contact their athletic trainer with questions and concerns.