

# 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 3<sup>rd</sup> 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 SCAT5 Standardized Cognitive and Balanced Assessment.
- The concussed student-athlete will be evaluated by a Team Physician regularly. Once athlete has symptomatically improved, 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 ([https://www.ncaa.org/sites/default/files/2017SSI\\_ConcussionFactSheet\\_StudentAthletes\\_20170721.pdf](https://www.ncaa.org/sites/default/files/2017SSI_ConcussionFactSheet_StudentAthletes_20170721.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 ([https://www.ncaa.org/sites/default/files/2017SSI\\_ConcussionFactSheet\\_Coaches\\_20170721.pdf](https://www.ncaa.org/sites/default/files/2017SSI_ConcussionFactSheet_Coaches_20170721.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 SCAT5. 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 deficit suggesting intracranial trauma
  - Repetitive vomiting (emesis)
  - Persistent diminished/worsening mental status or other neurological signs/symptoms
  - 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, SCAT5 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 symptomatically improved.
  - 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](http://www.ncaa.org/health-safety)
- Consensus Statement on Concussion in Sport. 3<sup>rd</sup> 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 4<sup>th</sup> 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)	*Visual Disturbances (Photophobia, blurry, Phono/photophobia vision, double vision)
*Confusion	*Post-traumatic amnesia (PTA)
*Disequilibrium	*Retrograde amnesia (RGA)
*Delayed verbal and motor responses	*Feeling “in a fog,” “zoned out”
*Inability to focus	*Vacant stare
*Headache	*Emotional lability
*Nausea/Vomiting	*Dizziness
*Excessive drowsiness	*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:  
University of Kentucky Athletic Training Staff

\_\_\_\_\_  
Date

## APPENDIX 3

### **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:**

<b>Mental</b>	<b>Physical</b>	<b>Emotional</b>	<b>Sleep</b>
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.





## What is a concussion?

A concussion is a type of traumatic brain injury. It follows a force to the head or body and leads to a change in brain function. It is not typically accompanied by loss of consciousness.

## How can I tell if an athlete has a concussion?

*You may notice the athlete ...*

- Appears dazed or stunned
- Forgets an instruction
- Is confused about an assignment or position
- Is unsure of the game, score or opponent
- Appears less coordinated
- Answers questions slowly
- Loses consciousness

*Note that no two concussions are the same. All possible concussions must be evaluated by an athletic trainer or team physician.*

*The athlete may tell you he or she is experiencing ...*

- A headache, head pressure or that he or she doesn't feel right following a blow to the head
- Nausea
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light or noise
- Feeling sluggish, hazy or foggy
- Confusion, concentration or memory problems

## What can I do to keep student-athletes safe?

	Preseason	In-Season	Time of Injury	Recovery
<b>What can I do?</b>	Create a culture in which concussion reporting is encouraged and promoted.	Know the signs and symptoms of concussions.	Remove athletes from play immediately if you think they have a concussion and refer them to the team physician or athletic trainer.	Follow the recovery and return-to-play protocol established by team physicians and athletic trainers.
<b>Why does it matter?</b>	Athletes who don't immediately seek care for a suspected concussion take longer to recover.	The more people who know what to look for in a concussed athlete, the more likely a concussion will be identified.	Early removal from play can mean a quicker recovery and help avoid serious consequences.	Team physicians and athletic trainers have the training to follow best practices related to the concussion recovery process.
<b>Tips and strategies</b>	Be present when your team physician or athletic trainer provides concussion education material to your team. Tell your team that this matters to you.	Check in with your team physician or athletic trainer if you want to learn more about concussion safety.	Provide positive reinforcement when an athlete reports a suspected concussion.	Tell athletes that decisions related to their return to play and health are entirely in the hands of the team physician and athletic trainer.

*You play a powerful role in setting the tone for concussion safety on your team. Let your team know that you take concussion seriously and reporting the symptoms of a suspected concussion is an important part of your team's values.*



### What happens if an athlete gets a concussion and keeps practicing or competing?

- Due to brain vulnerability after a concussion, an athlete may be more likely to suffer another concussion while symptomatic from the first one.
- In rare cases, repeat head trauma can result in brain swelling, permanent brain damage or even death.
- Continuing to play after a concussion increases the chance of sustaining other injuries too, not just concussion.
- Athletes with a concussion have reduced concentration and slowed reaction time. This means they won't be performing at their best.
- Athletes who delay reporting concussion may take longer to recover fully.

### What are the long-term effects of a concussion?

- We don't fully understand the long-term effects of a concussion, but ongoing studies raise concerns.
- Athletes who have had multiple concussions *may* have an increased risk of degenerative brain disease, and cognitive and emotional difficulties later in life.

### What do I need to know about repetitive head impacts?

- Repetitive head impacts mean that an individual has been exposed to repeated impact forces to the head. These forces may or may not meet the threshold of a concussion.
- Research is ongoing but emerging data suggest that repetitive head impact also may be harmful and place a student-athlete at an increased risk of neurological complications later in life.

### Did you know?

- Most contact or collision teams have at least one student-athlete diagnosed with a concussion every season.
- Your school has a concussion management plan, and team physicians and athletic trainers are expected to follow that plan during a student-athlete's recovery.
- NCAA rules require that team physicians and athletic trainers have the unchallengeable authority to make all medical management and return-to-play decisions for student-athletes.
- We're learning more about concussion every day. To find out more about the largest concussion study ever conducted, which is being led by the NCAA and U.S. Department of Defense, visit [ncaa.org/concussion](http://ncaa.org/concussion).



Coach's signature indicates receipt and acknowledgement of understanding.

Signature \_\_\_\_\_

Print Name \_\_\_\_\_

For more information, visit [ncaa.org/concussion](http://ncaa.org/concussion).

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Sport \_\_\_\_\_

Date \_\_\_\_\_







## What is a concussion?

A concussion is a type of traumatic brain injury. It follows a force to the head or body and leads to a change in brain function. It is not typically accompanied by loss of consciousness.

### How can I keep myself safe?

#### 1. Know the symptoms.

*You may experience ...*

- Headache or head pressure
- Nausea
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light or noise
- Feeling sluggish, hazy or foggy
- Confusion, concentration or memory problems

#### 2. Speak up.

- If you think you have a concussion, stop playing and talk to your coach, athletic trainer or team physician immediately.

#### 3. Take time to recover.

- Follow your team physician and athletic trainer's directions during concussion recovery. If left unmanaged, there may be serious consequences.
- Once you've recovered from a concussion, talk with your physician about the risks and benefits of continuing to participate in your sport.

### How can I be a good teammate?

#### 1. Know the symptoms.

*You may notice that a teammate ...*

- Appears dazed or stunned
- Forgets an instruction
- Is confused about an assignment or position
- Is unsure of the game, score or opponent
- Appears less coordinated
- Answers questions slowly
- Loses consciousness

#### 2. Encourage teammates to be safe.

- If you think one of your teammates has a concussion, tell your coach, athletic trainer or team physician immediately.
- Help create a culture of safety by encouraging your teammates to report any concussion symptoms.

#### 3. Support your injured teammates.

- If one of your teammates has a concussion, let him or her know you and the team support playing it safe and following medical advice during recovery.
- Being unable to practice or join team activities can be isolating. Make sure your teammates know they're not alone.

*No two concussions are the same. New symptoms can appear hours or days after the initial impact.*

*If you are unsure if you have a concussion, talk to your athletic trainer or team physician immediately.*



### What happens if I get a concussion and keep practicing or competing?

- Due to brain vulnerability after a concussion, an athlete may be more likely to suffer another concussion while symptomatic from the first one.
- In rare cases, repeat head trauma can result in brain swelling, permanent brain damage or even death.
- Continuing to play after a concussion increases the chance of sustaining other injuries too, not just concussion.
- Athletes with concussion have reduced concentration and slowed reaction time. This means that you won't be performing at your best.
- Athletes who delay reporting concussion take longer to recover fully.

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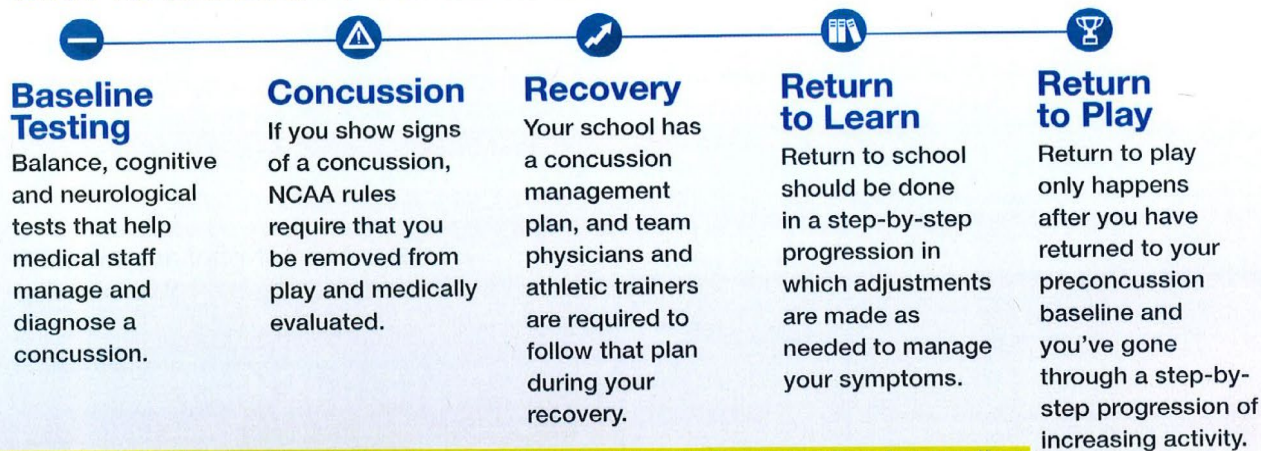
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- Research is ongoing but emerging data suggest that repetitive head impact also may be harmful and place a student-athlete at an increased risk of neurological complications later in life.

### Did you know?

- NCAA rules require that team physicians and athletic trainers manage your concussion and injury recovery independent of coaching staff, or other non-medical, influence.
- We're learning more about concussion every day. To find out more about the largest concussion study ever conducted, which is being led by the NCAA and U.S. Department of Defense, visit [ncaa.org/concussion](http://ncaa.org/concussion).

## CONCUSSION TIMELINE



**Student-Athlete's signature indicates receipt and acknowledgement of understanding.**

Signature \_\_\_\_\_

Print Name \_\_\_\_\_

For more information, visit [ncaa.org/concussion](http://ncaa.org/concussion).

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Sport \_\_\_\_\_

Date \_\_\_\_\_



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