

# ARKANSAS

## ATHLETICS

### CONCUSSION MANAGEMENT PLAN

The following policy and procedures addressing neurocognitive baseline testing, identification, evaluation, treatment, education, return-to-play and return-to-learn guidelines for concussion management have been developed in accordance with the NCAA and the University of Arkansas' commitment to providing quality healthcare to each of our student-athletes.

By employing these protocols, the University of Arkansas Athletics Department will meet the following objectives:

Equitable access to healthcare will be provided for all Razorback student-athletes. The University of Arkansas ensures that student-athletes have appropriate healthcare, including equitable access to athletic healthcare providers for each varsity sport.

All athletics healthcare providers will understand and follow emergency action plans to provide a safe environment for our student-athletes. The University of Arkansas maintains an annually updated emergency action plan for each athletic venue. All athletic healthcare providers will review the plan annually.

Appropriate medical personnel will oversee healthcare for student-athletes and will determine time lines for return-to-play and return-to-learn. The Sports Medicine team is clearly empowered to have the unchallengeable authority to determine management and return-to-play and return-to-learn of any ill or injured student-athlete.

Clear assignment of responsibilities will ensure proper execution of medical protocols. The Sports Medicine Team has clearly defined roles related to concussion management.

The Sports Medicine Team will practice within the standards of the 2016 Berlin Consensus Guidelines regarding concussion management and return to play.

Selected staff members will read, understand and follow required educational materials and protocols related to concussions and will actively participate in these protocols. All members of the coaching, strength and conditioning, and athletic training staffs will receive educational materials (e.g., the NCAA Concussion Fact Sheet) to assist in identifying the signs and symptoms of concussion. Team physicians, sport administrators and the director of athletics also will receive these materials and all will acknowledge in writing that they have read and understood the materials. Coaches will be given the concussion management plan, their role within the plan will be identified and they will be required to sign an acknowledgement of their receipt and understanding of concussion education and protocols.



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All student-athletes will read and understand required educational materials related to concussions and will actively participate in these protocols. Further, they will sign a statement in which they accept the responsibility for reporting their injuries and illnesses to the medical staff, including signs and symptoms of concussions. Student-athletes will be given take-home educational materials (e.g., the NCAA Concussion Fact Sheet) and will acknowledge in writing that they have read and understand the materials.

Baseline testing will be appropriately employed and documented as part of the required protocol for all student-athletes. All student-athletes are required to complete baseline testing prior to their first practice and the same assessment tools will be used post-injury at appropriate time intervals. These tests will include--but are not limited to--balance testing, reaction time testing, symptom evaluation via SWAY, and cognitive assessment via computerized neuropsychological screening (ImPACT), brain injury and concussion history via questionnaire on preparticipation physical. Team physicians will determine pre-participation clearance and/or the need for additional consultation or testing.

Appropriate care and professional medical judgement will be employed to provide optimal care to student-athletes who may have suffered concussions. Student-athletes will be removed from practice or competition when they show signs, symptoms or behaviors consistent with a concussion. The student-athletes also will be evaluated by a healthcare provider with experience in the evaluation and management of concussions. Student-athletes will be monitored for deterioration and given written instructions on management of concussions. Final authority on return-to-play and return-to-learn will reside with Dr. Ramon Ylanan.

Appropriate recovery time will be taken for each student-athlete diagnosed with a concussion. Student-athletes diagnosed with concussions will be withheld from competition, practice and classroom activities for the remainder of the day, at a minimum. Student athletes will be evaluated by a team physician and will follow a medically supervised process for return-to-learn and return-to-play. Once asymptomatic, at or above baseline on neurocognitive baseline tests, after completion of an exertional protocol and after returning-to-learn without reoccurrence of symptoms, student-athletes will be allowed to full return-to-play.

Appropriate written records must be maintained. The Sports Medicine Team will be responsible for documentation of the incident, evaluation, continued management and clearance of any and all student-athletes with concussions.

Student-athlete safety is paramount. As a result, emphasis will be placed on following current sport rules. Purposeful or flagrant head or neck contact in any sport will not be tolerated and current rules of play will be strictly enforced. The department will take a “safety first” approach to sports, including adherence to contact guidelines, gratuitous contact and maintaining educational initiatives as safe play and proper technique protocols are identified in response to future concussion research.



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### CONCUSSION MANAGEMENT TEAM

A multi-disciplinary team will be responsible for employing the protocols outlined in this document are assigned respective roles in mild traumatic brain injury/concussion management. All individuals who will serve these roles will participate in education and review sessions at least once per year.

**Sports Medicine Physician (Dr. Ramon Ylanan)** will have final clearance on all concussions. He will supervise stepwise progression and he will serve as the final authority on a student-athlete's return-to-learn and return-to-play.

**Sports Medicine Physicians (Dr. Wagner & Dr. Balle)** will also diagnose and treat mild traumatic brain injuries. They will communicate with Dr. Ylanan regarding final clearance.

**Team Orthopedic Physicians** may diagnose mild traumatic brain injuries and will defer to Dr. Ylanan for final clearance.

**Nurse Practitioner (Valerie Whitson)** will recognize mild traumatic brain injuries, will refer student-athletes to their respective team physicians if they show symptoms of concussion, and will defer to Dr. Ylanan for final clearance.

**Athletic Training Staff (Assigned by Team)** will recognize and treat mild traumatic brain injuries, will refer student-athletes to a team physician if they show symptoms of concussion, and will defer to Dr. Ylanan for final clearance.

**Neuropsychologist (Dr. Sarah Downing)** will consult as a specialist in IMPACT interpretation and concussion rehabilitation.

**Neurosurgeon (Dr. J.B. Blankenship & Dr. Quoc-Anh Thai)** will consult as a specialist in brain, spinal cord and peripheral nerves injuries will be involved with complicated mild traumatic brain injuries.

**Academic Counselor/Learning Specialist (Assigned by Team)** will help navigate return-to-learn activities with student-athletes and will coordinate compliance activities with campus disability services, ensuring ADA compliance.

**Director of Clinical and Sport Psychology (TBD)** will help navigate return-to-learn activities and cognitive management.

**Faculty Athletics Representative (Gerald Jordan)** will help navigate complex return-to-learn cases, as needed.



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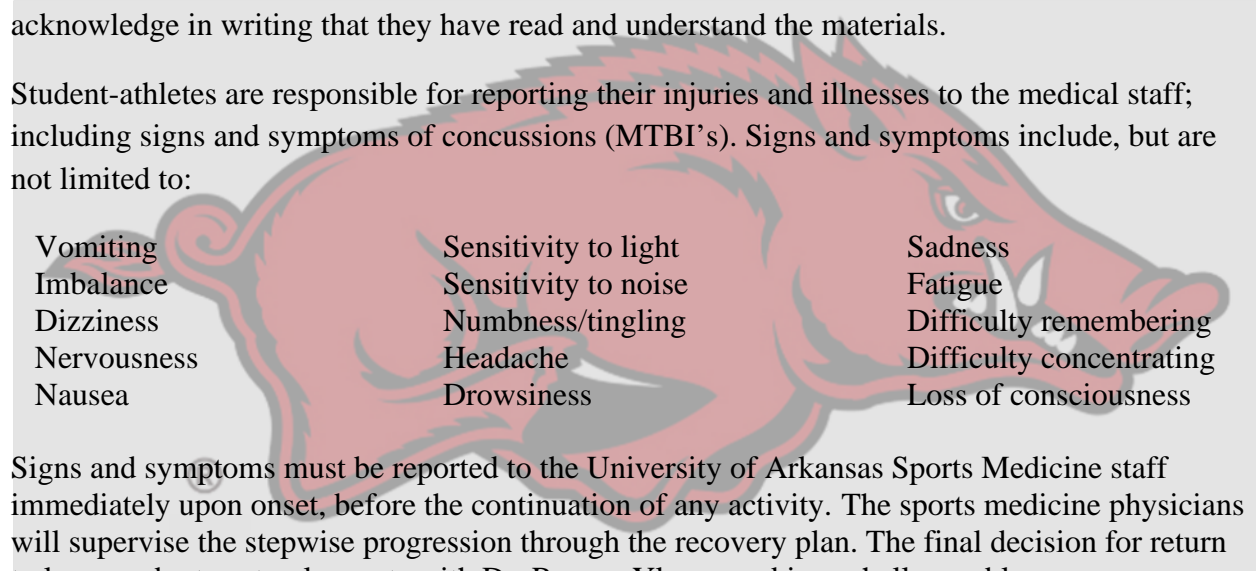
## ATHLETICS

### EDUCATION

Participation in sport may result in injury or illness, including concussions. A concussion or Mild Traumatic Brain Injury (MTBI) or *comotio cerebri* is defined as a complex pathophysiologic process affecting the brain's function. It is induced by traumatic biomechanical forces after impact to the head, face, neck or body that leads to a functional, not structural, disturbance which may or may not involve LOC (Loss of Consciousness).

All student-athletes will read and understand required educational materials related to concussions and will actively participate in these protocols. Further, they will sign a statement in which they accept the responsibility for reporting their injuries and illnesses to the medical staff, including signs and symptoms of concussions (Appendix A). Student-athletes will be given take-home educational materials (e.g., the NCAA Concussion Fact Sheet) and will acknowledge in writing that they have read and understand the materials.

Student-athletes are responsible for reporting their injuries and illnesses to the medical staff; including signs and symptoms of concussions (MTBI's). Signs and symptoms include, but are not limited to:



Vomiting	Sensitivity to light	Sadness
Imbalance	Sensitivity to noise	Fatigue
Dizziness	Numbness/tingling	Difficulty remembering
Nervousness	Headache	Difficulty concentrating
Nausea	Drowsiness	Loss of consciousness

Signs and symptoms must be reported to the University of Arkansas Sports Medicine staff immediately upon onset, before the continuation of any activity. The sports medicine physicians will supervise the stepwise progression through the recovery plan. The final decision for return to learn and return to play rests with Dr. Ramon Ylanan and is unchallengeable.

Selected staff members will read, understand and follow required educational materials and protocols related to concussions and will actively participate in these protocols. All members of the coaching, strength and conditioning, and athletic training staffs will receive educational materials (e.g., the NCAA Concussion Fact Sheet) to assist in identifying the signs and symptoms of concussion. Coaches will be given the concussion management plan, their role within the plan will be identified and they will be required to sign an acknowledgement of their receipt and understanding of concussion education and protocols (Appendix B). Team physicians (Appendix C), athletic trainers (Appendix D) sport administrators (Appendix F) and the director of athletics (Appendix E) also will receive these materials and all will acknowledge in writing that they have read and understood them.



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### PRE-PARTICIPATION ASSESSMENT

Baseline testing will be appropriately employed and documented as part of the required protocol for all student-athletes on an annual basis. All student-athletes are required to complete baseline testing prior to their first practice and the same assessment tools will be used post-injury at appropriate time intervals. These tests include--but are not limited to—recording concussion and/or brain injury history in preparticipation physical, balance testing, reaction time testing, symptom evaluation via SWAY and cognitive assessment using computerized neuropsychological screening (Impact). Team physicians will determine pre-participation clearance and/or need for additional consultation or testing. If a student-athlete presents a complicated or multiple-concussion history, additional baseline testing may be conducted mid-year or at another appropriate interval as determined by the team physician.

Utilization of SWAY tool will evaluate potential signs of concussion, including symptom evaluation, cognitive assessment, reaction time, and balance evaluation

Further, utilization of IMPACT will evaluate potential brain injury and concussion history, symptom evaluation and cognitive assessment.

### RECOGNITION AND DIAGNOSIS OF CONCUSSION

To assure appropriate recognition and diagnosis of concussion, medical personnel with training in the diagnosis, treatment, and initial management of acute concussions will be “present” at all NCAA varsity competitions in the following contact / collision sports available at the University of Arkansas: Men’s and Women’s Basketball, Football, Pole Vault and Women’s Soccer. Athletic trainers and team physicians will be on campus or arena of competition.

Further, medical personnel with training in the diagnosis, treatment and initial management of acute concussion will be “available” at all NCAA varsity practices in the following contact / collision sports available at the University of Arkansas: Men’s and Women’s Basketball, Football, Pole Vault and Women’s Soccer. Athletic trainers will be on-site during the time of practice or via telephone, messaging, email or other immediate communication means. The case can be discussed through such communication, and immediate arrangements can be made for the athlete to be evaluated.

If a student-athlete has signs, symptoms or behaviors consistent with a concussion, the student-athlete will be removed from competition. The athletic trainer or team physician that has concussion evaluation experience will perform initial evaluation including a cognitive assessment. Initial assessments will also include assessment of cervical spine trauma, skull fracture and/or intracranial bleeding. Utilization of the SWAY tool will evaluate potential signs of concussion using symptom evaluation, reaction time and balance evaluation. Please refer to (Appendix G) for specific guidelines for head injury evaluation. Once a concussion is suspected or diagnosed, the student-athlete will be further evaluated by an athletic trainer or a sports medicine physician who are experienced and trained in the management of concussions.

In consultation with Dr. Ylanan, the athletic training staff and the sports medicine physicians will work together to order additional testing (e.g. imaging, neuropsychiatric testing and referrals) as needed and outline a plan for return-to-learn and return-to-play. The sports medicine physicians will supervise stepwise progression to recovery. The final decision for return-to-learn and return-to-play rests with Dr.



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Ylanan and is unchallengeable. In certain cases, such as extensive travel, Dr. Ramon Ylanan will be available by phone to assist the athletic training staff with decisions regarding the need for urgent evaluations.

If a student-athlete is diagnosed with a concussion, the student-athlete will be removed from participation and **shall not return** to activity on that day. The University of Arkansas will have a physician with experience in the management of concussion either on-site or on-call for all home athletic events. At all times, a physician with experience in the management of concussions will be available for phone consultation.

Student-athletes diagnosed with a concussion will be given written instructions on management of concussions and monitored for deterioration overnight. This is optimally done by roommates, significant others, family, guardians or anyone expected to be staying with student-athlete overnight.

## POST-CONCUSSION MANAGEMENT

The Emergency Action Plan will be activated if the following are present during the initial evaluation of a student-athlete with a suspected head or neck injury: cervical spine injury/trauma, skull fracture, Glasgow Coma Scale < 13, prolonged LOC > 1 minute, focal neurological deficit suggesting intracranial trauma, repetitive emesis, persistently diminished/worsening mental status or other neurological signs/symptoms.

Evaluation by the athletic trainer and team physician will determine whether or not the student-athlete is safe to go home or should be taken to the hospital. Serial evaluation and monitoring for deterioration following injury will be conducted. Student-athletes diagnosed with a concussion will be given written instructions on management of concussions and monitored for deterioration overnight. Optimally, this will be done by roommates, significant others, family, guardians or anyone expected to be staying with student-athlete overnight. Student-athletes will receive the document outlined in (Appendix H) before they are released from the site of the assessment.

Student-athletes with prolonged symptoms may require additional diagnosis and best management options. These student-athletes may need additional referral for vestibular therapy, post-concussion syndrome, mood disorders, sleep deprivation, migraines or nutritional disorders. In such instances, team physicians will conduct follow-up evaluations to consider additional treatment and management options.



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### RETURN-TO-PLAY FOLLOWING A CONCUSSION

The timetable for a return-to-play and return-to-learn will be individualized and dependent on numerous factors. For a student-athlete to return-to-play, he or she must at a minimum, meet the following progressive standards:

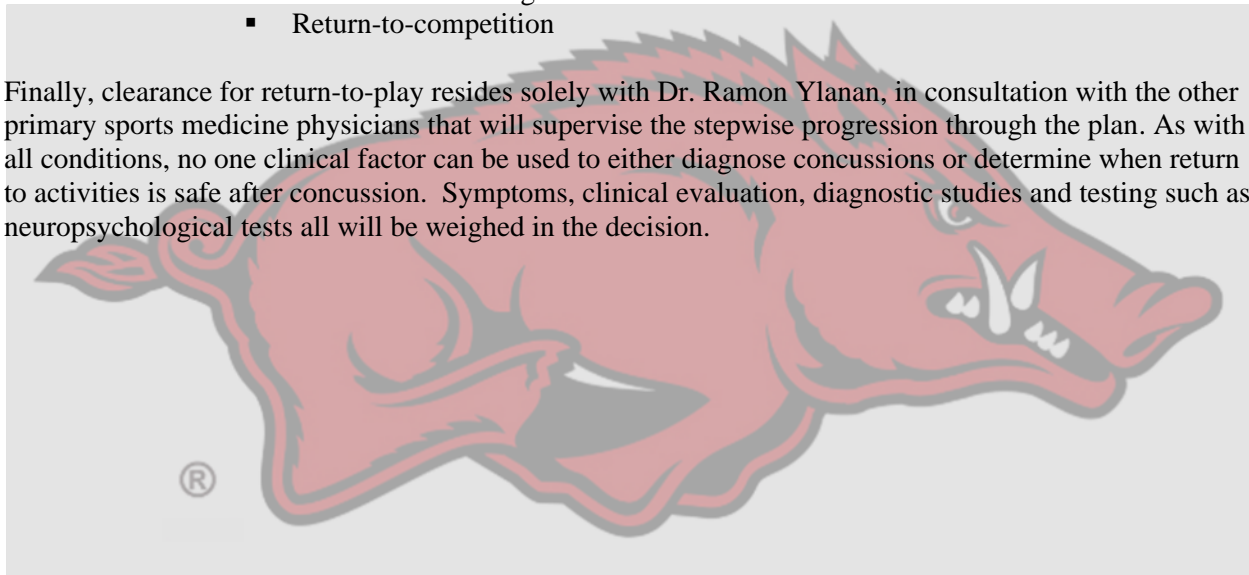
The student-athlete must have full resolution of symptoms.

The student-athlete must be at or above his or her previous baseline testing.

The student-athlete has undergone an appropriate step-by-step return to activity plan and has tolerated a graded exertional protocol without symptoms returning, including the following:

- Light aerobic exercise without resistance training
- Sport-specific exercise and activity without head impact
- Non-contact practice (Contact sports only), progressive resistance training
- Unrestricted training
- Return-to-competition

Finally, clearance for return-to-play resides solely with Dr. Ramon Ylanan, in consultation with the other primary sports medicine physicians that will supervise the stepwise progression through the plan. As with all conditions, no one clinical factor can be used to either diagnose concussions or determine when return to activities is safe after concussion. Symptoms, clinical evaluation, diagnostic studies and testing such as neuropsychological tests all will be weighed in the decision.



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### RETURN-TO-LEARN FOLLOWING A CONCUSSION

Concussion or Mild Traumatic Brain Injury (MTBI) or *comotio cerebri* is defined as a complex pathophysiologic process affecting the brain's function. It is induced by traumatic biomechanical forces after impact to the head, face, neck or body that leads to a functional, not structural, disturbance which may or may not involve LOC (Loss of Consciousness). 80-90% of concussions resolve spontaneously within 7-10 days, follow a sequential course towards resolution, however, some concussions take a protracted course towards resolution.

Student-athletes are responsible for reporting their injuries and illnesses to the medical staff; including signs and symptoms of concussions (MTBI's). Signs and symptoms include, but are not limited to:

Vomiting	Sensitivity to light	Sadness
Imbalance	Sensitivity to noise	Fatigue
Dizziness	Numbness/tingling	Difficulty remembering
Nervousness	Headache	Difficulty concentrating
Nausea	Drowsiness	Loss of consciousness

After suffering a concussion, there is a brain energy crisis. Due to this crisis, cognitive rest is necessary to enhance the recovery process. A student-athlete's academic schedule may need some modification in the first one to two weeks following a concussion. In such cases, the athletic trainer and academic counselor often will be able to handle academic modifications through recovery. An individualized plan will be documented that may include remaining at home until light cognitive activity can be tolerated, along with gradual return to the classroom. More complex cases of prolonged return-to-learn will be managed by a multi-disciplinary concussion management team. If cases are prolonged, campus resources will be identified by the learning specialist and accommodations will be made in compliance with ADA through the Office of Disabilities Services as needed.

The academic services staff will communicate with faculty to make them aware of injuries and the related symptoms that student-athletes may experience. Student-athletes will refrain from all classroom activity the same day as a concussion. Possible modification to classroom activity to allow cognitive rest, providing adequate time for recovery, while allowing the student-athlete to participate in some classroom activity, also may be necessary. When the student-athlete resumes class, faculty will be aware that their academic performance may suffer during the recovery process and that student-athletes should progress to the classroom and studying activities as tolerated. Please refer to (Appendix I) for a sample return-to-learn letter.

Final authority to return-to-learn will reside with Dr. Ramon Ylanan, who will continue re-evaluation of the student-athlete until symptoms resolve. If symptoms are persistent after a 14-day period, further modifications will be recommended by the multidisciplinary team.



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### STEPS TO REDUCE EXPOSURE TO HEAD INJURIES--FOOTBALL

The University of Arkansas Department of Athletics will continue to emphasize ways to minimize head trauma exposure and will expand its efforts as additional research is conducted to identify best practices for prevention and treatment of concussions. Following are examples of current efforts:

#### Adherence to the Inter-Association Consensus: Year-Round Practice Contact Guideline

- **Preseason:** Two-a-day practices should not occur. A second session of activity can include walk-throughs or meetings. In any given seven days following the five-day acclimation period:
  - Up to three days of practice may be live contact (tackling or thud).
  - There must be three non-contact/minimal contact practices in a given week.
  - A non-contact/minimal contact practice also follow a scrimmage.
  - One day must be no football practice.
- **Inseason:** Inseason is defined as the period between six days prior to the first regular-season game and the final regular-season game or conference championship game (for participating institutions).
  - In a given seven days following the five-day acclimation period:
    - Three days of practice should be non-contact/minimal contact.
    - One day of live contact/tackling should be allowed.
    - One day of live contact/thud should be allowed.
- **Postseason:** NCAA Championships (Football Championship Subdivision), bowl (Football Bowl Subdivision)
  - If there is a two-week or less period of time between the final regular-season game or conference championship game (for participating institutions) and the next bowl or postseason game, then inseason practice recommendations should remain in place.
  - If there is greater than two weeks between the final regular-season game or conference championship game (for participating institutions) and the next bowl or postseason game, then:
    - Up to three days may be live-contact (two of which should be live contact/thud).
    - There must be three non-contact/minimal contact practices in a given week.
    - The day preceding and following live contact/tackling should be non-contact/minimal contact or no football practice.
    - One day must be no football practice.
- **Spring practice:** Of the 15 allowable sessions that may occur during the spring practice season, eight practices may involve live contact (tackling or thud); three of these live contact practices may include greater than 50 percent live contact (scrimmages). Live contact practices should be limited to two in a given week and should not occur on consecutive days. The day following live scrimmage should be non-contact / minimal contact.



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### Definitions

**Live contact/thud:** Any practice in which players are not taken to the ground, “thud” sessions or drills that involve “wrapping up” irrespective of uniform worn.

Drill is run at competitive speed through the moment of contact with no predetermined winner. Contact remains above the waist, players stay on their feet and a quick whistle ends the drill. This definition provides a foundation for differentiating the increased concussion risk in live contact/tackling versus live contact practice that does not include tackling to the ground.

**Live contact/tackling:** Any practice that involves tackling to the ground.

Drill is run in game like conditions and is the only time that players are taken to the ground. This definition provides a foundation for allowances of live contact/tackling practice during the season, and differentiates live contact/tackling (which carries a higher concussion risk) from other types of contact practice.

Live contact practices are to be conducted in a manner consistent with existing rules that prohibit targeting to the head or neck area with the helmet, forearm, elbow, or shoulder, or the initiation of contact with the helmet.

Full pad practice, shell practice and helmet only practice all carry a risk of concussion. No helmet and no shoulder pad practice is the only evidence-based non-contact practice with negligible concussion risk.

Education of football student-athletes on proper tackling techniques and practicing good sportsmanship. (Appendix J).

Continued emphasis of student-athlete safety as a priority, including an annual meeting of the sports medicine staff and the Athletic Director, during which the unchallengeable authority of the team physicians will be clearly articulated. During this meeting, the Athletic Director and staff will discuss the culture and environment of surrounding student-athlete care and support for their well-being.

Provide educational materials to student-athletes, coaches, athletic trainers and athletic administration to certify that they have carefully read, fully understand, and aware of the signs/symptoms of concussions.

## APPENDIX A



UNIVERSITY OF ARKANSAS DEPARTMENT OF INTERCOLLEGIATE ATHLETICS

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## ATHLETICS

### CONCUSSION MANAGEMENT PLAN

Name \_\_\_\_\_ Date \_\_\_\_\_

### PARTICIPATION IN SPORT MAY RESULT IN INJURY OR ILLNESS, INCLUDING CONCUSSIONS

A concussion or Mild Traumatic Brain Injury (MTBI) or *comotio cerebri* is defined as a complex pathophysiologic process affecting the brain's function. It is induced by traumatic biomechanical forces after impact to the head, face, neck or body that leads to a functional, not structural, disturbance which may or may not involve LOC (Loss of Consciousness).

Student-athletes are responsible for reporting their injuries and illnesses to the medical staff; including signs and symptoms of concussions (MTBI's). Signs and symptoms include, but are not limited to:

- |             |                      |                          |
|-------------|----------------------|--------------------------|
| Vomiting    | Sensitivity to light | Sadness                  |
| Imbalance   | Sensitivity to noise | Fatigue                  |
| Dizziness   | Numbness/tingling    | Difficulty remembering   |
| Nervousness | Headache             | Difficulty concentrating |
| Nausea      | Drowsiness           | Loss of consciousness    |

Signs and symptoms must be reported to the University of Arkansas Sports Medicine staff immediately upon onset, before the continuation of any activity. Return to any activity will be determined by the University of Arkansas Sports Medicine staff after proper evaluation.

This is to certify that I have carefully read, fully understand, and that I am aware of the signs/symptoms of concussions. I have received education on the signs/symptoms associated with concussions. I acknowledge that all signs and symptoms of concussions must be reported to the University of Arkansas Sports Medicine staff immediately upon onset.

\_\_\_\_\_  
Student-Athlete's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent or Guardian's Signature

\_\_\_\_\_  
Date

### APPENDIX B



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## ATHLETICS

### CONCUSSION MANAGEMENT PLAN

Name \_\_\_\_\_ Date \_\_\_\_\_

#### **PARTICIPATION IN SPORT MAY RESULT IN INJURY OR ILLNESS, INCLUDING CONCUSSIONS**

A concussion or Mild Traumatic Brain Injury (MTBI) or *comotio cerebri* is defined as a complex pathophysiologic process affecting the brain's function. It is induced by traumatic biomechanical forces after impact to the head, face, neck or body that leads to a functional, not structural, disturbance which may or may not involve LOC (Loss of Consciousness).

Student-athletes are responsible for reporting their injuries and illnesses to the medical staff; including signs and symptoms of concussions (MTBI's). Signs and symptoms include, but are not limited to:

- |             |                      |                          |
|-------------|----------------------|--------------------------|
| Vomiting    | Sensitivity to light | Sadness                  |
| Imbalance   | Sensitivity to noise | Fatigue                  |
| Dizziness   | Numbness/tingling    | Difficulty remembering   |
| Nervousness | Headache             | Difficulty concentrating |
| Nausea      | Drowsiness           | Loss of consciousness    |

Signs and symptoms must be reported to the University of Arkansas Sports Medicine staff immediately upon onset, before the continuation of any activity. Return to any activity will be determined by the University of Arkansas Sports Medicine staff after proper evaluation.

This is to certify that I have carefully read, fully understand, and that I am aware of the signs/symptoms of concussions. I have received the NCAA concussion fact sheet education material on the signs/symptoms associated with concussions. I acknowledge that all signs and symptoms of concussions must be reported to the University of Arkansas Sports Medicine staff immediately upon onset.

\_\_\_\_\_  
Coach's Signature

\_\_\_\_\_  
Date

#### APPENDIX C



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### CONCUSSION MANAGEMENT PLAN

Name \_\_\_\_\_ Date \_\_\_\_\_

#### **PARTICIPATION IN SPORT MAY RESULT IN INJURY OR ILLNESS, INCLUDING CONCUSSIONS**

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Student-athletes are responsible for reporting their injuries and illnesses to the medical staff; including signs and symptoms of concussions (MTBI's). Signs and symptoms include, but are not limited to:

Vomiting	Sensitivity to light	Sadness
Imbalance	Sensitivity to noise	Fatigue
Dizziness	Numbness/tingling	Difficulty remembering
Nervousness	Headache	Difficulty concentrating
Nausea	Drowsiness	Loss of consciousness

Signs and symptoms must be reported to the University of Arkansas Sports Medicine staff immediately upon onset, before the continuation of any activity. Return to any activity will be determined by the University of Arkansas Sports Medicine staff after proper evaluation.

This is to certify that I have carefully read, fully understand, and that I am aware of the signs/symptoms of concussions. I have received the NCAA concussion fact sheet education material on the signs/symptoms associated with concussions. I acknowledge that all signs and symptoms of concussions must be reported to the University of Arkansas Sports Medicine staff immediately upon onset.

\_\_\_\_\_  
Team Physician's Signature

\_\_\_\_\_  
Date

#### APPENDIX D



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### CONCUSSION MANAGEMENT PLAN

Name \_\_\_\_\_ Date \_\_\_\_\_

#### **PARTICIPATION IN SPORT MAY RESULT IN INJURY OR ILLNESS, INCLUDING CONCUSSIONS**

A concussion or Mild Traumatic Brain Injury (MTBI) or *comotio cerebri* is defined as a complex pathophysiologic process affecting the brain's function. It is induced by traumatic biomechanical forces after impact to the head, face, neck or body that leads to a functional, not structural, disturbance which may or may not involve LOC (Loss of Consciousness).

Student-athletes are responsible for reporting their injuries and illnesses to the medical staff; including signs and symptoms of concussions (MTBI's). Signs and symptoms include, but are not limited to:

Vomiting	Sensitivity to light	Sadness
Imbalance	Sensitivity to noise	Fatigue
Dizziness	Numbness/tingling	Difficulty remembering
Nervousness	Headache	Difficulty concentrating
Nausea	Drowsiness	Loss of consciousness

Signs and symptoms must be reported to the University of Arkansas Sports Medicine staff immediately upon onset, before the continuation of any activity. Return to any activity will be determined by the University of Arkansas Sports Medicine staff after proper evaluation.

This is to certify that I have carefully read, fully understand, and that I am aware of the signs/symptoms of concussions. I have received the NCAA concussion fact sheet education material on the signs/symptoms associated with concussions. I acknowledge that all signs and symptoms of concussions must be reported to the University of Arkansas Sports Medicine staff immediately upon onset.

\_\_\_\_\_  
ATC'S Signature

\_\_\_\_\_  
Date

#### APPENDIX E



UNIVERSITY OF ARKANSAS DEPARTMENT OF INTERCOLLEGIATE ATHLETICS

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## ATHLETICS

### CONCUSSION MANAGEMENT PLAN

Name \_\_\_\_\_ Date \_\_\_\_\_

#### **PARTICIPATION IN SPORT MAY RESULT IN INJURY OR ILLNESS, INCLUDING CONCUSSIONS**

A concussion or Mild Traumatic Brain Injury (MTBI) or *comotio cerebri* is defined as a complex pathophysiologic process affecting the brain's function. It is induced by traumatic biomechanical forces after impact to the head, face, neck or body that leads to a functional, not structural, disturbance which may or may not involve LOC (Loss of Consciousness).

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\_\_\_\_\_  
Athletics Health Care Administrator

\_\_\_\_\_  
Date

#### **APPENDIX F**



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## ATHLETICS

### CONCUSSION MANAGEMENT PLAN

Name \_\_\_\_\_ Date \_\_\_\_\_

#### **PARTICIPATION IN SPORT MAY RESULT IN INJURY OR ILLNESS, INCLUDING CONCUSSIONS**

A concussion or Mild Traumatic Brain Injury (MTBI) or *comotio cerebri* is defined as a complex pathophysiologic process affecting the brain's function. It is induced by traumatic biomechanical forces after impact to the head, face, neck or body that leads to a functional, not structural, disturbance which may or may not involve LOC (Loss of Consciousness).

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Dizziness	Numbness/tingling	Difficulty remembering
Nervousness	Headache	Difficulty concentrating
Nausea	Drowsiness	Loss of consciousness

Signs and symptoms must be reported to the University of Arkansas Sports Medicine staff immediately upon onset, before the continuation of any activity. Return to any activity will be determined by the University of Arkansas Sports Medicine staff after proper evaluation.

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\_\_\_\_\_  
Administrator Signature

\_\_\_\_\_  
Date

#### APPENDIX G



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### HEAD INJURY EVALUATION GUIDELINES

If a suspected head injury occurs, the student-athlete will be removed from competition and evaluated by a healthcare provider.

The initial evaluation should rule out cervical spine injury/trauma, skull fracture, prolonged LOC > 1 minute, intercranial trauma, neurological deficit, repetitive emesis, persistently diminished/worsening mental status and/or other neurological signs/symptoms. If a student-athlete has a suspected concussion, the clinical evaluation will be performed by an athletic trainer or sports medicine physician with experience in the management of concussions and the SWAY app evaluation will also be performed.

If a student-athlete is diagnosed with a concussion, the student-athlete will be removed from participation and **shall not return** to activity on that day.

The University of Arkansas will have a physician with experience in the management of concussion either on-site or on-call for all home athletic events. At all times, a physician with experience in the management of concussions will be available for phone consultation.

Student-athletes diagnosed with a concussion will be given written instructions on management of concussions and will be monitored for deterioration overnight. Optimally, this will be done by roommates, significant others, family, guardians or anyone staying overnight with the student-athlete.

Once a concussion is suspected or diagnosed, the student-athlete will be evaluated by Dr. Ramon Ylanan who is experienced and trained in the management of concussions. Dr. Ylanan, the athletic training staff and the other sports medicine physicians will work together to order additional testing (imaging, neuropsychiatric testing and referrals) as needed and outline a plan for return-to-learn and -play. The final decision for return-to-learn and -play rests with Dr. Ramon Ylanan and is unchallengeable. In certain cases, such as extensive travel, Dr. Ramon Ylanan will be available by phone to assist the athletic training staff with decisions regarding the need for urgent evaluations.

The timetable for return-to-play and return-to-learn will be individualized and dependent on numerous factors. For a student-athlete to return to play, the following minimum standards must be met:

- The student-athlete must have full resolution of symptoms.
- The student-athlete must be at or above their previous baseline testing.
- The student-athlete has undergone an appropriate step-by-step return-to-activity plan and has tolerated a graded exertional protocol without symptoms returning.
- Clearance for return-to-play resides solely with the team physician.

As with all conditions, no one clinical factor can be used to either diagnose concussions or determine when return to activities is safe after concussion. Symptoms, clinical evaluation, diagnostic studies and testing such as neuropsychological tests all must be weighed in the decision. Clinical judgment will make the final determination.

Those student-athletes with prolonged symptoms may require additional diagnosis and best management options. These student-athletes may need additional referral for vestibular therapy, learning disorders, mental health disorders, sleep deprivation and nutritional disorders.



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### APPENDIX H

#### CONCUSSION INFORMATION FOR THE UNIVERSITY OF ARKANSAS STUDENT ATHLETE

##### What is a concussion?

A concussion is an injury to the brain caused by a blow to your head, neck, face or body which transmits force to the brain. This injury causes the brain not to function normally for a period of time. Concussions may be referred to as mild traumatic brain injuries and get better with time. However, occasionally there can be a more significant problem, and it is important that the symptoms from a concussion be monitored. When you suffer this injury, you may have problems with concentration and memory, notice an inability to focus, feel fatigued, have a headache or feel nauseated. Bright lights and loud noises may bother you. You may feel irritable or have other symptoms.

##### What should I watch for?

After evaluation by your athletic trainer and team physician, it may be determined you are safe to go home. Otherwise, you may be taken to the hospital. If you are sent home, you should not be left alone. A responsible adult should accompany you. Symptoms from your concussion may persist when you are sent home but should not worsen, nor should new symptoms develop. You and your chaperone should watch for such things as:

1. Increasing headache
2. Increasing nausea or vomiting
3. Increasing confusion
4. Unusual sleepiness or difficulty being awakened
5. Trouble using your arms or legs
6. Garbled speech
7. Convulsions or seizures

If you notice any of these problems or have any other problem that appears worse as compared to how you felt at the time you left the stadium or practice, immediately call the athletic trainer or physician. In an emergency, call 911 or have someone transport you to the hospital immediately.

##### Is it okay to go to sleep?

Concussions, many times make players feel drowsy or tired. As long as you are not getting worse, it is all right for you to sleep. We recommend a responsible adult be at home with you in case any problems arise.

##### May I take something for pain?

Do not take any medication unless your athletic trainer or team physician has instructed you to do so. Normally, we do not advise anything stronger than Tylenol. Avoid the use of Aspirin, Motrin, Aleve, Ibuprofen or any other anti-inflammatory medication that you may have been taking. We also ask that you not consume alcohol and avoid caffeine and any other stimulants. If you are taking any supplements, we highly suggest that you discontinue the use of them as well. The athletic trainer and team physician will determine when you can restart medications and supplements.

##### May I eat after the game?

It is fine to eat if you are hungry. Remember, some players do have a sense of nausea and fatigue, and often find that their appetite is suppressed immediately after a concussion. Do not force yourself to eat.

##### Do I need a CT scan or MRI examination?

If the team physicians have determined that you are able to go home after the game, these types of diagnostic tests are not necessary. If you are sent to the hospital with a more serious injury, a CT scan or MRI examination is likely. If your symptoms linger for several days after a concussion, CT scan or MRI examination may be considered by your athletic trainer or team physician.

##### How long will I be observed?

You are to report to the athletic training room the morning after your concussion. You will be assessed by the athletic trainer and/or team physicians. You will take a neurocognitive test and your symptoms will be monitored. Return-to-play decisions vary by individuals, and will be based on physical exam and a return to baseline on the neurocognitive test.

Athletic Trainer: \_\_\_\_\_ Contact Number: \_\_\_\_\_

\_\_\_\_\_

Team Physician: \_\_\_\_\_ Contact Number: \_\_\_\_\_

\_\_\_\_\_



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You are to report to the athletic training room on: Day:

Time: \_\_\_\_\_

### APPENDIX I

## RETURN-TO-LEARN FOLLOWING A CONCUSSION

Concussion or Mild Traumatic Brain Injury (MTBI) or *comotio cerebri* is defined as a complex pathophysiologic process affecting the brain's function. It is induced by traumatic biomechanical forces after impact to the head, face, neck or body that leads to a functional, not structural, disturbance which may or may not involve LOC (Loss of Consciousness). 80-90% of concussions resolve spontaneously within 7-10 days, follow a sequential course towards resolution, however, some concussions take a protracted course towards resolution.

Student-athletes are responsible for reporting their injuries and illnesses to the medical staff; including signs and symptoms of concussions (MTBI's). Signs and symptoms include, but are not limited to:

Vomiting	Sensitivity to light	Sadness
Imbalance	Sensitivity to noise	Fatigue
Dizziness	Numbness/tingling	Difficulty remembering
Nervousness	Headache	Difficulty concentrating
Nausea	Drowsiness	Loss of consciousness

After suffering a concussion, there is a brain energy crisis. Due to this crisis, cognitive rest is necessary to enhance the recovery process. A student-athlete's academic schedule may take some modification in the first one to two weeks following a concussion. Please work with the student-athlete's Athletic Trainer, Academic Counselor and Learning Specialist when navigating return-to-learn activities. A multidisciplinary team will navigate more complex cases as of prolonged return-to-learn. If cases are prolonged, campus resources will be identified by the learning specialist and accommodations will be made in compliance with ADA through the Office of Disabilities Services as needed.

The Sports Medicine staff and Academic staff wants to make you aware of this injury and the related symptoms that the student-athlete may experience. \_\_\_\_\_ sustained a concussion on \_\_\_\_/\_\_\_\_/\_\_\_\_. Student-athletes should refrain from all classroom activity the same day as a concussion. Possible modification to classroom activity to allow cognitive rest, providing adequate time for recovery, while allowing the student-athlete to participate in some classroom activity may also be necessary. When the student-athlete resumes class, please be aware that their academic performance may suffer during the recovery process. The student-athlete should progress to the classroom and studying activities as tolerated. Final authority to return to learn will reside with Dr. Ramon Ylanan, Sports Medicine Physician, who will continue re-evaluation of the student-athlete until symptoms resolve.

Any consideration you may provide academically during this time would be greatly appreciated. If you have any questions or concerns, please do not hesitate to contact the Academic staff or Sports Medicine staff. Thank you for your time and consideration during this process.

Dave England, ATC  
Director of Sports Medicine  
479-575-4018



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[dengland@uark.edu](mailto:dengland@uark.edu)

### APPENDIX J

## HELMET POLICY/RELEASE

Football Only

Name \_\_\_\_\_ Date \_\_\_\_\_

### WARNING

## NO HELMET CAN PREVENT SERIOUS HEAD OR NECK INJURIES A PLAYER MIGHT RECEIVE WHILE PARTICIPATING IN FOOTBALL

Do not use your helmet to butt, ram, or spear an opposing player. This is in violation of the football rules and such use can result in severe head or neck injuries, paralysis or death to you and possible injury to your opponent.

Contact in football may result in CONCUSSION-BRAIN INJURY which no helmet can prevent. Symptoms include: loss of consciousness or memory, dizziness, headache, nausea or confusion. If you have symptoms, immediately stop playing and report them to your coach, athletic trainer or parents. Do not return to a game or practice until all symptoms are gone and you have received MEDICAL CLEARANCE. Ignoring this warning may lead to another and more serious or fatal brain injury.

This is to certify that I have carefully read and that I fully understand the warning labels(s) attached inside and/or outside the football helmet issued to me by the University of Arkansas Athletic Department.

\_\_\_\_\_  
Student-Athlete's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent or Guardian's Signature  
(Parent signature is required if student-athlete is under 18 years of age)

\_\_\_\_\_  
Date



UNIVERSITY OF ARKANSAS DEPARTMENT OF INTERCOLLEGIATE ATHLETICS

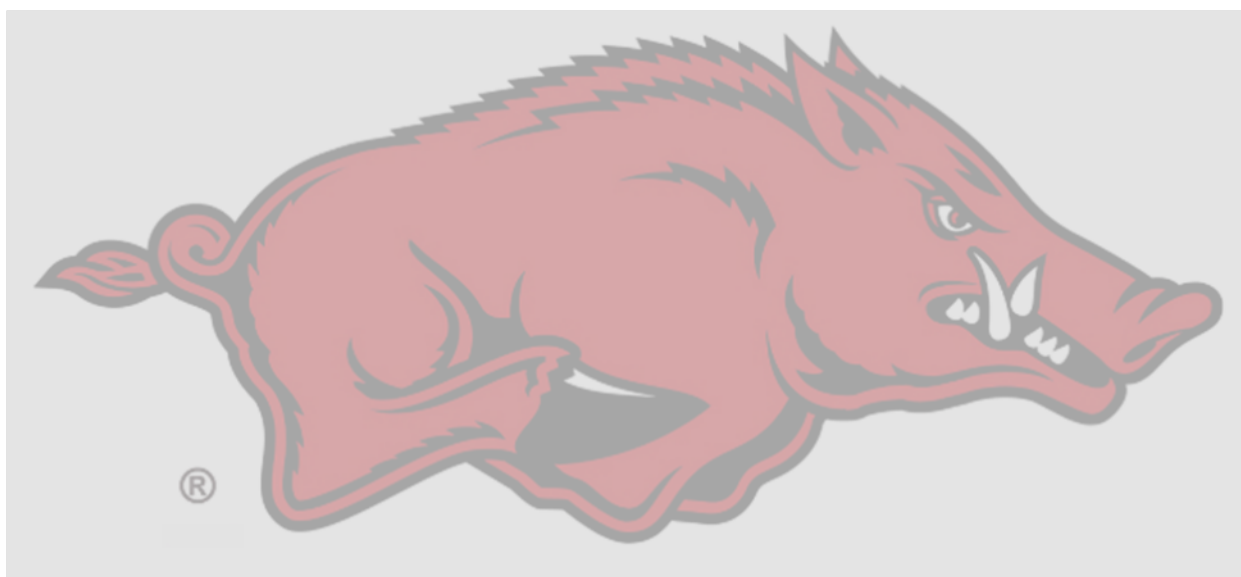
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