

## GUIDELINES FOR DIAGNOSIS AND MANAGEMENT OF SPORT-RELATED CONCUSSION

### **PURPOSE:**

Provide guidelines for diagnosis and management of sport-related concussion.

### **BACKGROUND:**

Concussion is:

- a change in brain function
- following a force to the head, which
- may be accompanied by temporary loss of consciousness, but is
- identified in awake individuals, with
- measures of neurological and cognitive dysfunction.

### **POLICY:**

Pursuant to the NCAA Concussion Policy and Legislation mandate, UT Athletics implements the following:

- 1 . An annual process that ensures student-athletes, coaches, team physicians, athletic trainers, and directors of athletics will be educated about the signs and symptoms of concussion.
- 2 . A process that ensures a student-athlete who exhibits the signs, symptoms, or behaviors consistent with concussion shall be removed from athletics activities and evaluated by a medical staff member with experience in the evaluation and management of concussion. Initial evaluation includes symptom assessment, physical and neurological examination, cognitive assessment, balance examination, as well as clinical assessment for cervical spine trauma, skull fracture, and intracranial bleeding.
3. A policy that precludes a student-athlete who is suspected concussion from returning to athletic activities for at least the remainder of that calendar day.
4. A policy that requires medical clearance for a student-athlete diagnosed with a concussion to return to athletics activities as determined by a physician or physician's designee.
5. A policy that adheres to the Inter-Association Consensus: Year-Round Football Practice Contact Guidelines, emphasizing education regarding safe play and proper technique and reducing gratuitous contact during practice.
6. A policy in which our athletics healthcare providers are empowered to have the unchallengeable authority to determine management and return-to-play of any ill or injured student-athlete, as he or she deems appropriate.

**CONCUSSION MANAGEMENT PLAN:**

The following concussion management plan will be utilized for UT student-athletes at risk for or suspected of sustaining a concussion:

1. Student-athletes, coaches, and other pertinent team personnel, including team physicians, athletic trainers, and directors of athletics will be provided the "Concussion Education Fact Sheet" (see 15.13.7b) and educated on concussions annually. Student-athletes, coaches, team physicians, athletic trainers, and directors of athletics will be required to provide signed acknowledgment and understanding of the concussion education materials. Further, student-athletes will be required annually to sign a statement in which they acknowledge their duty to report their injuries and illnesses to the sports medicine staff, including signs and symptoms of concussions.
2. A one-time, pre-participation baseline assessment will be conducted for each student-athlete in all sports. This assessment consists of 1) a brain injury/concussion history, 2) symptom evaluation, 3) cognitive assessment, and 4) balance assessment. The subjective history will be captured in our institution's online pre-participation health history questionnaire and during the pre-participation physical exam with the team physician. The C3 Logix Integrated Concussion Management System will be utilized for the objective and quantitative analysis. The team physician will determine pre-participation clearance and/or the need for additional consultation or testing.
3. A sideline assessment tool for evaluating and managing a mild head injury sustained in practice or competition will be made available to all Sports Medicine staff members. Sideline assessment will be performed at the time the injury. The components of the sideline evaluation include assessment of symptoms, cognition, oculomotor function, and balance. (see 15.13.7d).
4. A venue-specific emergency action plan will be activated and followed that includes further evaluation for a student-athlete with a Glasgow Coma Scale score greater than 13, prolonged loss of consciousness, focal neurological deficit, repetitive emesis, deteriorating mental status, or spinal injury. The emergency action plan is an organized and coordinated plan that provides directive to team physicians, athletic trainers, and EMS personnel to manage the aforementioned circumstances.
5. Student-athlete showing any signs, symptoms or behaviors consistent with a concussion will be removed from practice or competition and evaluated by an athletics healthcare provider with experience in the evaluation and management of concussion.
6. A student-athlete diagnosed with a concussion will be withheld from competition or practice and will not be permitted to return to athletics activities for the remainder of that day.
7. Academic accommodations, if necessary, will be requested and coordinated by a designated member of the Student Services staff (see 15.13.7 Return to learn guidelines).
8. The post-concussion management is directed by the team physician. The need for initial physical and cognitive rest will be determined based on individual serial assessments, concussion history, modifying factors, and specific needs of the student-athlete. Initial

assessment will be performed within 72 hours of report of injury and serial follow up will be repeated at least every seven days, or at the discretion of the team physician. Once serial evaluations and monitoring confirm the student-athlete has returned to a symptomatic level consistent with his/her baseline, return to play will follow a medically supervised stepwise progression. Gradual increase in physical activity that includes both an incremental increase in physical demands and contact risk will be implemented.

9. Final authority for “Return-to-Play” resides with the team physician.
10. The incident, evaluation, continued management, and clearance of the student-athlete with a concussion will be documented and maintained in his/her medical file. Documentation will include oral and/or written instruction provide to the student-athlete and/or other responsible adult.
11. Medical personnel with training in the diagnosis, treatment, and initial management of acute concussion will be present at all basketball, football, soccer, and pole vault competitions. To be present indicates medical personnel will be on site at the competition venue. Competition indicates any NCAA-sanctioned contest hosted by Texas Athletics.
12. Medical personnel with training in the diagnosis, treatment, and initial management of acute concussion will be available at all basketball, football, soccer, and pole vault practices. To be available indicates, at a minimum, medical personnel can be contacted at any time via telephone or other electronic means and that immediate arrangements can be made for the injured student-athlete to be evaluated.

#### REFERENCES:

McCrory P 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; 47:250-258.

Inter-association Consensus: Diagnosis and Management of Sport-Related Concussion Best Practices. NCAA Sports Science Institute. 2017.

Independent Medical Care. Inter-association Consensus Recommendations. NCAA Sports Science Institute. 2017.

Year-Round Football Practice Contact for College Student-Athletes: Inter-association Consensus Recommendations. NCAA Sports Science Institute. 2017.

## SPORTS-RELATED CONCUSSION: RETURN-TO-LEARN GUIDELINES

### **PURPOSE:**

Provide guidelines for initiating cognitive rest following sports-related concussion and establishing a process to guide the transition back into the academic classroom.

### **BACKGROUND:**

Return-to-learn is a parallel concept to return-to-play. The foundation of return-to-learn includes:

- Return-to-learn should be managed in a stepwise program that fits the needs of the individual.
- Return-to-learn guidelines assume that both physical and cognitive activities require brain energy utilization, and that such brain energy is not available for physical and cognitive exertion because of the concussion-induced brain energy crisis.
- The hallmark of return-to-learn is cognitive rest immediately following concussion, just as the hallmark of return-to-play is physical rest. Cognitive rest refers to avoiding potential cognitive stressors such as school work, video games, reading, texting and watching television, as well as team meetings and instruction. Current evidence suggests that providing both physical and cognitive rest allows the brain to heal more quickly as well as having a beneficial effect of cognitive rest on concussion recovery.
- Return-to-learn recommendations are based on consensus statements, with a paucity of evidence-based data to correlate with such consensus recommendations.
- Return-to-learn recommendations should be made within the context of a multi-disciplinary team that includes Sports Medicine and Student Services personnel.
- Like return-to-play, it is not always easy to provide prescriptive recommendations for return-to-learn because the student-athlete may appear physically normal but is unable to perform at his/her expected baseline due to concussive symptomatology.

### **POLICY:**

Pursuant to the NCAA Sports-Related Concussion Policy and Concussion Safety Protocol, UT Athletics implements the following:

- A policy that ensures that a student-athlete diagnosed with concussion will be prescribed an initial period of physical and cognitive rest.
- A process that ensures the gradual return to cognitive activity is based on the absence of concussion symptoms following cognitive exposure.

## **RETURN-TO-LEARN MANAGEMENT PLAN:**

The multidisciplinary team involved in the Return-to-Learn process will be directed by the Head Team Physician while the Executive Senior Associate Athletics Director for Student Services will coordinate necessary academic accommodations. The following tenets of cognitive recovery will be addressed:

### **Cognitive Rest:**

Cognitive rest following concussion involves avoiding the classroom for at least 24 hours.

If the student-athlete cannot tolerate the amount of time required to participate in a class requiring light cognitive activity, he or she should remain at home or in the residence hall.

For example, once the student-athlete can tolerate 30-45 minutes of cognitive activity without return of symptoms, he/she should return to the classroom in a step-wise manner. Such return should include no more than 30-45 minutes of cognitive activity at one time, followed by at least 15 minutes of rest.

The levels of adjustment needed should be decided by a multi-disciplinary team that includes Sports Medicine and Students Services personnel, including but not limited to the Team Physician, athletic trainer, and academic counselor, and other faculty or individual teachers as appropriate. The level of multi-disciplinary involvement should be made on a case-by-case basis.

### **Academic Procedures:**

**Academic adjustment** - a student-athlete's academic schedule requires some modification in the first one to two weeks following concussion. In this case, full recovery is anticipated, and the student-athlete will not require any meaningful curriculum or testing alterations.

**Academic accommodation** - the student-athlete has persistent symptoms for more than two weeks following concussion. Because the student-athlete has not recovered in the anticipated period of time, he or she may require a change in the class schedule and special arrangements may be required for tests, term papers and projects. Although there is no fixed timeline for academic accommodation, this generally applies to student-athletes who have more prolonged concussion symptoms, or who may be suffering with post-concussion syndrome. It is important to verify, as best as possible, the diagnosis instead of assuming that the student-athlete has prolonged concussion symptoms.

**Academic modification** - a more difficult scenario in which the student-athlete suffers with prolonged cognitive difficulties, which thereby requires a more specialized educational plan.

**Services for Students with Disabilities (SSD)** – In certain medical situations, including those involving sports-related concussion, SSD may need to be contacted to determine eligibility and approval for reasonable classroom and/or testing accommodations. ADA-compliant mitigating measures to lessen the impairment of the condition will be implemented as appropriate.

## References

McCrary P 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; 47:250-258.

Harmon KG et al: American Medical Society for Sports Medicine position statement: concussion in sport. Br J Sports Med 2013; 47:15-26.

Schneider KJ et al: The effects of rest and treatment following sport-related concussion: a systematic review of the literature. Br J Sports med 2013; 47:304-307.