



Rev. 3/2018

Prevention and Care of Injuries and Illness

Concussions and Head Injuries

The following guideline pertains to **EDUCATION** and **TREATMENT OF CONCUSSIONS**. There is an increasing awareness surrounding the seriousness of student-athletes sustaining concussions with potential short term and/or long term consequences. Within the overarching goal of maximizing the student-athlete experience while at The Ohio State University, the Department of Athletics is committed to:

- Minimizing potential concussion complications in our student-athletes, both immediate and long term, and
- Minimizing the negative impact of concussion on the student-athlete's academic career.

The NCAA Concussion Policy and Legislation mandates that institutions implement the following:

1. An annual process that ensures student-athletes are educated about the signs and symptoms of concussion;
2. A process that ensures a student-athlete who exhibits signs, symptoms or behaviors consistent with a concussion shall be removed from athletic activities and evaluated by a medical staff member with experience in the evaluation and management of concussion;
3. A policy that precludes a student-athlete diagnosed with concussion from returning to athletic activity for at least the remainder of that calendar day; and
4. A policy that requires medical clearance for a student-athlete diagnosed with a concussion to return to athletic and cognitive activity as determined by a physician or the physician's designee.

ANNUAL EDUCATION

Student-Athletes

- Student-athletes will receive concussion education material prior to the start of each academic year. Student-athletes are provided the NCAA "Fact Sheet for Student-Athletes" form. Each student-athlete will sign an acknowledgement (form titled "Concussion Acknowledgement and Release Form") that they have read and understand the information provided. The education outlines the causes, symptoms and possible consequences of concussion and head injury. This education also outlines their responsibility for reporting these injuries to the medical staff. The signed acknowledgement forms will be retained in the respective student-athletes' medical charts.

Coaches

- All head coaches and assistant coaches will receive concussion education material via PowerPoint at the start of each academic year. Coaches are provided the NCAA "Fact Sheet for Coaches" form in addition to the PowerPoint education. Each coach will sign an acknowledgement at the conclusion of the PowerPoint that they understand the concussion management plan, their role within the plan and that they have received education about concussions. Education will outline the causes, symptoms and possible consequences of a concussion. The Director of Sport Performance will ensure that each coach has completed this education and will document the completion dates of the training sessions.

Team Physicians

- All team physicians will receive concussion education annually at a staff retreat, date to be determined by the Head Team Physician. This education will be provided via PowerPoint. At the conclusion of the PowerPoint, each Team Physician will sign an acknowledgement (form titled "Physician Concussion Education Acknowledgement") that they understand the concussion management plan, their role within the plan and that they have received education about concussions. Education will outline the causes, symptoms, treatment and possible consequences of a concussion. The Head Athletic Trainer and Team Physician will retain copies of the signed acknowledgement forms. These forms will be placed in the main copy of the Standard Operating Procedures Manual.

Certified Athletic Trainers

- All certified athletic trainers (AT) will receive concussion education annually at a staff meeting, date to be determined by the Head Athletic Trainer. This education will be provided via PowerPoint. At the conclusion of the PowerPoint, each AT will sign an acknowledgement (form titled "AT Concussion Education Acknowledgement") that they understand the concussion management plan, their role within the plan and that they have received education about concussions. Education will outline the causes, symptoms, treatment and possible consequences of a concussion. The Head Athletic Trainer and Team Physician will retain copies of the signed acknowledgement forms. These forms will be placed in the main copy of the Standard Operating Procedures Manual.

Director of Athletics and Sport Administrators

- The Director of Athletics and Sport Administrators that oversee athletics programs will receive concussion education annually at a staff meeting, date to be determined by the Director of Athletics. At the conclusion of the PowerPoint, the Director of Athletics and each Sport Administrator will sign an acknowledgement (form titled "Administration Concussion Education Acknowledgement") that they understand the concussion management plan, their role within the plan and that they have received education about concussions. The Director of Sport Performance will ensure that each administrator has completed this education and will document the completion dates of the training sessions.

PRE-PARTICIPATION ASSESSMENT

- All varsity student-athletes at The Ohio State University will undergo a series of baseline evaluations and questions. Testing will consist of the following:
 - o Incoming Health History Questionnaire: Section "Head Injuries/ Illnesses and Concussions."
 - Brain Injury and Concussion History
 - o ImPact Baseline Testing
 - Baseline Symptom Scale
 - Attention Span
 - Working Memory
 - Sustained and selective attention time
 - Response variability
 - Non-verbal problem solving
 - Reaction time
 - o SCAT5 Baseline Testing
 - Glasgow Coma Scale
 - Maddocks Score
 - Cognitive Assessment with SAC Delayed Recall
 - Baseline Symptoms Evaluation
 - Neck Examination
 - Balance and Coordination Evaluations
 - o King-Devick Test (as deemed necessary by team physicians)
 - Oculomotor Screening
 - Neurological Function
- The AT for each sport will ensure these tests are completed in conjunction with the incoming student-athlete pre-participation evaluation. The team physician will review the Incoming Health History Questionnaire for concerns regarding a student-athlete's history of head injury. If concerns arise during this evaluation, the team physician will review the ImPact Test and SCAT5 Evaluation to determine participation or need for additional consultation or testing.
- New baseline concussion assessments should be considered for student-athletes with complicated or multiple concussion history. This will be determined by the Team Physician.

MEDICAL COVERAGE OF PRACTICES AND COMPETITIONS

- Medical personnel with training in the diagnosis, treatment, and initial management of acute concussion (i.e. athletic trainers and/or team physicians) are **on-site** at the following NCAA varsity **competitions**; men's and women's basketball, field hockey, football, men's and women's ice hockey, men's and women's lacrosse, pole vault, men's and women's soccer, and wrestling.
- Medical personnel with training in the diagnosis, treatment, and initial management of acute concussion (i.e. athletic trainers and/or team physicians) are **on-site or immediately available via cell phone or pager** at the following NCAA varsity **practices**; men's and women's basketball, field hockey, football, men's and women's ice hockey, men's and women's lacrosse, pole vault, men's and women's soccer, and wrestling. If not on-site, the case can be discussed through such communication. Immediate arrangements are made for all concussions to be evaluated.
- If no medical personnel are available at practice or competition, any student-athlete displaying symptoms of a concussion should be withheld from activities by the supervising adult.
 - If medical personnel are available in the athletic training room (ATR), the student-athlete will be sent to the ATR for evaluation.
 - If medical personnel are not available and the student-athlete sustains a head injury, an attempt should be made to contact the medical staff. If medical personnel are not available, and head injury symptoms are significant, the student-athlete should be taken to the emergency department for evaluation. The medical team will assume their role in the concussion management plan after emergency department care has been rendered.
 - The medical staff should be notified of the situation in a timely fashion.
 - Concussions that occur from a non-athletic cause will be managed in the same fashion.

RECOGNITION AND DIAGNOSIS OF A CONCUSSION

- Any student-athlete that experiences concussion-like symptoms will be withdrawn from practice/competition and will be evaluated by the AT and/or team physician. Under no circumstance should a student-athlete return to participation on the same calendar day if concussion is confirmed.
- Upon confirmation of concussion diagnosis, the student-athlete should undergo an evaluation by the AT and/or Team Physician that consists of symptom assessment, SCAT5 evaluation, and clinical evaluation for cervical spine trauma, fractures and/or intracranial bleeding. The King-Devick Sideline Concussion Screening test will be prescribed for student-athlete at the team physicians' discretion.

POST-CONCUSSION MANAGEMENT

- Should the student-athlete display major concussive symptoms the Emergency Action Plan should be activated. Refer to document "Emergency Action Plan" for detailed information regarding activation of EMS. Emergency Action Plans are posted in conspicuous locations at every Ohio State athletics facility.
- Major Concussive symptoms include:
 - Glasgow Coma Scale < 13
 - Prolonged loss of consciousness
 - Focal neurological deficit suggesting intracranial trauma
 - Repetitive Emesis
 - Persistently diminished/ worsening mental status or other neurological signs/symptoms
 - Suspected spinal injury
- If major concussive symptoms are not present, and the student-athlete undergoes evaluation per the AT and/or Team Physician as stated above, the AT will discharge the student-athlete with the form "Head Injury Discharge Instructions". This form will be reviewed with the student-athlete and another responsible adult. The form should be signed by the student-athlete. The original copy should be given to the student-athlete as discharge instructions and a copy should be made for the student-athlete's medical chart.
- A daily symptom scale will be completed by the student-athlete until the score returns to 'baseline'.
 - If the student-athlete is asymptomatic within 14 days and the post-injury neurocognitive function is back to baseline, the student-athlete will undergo a graded cardiovascular workout challenge under supervision of the medical team. The medical team may progress activity if the student-athlete remains asymptomatic.
 - If symptoms persist greater than 14 days or if the student-athlete has a return of symptoms during the return to play progression, a neurocognitive assessment and balance re-assessment will be performed. If symptoms or progression become complicated, an evaluation/consult with neuropsychology specialist(s) should be considered.
 - If symptoms persist greater than 14 days or become complicated, the student-athlete should have follow-up consultation with the Team Physician to consider additional diagnoses including, but not limited to; post-concussion syndrome, sleep dysfunction, migraine or other headache disorders, mood disorders such as anxiety and depression, or ocular/vestibular dysfunction.
 - As each student-athlete and situation vary, the medical team will determine the best course of evaluation and treatment, and will utilize additional resources as deemed necessary, to make the appropriate decisions in the student-athletes best interest.

RETURN TO PLAY

- After symptoms return to baseline, a SCAT5 will be performed (preferably by the same individual who conducted the initial injury SCAT3, for consistency). ImPact and the King-Devick Recovery Acceleration Program will be utilized at the team physician's discretion. If deemed back to baseline by the team physician, the student-athlete can initiate a supervised return-to-play progression as follows in a step-wise fashion:
 - Light aerobic exercise without resistance training
 - Sport-Specific exercise and activity without head impact
 - Non-contact practice with progressive resistance training
 - Unrestricted training
 - Return to competition

Any student-athlete withheld from activity due to concussion symptoms will be cleared by a team physician before returning to athletic activity. The final authority for resuming athletic activity shall reside with the team physician or the physician's designee.

RETURN TO LEARN

- Consideration will be given for academic implications following concussion. The student-athlete should not return to cognitive activity on the same day as a concussion diagnosis.
- Cognitive instruction should be given as part of the “Head Injury Discharge” form. This plan will be individualized based on the needs of the student-athlete. It should be advised that no classroom activity should be resumed if the student-athlete cannot tolerate light cognitive activity. A gradual return to classroom activity will be initiated as tolerated by the student-athlete.
- The medical staff will provide written documentation and communication to the student-athletes academic counselor. The academic counselor specific to the student-athletes sport will be considered the point-person for progression back into academic and team cognitive activities.
- For student-athletes with prolonged symptoms of concussion lasting greater than 14 days the student-athlete should follow-up with the Team Physician and an academic management team will be aligned that may consist of but is not limited to the following individuals:
 - Medical Staff (appropriate individuals may include the team physician, athletic trainer, psychologist, neuropsychologist, etc.)
 - Academic Counselors and Course Instructors
 - Sport Administrators
 - Office of Disability Services representative
 - Coaching Staff
 - Compliance Office (as classwork may effect eligibility)
 - Faculty athletics representative
- Modifications and schedule accommodations will be made for student-athletes that experience concussion symptoms for up to 14 days, with assistance from the student-athletes academic counselor. If symptoms persist greater than 14 days or symptoms worsen with academic challenges, the student-athlete should be re-evaluated by the Team Physician. For persistent symptoms, the academic counselor will engage campus resources (consisting of learning specialists, the Office of Disability Services, and/or the ADA office) for prolonged cases.

REDUCING EXPOSURE TO HEAD TRAUMA

- Education should be provided to sport coaches on recommendations to minimize head trauma. The Ohio State Medical Services team should ensure adherence to the education provided. This PowerPoint education to coaches involves the recommendation to eliminate unnecessary contact during practice sessions, taking the head and neck out of contact situations, and teaching proper technique to student-athletes where appropriate for their respective sports. A “safety-first” approach to sport is emphasized in the PowerPoint education.
- The AT and sport coaches should work in conjunction to reduce gratuitous contact during practice sessions. When appropriate for respective sports, coaches and student-athletes should be educated regarding safe play and proper technique for head injury reduction.
- A review of the interassociation consensus guidelines “Year-Round Football Practice Contact Recommendations” and “Independent Medical Care for College Student-Athlete Best Practices” will occur annually. After review updates to best-practices and education will take place.

DOCUMENTATION OF CONCUSSION MANAGEMENT

After diagnosis of a concussion, the managing AT will include the form titled “Concussion Quality Assurance Monitor” in the student-athlete’s medical chart.

- The AT will document on this form as each step is completed.
- At the resolution of the concussion, the AT will make a copy of all documentation as it pertains to the concussion.
- The documentation will be provided to the Facility Supervising AT for inspection that all steps were followed per the concussion management policy. After the Supervising AT ensures documentation is complete, the copied packet will be provided to the head team physician at the end of each academic year. The head team physician will review each packet to ensure thoroughness and proper education.

REFERENCES

1. NCAA Fact Sheet. Concussion Safety: What Coaches Need to Know, 2017. https://www.ncaa.org/sites/default/files/2017SSI_ConcussionFactSheet_Coaches_20170721.pdf
2. NCAA Fact Sheet. Concussion Safety: What Student-Athletes Need to Know, 2017. https://www.ncaa.org/sites/default/files/2017SSI_ConcussionFactSheet_StudentAthletes_20170721.pdf
3. NCAA Sport Science Institute. Diagnosis and Management of Sport-Related Concussion Best Practices. Inter-association Consensus Document: http://www.ncaa.org/sites/default/files/SSI_ConcussionBestPractices_20170616.pdf
4. *NCAA Sports Medicine Handbook 2014-2015*. Guideline 2I; Sport-Related Concussion (Revised July 2014).
5. National Athletic Trainers’ Association Position Statement: Management of Sport Concussion. https://www.nata.org/sites/default/files/Concussion_Management_Position_Statement.pdf
6. NCAA Year-Round Football Practice Contact for College Student-Athletes Recommendations; Inter-association Consensus, 2017. http://www.ncaa.org/sites/default/files/Year%20Round%20Football%20Practice%20Contact%20Recommendations_2017011.pdf
7. NCAA Independent Medical Care for College Student-Athletes Best Practices; Inter-association Consensus, 2017. https://www.ncaa.org/sites/default/files/2017SSI_IndependentMedicalCare_20170626.pdf