



Concussion Safety Protocol

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INTRODUCTION/PURPOSE:

Concussion management in sport is challenged by the fact that concussion risk is both individualized and dynamic. A blow to the head with the exact same forces will yield different symptoms of differing severity depending on the individual. Add to this the fact that the brain is dynamic, especially in the developmental years of youth and adolescence, and is influenced by a multitude of other factors (i.e. sleep deprivation, dehydration, fatigue, depression, ADD/ADHD, headache disorders, drugs and supplements to name a few).

International experts have convened at conferences on multiple occasions, most recently in Berlin in 2016, to form consensus statements on the management of sports-related concussion. An outcome from these meetings is that sports concussion diagnosis and management needs to be individualized.

University of Michigan Student-Athlete Health and Welfare personnel recognize that concussions are potentially very serious injuries that require a comprehensive and carefully measured approach to management. This protocol was created with the understanding that each concussion, as well as each student-athlete, is unique. Individualizing concussion management, considering each student-athlete's complete medical history, and close medical staff involvement, are the hallmarks of this protocol, and are essential for the safety of our student athletes.

DEFINITION:

Concussion is defined as a complex pathophysiological process affecting the brain and induced by traumatic biomechanical forces. It is most commonly characterized by the rapid onset of a constellation of symptoms and signs that are self-limited and resolve spontaneously.

PRESEASON EDUCATION:

Education efforts around concussions are an ongoing process that includes the education of all parties involved in the health and welfare of the student-athlete, including, but not limited to the student-athlete, coaches, team physicians, athletic trainers, athletic administration and the Director of Athletics. Each individual will provide a signed acknowledgement of having read and understood the concussion material.

University of Michigan student-athletes will receive annual didactic education by a certified athletic trainer and/or Team Physician on the topic of concussions during their yearly pre-participation physical evaluation process. Student-athletes will be provided with applicable online and written education materials such as the *NCAA Concussion Fact Sheet for Student-Athletes* and the NCAA Concussion Video

(https://s3.amazonaws.com/ncaa/web_video/health_and_safety/concussion/concussion.html). Student-athletes are required to sign a Medical Examination and Authorization Waiver on an annual basis acknowledging that they have disclosed their prior medical history, have received concussion education, and agree to report any problems, ailments, injuries, and/or complaints.

University of Michigan coaches and athletic administration will undergo annual education on the topic of concussions and will be provided with applicable online and written education materials such as the *NCAA Concussion Fact Sheet for Coaches* and the NCAA Concussion Video

(https://s3.amazonaws.com/ncaa/web_video/health_and_safety/concussion/concussion.html). Within this education, it will be noted to all that Michigan Athletics follows the NCAA guideline and Big 10 Conference Institutional Standard of Independent Medical Care, in which athletic health care providers are empowered to have the authority to remove a student-athlete from competition or practice if they feel as though a student-athlete is at risk. In addition, athletic health care providers can determine management and return-to-play of any ill or injured student-athlete without risk of employment status change. Personnel will also be required to sign a ***Concussion Acknowledgement Form*** acknowledging the responsibility to support the department's concussion management policy, to report any signs, symptoms, or behaviors consistent with a concussive injury that they may witness, and acknowledge the education and return-to-play decision-making process.

University of Michigan Medical Team personnel will engage in professional development activities specific to the topic of concussions and will also be required to sign a ***Concussion Acknowledgement Form*** acknowledging the responsibility to support the department's concussion management policy, report any signs, symptoms, or behaviors consistent with a concussive injury that they may witness, and acknowledge the education and return-to-play decision-making process.

PRE-PARTICIPATION ASSESSMENT:

A pre-participation assessment for every student-athlete will consist of a comprehensive history that includes details of prior concussions suffered before college entry and any history of migraine/headache disorders, ADD/ADHD, or other learning disabilities; a focused neurological evaluation, pre-season symptom evaluation, cognitive assessment, and balance evaluation conducted by University of Michigan Medical team personnel. A University of Michigan Team Physician will determine clearance and/or the need for additional consultation or testing. A new baseline concussion assessment six months or beyond, will be considered for any varsity student-athlete with a documented concussion, especially those with complicated or multiple concussion history.

CONCUSSION RECOGNITION & DIAGNOSIS:

Medical personnel with training in the diagnosis, treatment, and initial management of acute concussion will be present at all practices and competitions in the following sports: football; ice hockey; field hockey; men's and women's basketball; men's and women's soccer; men's and women's lacrosse; wrestling; men's and women's gymnastics; volleyball; softball; baseball; and pole vault.

Student-Athletes that exhibit signs, symptoms, or behaviors consistent with a concussive injury will be immediately removed from participation and will undergo an assessment by Athletic Medicine personnel (Certified Athletic Trainer (ATC) and/or Team Physician) that includes symptom assessment, a focused assessment of the student-athlete's neurological status, testing to assess neurocognitive function and balance, and a clinical assessment for neck trauma or other head trauma including skull fracture and intracranial bleed. If the student-athlete manifests any of the signs and symptoms that are considered to be severe or their clinical status is deteriorating (e.g. 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; spine injury; other), that student-athlete will be referred to a medical facility for more immediate follow-up care as per the U-M Emergency Action Plan.

A University of Michigan student-athlete diagnosed with a concussion will be withheld from participation for at least the remainder of the day of injury and will be serially evaluated and monitored as necessary following the injury by Athletic Medicine personnel. Athletic Medicine personnel will also provide verbal and/or written care instructions to the student-athlete and/or other appropriate personnel at the time of discharge.

POST-CONCUSSION MANAGEMENT:

Any future return-to-play decision is based on both the initial evaluation and subsequent follow-up assessments with a U-M Team Physician, and is not entertained until the student-athlete has successfully progressed through an individualized graded exercise progression without a return of symptoms. The supervised stepwise progression will include light aerobic exercise without resistance training, sport-specific exercise and activity without head impact, non-contact practice with progressive resistance training, unrestricted training, and return-to-competition. This progression can take anywhere from days to weeks and the speed with which the athlete moves through this progression and returns-to-play is dependent on multiple factors, guided by U-M Team Physicians. Any student-athlete with prolonged symptoms or atypical time course for recovery will continue to be evaluated for additional diagnoses and managed by University of Michigan Team Physicians, including University of Michigan Team Neurologist. In these cases, referrals to relevant specialties will occur expeditiously.

A University of Michigan Team Physician has the final authority in deciding if and when an injured student-athlete may return to practice and/or competition. Any student-athlete seen by and/or under the care of a physician other than a University of Michigan Team Physician, must submit copies of any imaging and/or testing, physician's notes, and/or medical records, and must return to the University of Michigan Team Physician for a follow-up evaluation and final clearance prior to active participation status. If a student-athlete is under the care of a private physician for an injury or illness and the physician's treatment precludes or alters activity in intercollegiate athletics, the student-athlete must secure, **in writing**, a release to reinstate the student-athlete to full participation. No student-athlete will be allowed to return to participation until University of Michigan Student-Athlete Health and Welfare personnel has received a release from the private physician and the student-athlete is examined by a University of Michigan Team Physician and cleared for participation.

RETURN TO LEARN:

When a student-athlete is diagnosed with a concussion and evaluated by a team physician, the academic support staff of the student-athlete's sport will be notified and will function as the primary point person within Athletics. The student-athlete should not be involved in classroom activity on the same day as the concussion, and an individualized and stepwise progression for returning to academic participation, including remaining home if the student athlete cannot tolerate light cognitive activity. Any appropriate academic modifications and/or accommodations, before or after two weeks, will be developed in collaboration with the U-M Team Physicians and other appropriate personnel and will be communicated to academic personnel by Academic Success Program (ASP) personnel only.

A multi-disciplinary team of professionals, including, but not limited to the following individuals:

- Team Physician
- Athletic Trainer
- Mental Health professional
- Neuropsychology consultant
- Faculty Athletics Representative
- Academic Counselor
- Course Instructor(s)
- Administrators
- Coach(es)
- Office of Disability Services personnel

Other appropriate personnel will be identified in applicable circumstances to assist with the management of more complex cases and U-M campus resources, including learning specialists, office of disability and ADAAA office. Compliance with ADAAA will be maintained at all times. The Team Physician and the multidisciplinary team will continue to re-evaluate the student-athlete as necessary, prior to and longer than two weeks of symptoms.

REDUCING EXPOSURE TO HEAD TRAUMA:

The University of Michigan is committed to student-athlete health and welfare and will emphasize ways to minimize head trauma exposure by:

- Adherence to Inter-Association Consensus: Independent Medical Care Guidelines;
- Adherence to Inter-Association Consensus: Year-Round Football Practice Contact Guidelines;
- Taking a "student-athlete-centered" approach to health and welfare; and
- Annual student-athlete and coach education regarding safe play, proper technique, and the reporting of concussive signs, symptoms, and behaviors to appropriate medical personnel.