



University of Notre Dame Sports Medicine Department Intercollegiate Athletics Concussion Management Plan

Purpose:

Head injuries can pose a significant health risk for student-athletes competing in intercollegiate athletics. The University of Notre Dame is committed to promoting the safety of its student-athletes. In light of this commitment and developing research on the symptoms and effects of head injuries, Notre Dame has taken steps to prevent, identify, evaluate, and manage head injuries in a comprehensive and consistent manner.

The Notre Dame Athletic Department, in accordance with NCAA bylaw 3.2.4.17, has implemented this Concussion Management Plan (“the Plan”) to establish guidelines and procedures for assessing intercollegiate student-athletes who have or may have suffered a head injury. The Plan covers the education, recognition, emergency care, long-term care, and return-to-play of student-athletes who exhibit concussion-like symptoms. The Notre Dame Sports Medicine Department recognizes that each head injury and each student-athlete is unique. Therefore, in certain cases, modifications to this protocol may be deemed appropriate by Notre Dame sports medicine staff. For purposes of this Plan, “sports medicine staff” includes Notre Dame team physicians and athletic trainers.

Definitions:

Concussions are the most common form of head injury suffered by student-athletes. A uniform definition of a concussion does not exist because of the complexity of concussions. A concussion can be caused by a direct or indirect blow to the head or elsewhere on the body resulting in an impulsive force being transmitted to the head. A concussion may cause impaired neurologic function, which may or may not involve loss of consciousness. The exact recovery periods from these types of head injuries are uncertain timeframes and will often vary from student-athlete to student-athlete.

Throughout this policy, **team physician** means a university physician with experience in the evaluation and management of concussions.

Signs/Symptoms:

A concussed student-athlete may exhibit a variety of symptoms or very few symptoms. Despite popular belief, most concussions do not involve student-athletes losing consciousness. One important factor to take into consideration is that, while some symptoms appear immediately, others may take time to appear. Additionally, symptoms and the severity of symptoms will vary among student-athletes. Signs and symptoms of concussions include, but are not limited to:

Symptoms:

- Dizziness
- Nausea/Vomiting
- Confusion
- Irritability
- Headaches
- Ringing in ears
- Fatigue
- Lightheadedness
- Disorientation
- Seeing bright lights/stars
- Depression
- Feeling of being stunned
- Pressure in head
- Neck pain

Signs:

- Difficulty concentrating
- Reduced attention
- Decreased playing ability
- Cognitive dysfunction
- Vacant stare
- Personality change
- Loss of consciousness
- Slurred/incoherent speech
- Delayed verbal or motor responses
- Sleep disturbances

Education/Responsibilities:

1. *Student-Athletes:* Notre Dame student-athletes must be truthful and forthcoming about symptoms of illness and injury, both at the time of an injury as well as upon the emergence of any reoccurring or new symptoms. In conjunction with the annual pre-participation physical, student-athletes will sign a questionnaire in which they acknowledge their responsibility to be truthful and forthcoming about symptoms of illness and injury.

Each year, the sports medicine staff will educate Notre Dame student-athletes specifically about concussions. As part of that education, each student-athlete will receive the NCAA Concussion Fact Sheet (Appendix A) and will sign the Student-Athlete Concussion Responsibility Form (Appendix B). In signing the form, student-athletes will acknowledge that:

- a. they have read and understood the NCAA Concussion Fact Sheet for Student-Athletes and participated in education related thereto; and

- b. they accept the responsibility for truthfully and promptly reporting their illnesses and injuries to the sports medicine staff, including any signs or symptoms of a concussion, regardless of whether any such illnesses, injuries, signs, or symptoms are related to participation in intercollegiate athletics.
- 2. *Coaches*: Each year, all Notre Dame coaches (and appropriate athletics administrators, including the Director of Athletics) will receive the NCAA Concussion Fact Sheet for Coaches (Appendix C) and will sign the Coach's Concussion Responsibility Form (Appendix D), acknowledging that:
 - a. they have read and understood the NCAA Concussion Fact Sheet for Coaches and participated in education related thereto;
 - b. they will encourage their student-athletes to report their illnesses and injuries to sports medicine staff, especially any signs or symptoms of a concussion;
 - c. they will refer any student-athlete whom they suspect of sustaining a concussion to the proper medical authority; and
 - d. they have read and understand the Notre Dame Concussion Management Plan, including the fact that team physicians (and, in their absence, athletic trainers) have unchallengeable authority to withhold a student-athlete from practice or competition, and that team physicians have unchallengeable authority to determine concussion management, return-to-play, and medical clearance.
- 3. *Sports Medicine Staff*: The Notre Dame sports medicine staff will undergo at least annual training sessions on the diagnosis and treatment of head injuries and this Concussion Management Plan, including receipt and acknowledgement of the NCAA Concussion Fact Sheet(s).

Baseline Assessment:

At the beginning of each new season, Notre Dame sports medicine staff shall obtain an updated history of brain injury and concussion, and administer a baseline assessment for all student-athletes. The baseline assessment includes an evaluation of baseline symptoms, cognitive assessment, and balance evaluation. The team physician will then determine pre-participation clearance. Team physicians may, based on their medical judgment, conduct baseline assessments more frequently than at the beginning of each new season.

Recognition and Evaluation:

- A. Personnel Coverage of Competition and Practice
 - 1. Sports medicine staff with training in the diagnosis, treatment and initial management of acute concussion must be *present* at all NCAA varsity competitions in basketball, football, ice hockey, lacrosse, pole vault, and soccer. To be *present* means to be on site at

the campus or arena of the competition. Medical personnel may be from either team, or may be independently contracted for the event.

2. Sports medicine staff with training in the diagnosis, treatment and initial management of acute concussion must be *available* at all NCAA varsity practices in basketball, football, ice hockey, lacrosse, pole vault, and soccer. To be *available* means that, at a minimum, medical personnel can be contacted at any time during the practice via telephone, messaging, email, beeper or other immediate communication means; that the case can be discussed through such communication; and that immediate arrangements can be made for the athlete to be evaluated.

B. Evaluation and Management

1. If a student-athlete reports or displays signs, symptoms, or behaviors that a Notre Dame athletics staff member believes are consistent with a concussion, the Notre Dame athletics staff member shall inform the student-athlete's coach, as well as the student-athlete's team physician and/or athletic trainer. The student-athlete shall be removed from any practice or competition then underway, and will be evaluated by a team physician or athletic trainer, who will make a determination of whether there is a basis for a suspected concussion.
2. A student-athlete with a suspected concussion shall be withheld from practice or competition and shall not return to athletic activity for the remainder of that day. The team physician or athletic trainer making such decision should notify the coaching staff that the student-athlete will not return to athletic activity for the remainder of the day. The team physician and/or athletic trainer have unchallengeable authority to withhold a student-athlete from practice or competition.
3. A treating athletic trainer or team physician shall have the authority to require that a student-athlete be continuously monitored during a period that the student-athlete, in the judgment of the athletic trainer or team physician, is acutely symptomatic.
4. A student-athlete with a suspected concussion will be evaluated by a team physician for a diagnosis as soon as possible in accordance with the severity of the symptoms. Such evaluation will generally include symptom assessment, physical and neurological exam, cognitive assessment, balance exam, and clinical assessment for cervical spine trauma, skull fracture, and intracranial bleed. This may include but is not limited to evaluation with SCAT 5 testing and C3 Logix concussion management system. The timing and nature of any follow-up testing are in the discretion of the treating team physician.
5. Student-athletes and/or sports medicine staff may not be able to recognize the possibility of a concussion until hours or days after the precipitating event. Under these circumstances, once a student-athlete reports or displays signs, symptoms, or behaviors that a Notre Dame athletics staff member believes are consistent with a concussion, the

athletics staff member shall inform the student-athlete's coach, as well as the student athlete's team physician and/or athletic trainer, and the team physician or athletic trainer shall initiate normal evaluation and return-to-play procedures.

6. If a student-athlete sustains a potential concussion outside of participation in intercollegiate athletics, the student-athlete is responsible for truthfully and promptly reporting the injury to the sports medicine staff, including any signs or symptoms of a concussion, at which point the potential concussion will be managed in the same manner as potential concussions sustained during participation in intercollegiate athletics.
7. Upon request by a visiting team, Notre Dame sports medicine staff will evaluate and manage visiting student-athletes under the same guidelines as Notre Dame student-athletes until the visiting team indicates that evaluation and/or management are no longer needed.
8. If a Notre Dame student-athlete reports or displays signs, symptoms, or behaviors that a Notre Dame athletics staff member believes are consistent with a concussion while away from campus in connection with team activities and a team physician is not present, the athletics staff member shall inform the student-athlete's coach and the student athlete's athletic trainer. The Notre Dame athletic trainer shall manage the student-athlete under the guidelines set forth in this Plan, and should arrange for an in-person evaluation by a physician experienced in the evaluation and management of concussions, if deemed necessary by the athletic trainer. Regardless, the student-athlete will be evaluated by a team physician as soon as possible upon return to campus.

Emergency Referrals:

In the event that a student-athlete displays one or more of the following symptoms during an initial evaluation, a team physician and/or athletic trainer should consider activation of the applicable Medical Emergency Response Procedures and/or immediate referral to the Emergency Room:

- Prolonged loss of consciousness
- Deteriorating level of consciousness
- Suspicion of spine or skull injury
- Seizure activity
- Evidence of hemodynamic instability/deteriorating of vital signs
- Repetitive vomiting
- Glasgow Coma Scale < 13
- Focal neurological deficit suggesting intracranial trauma

Monitoring/Follow-Up Care:

1. Due to the need for ongoing monitoring for deterioration of symptoms, when an athletic trainer or team physician determines that a student-athlete who displays signs, symptoms, or behaviors consistent with a concussion or who is diagnosed with a concussion may be released from immediate care, the student-athlete should be accompanied by an individual who can provide reliable supervision (such as a roommate, parent/guardian, coach, member of residence hall staff or a teammate).
2. Upon release from immediate care, the student-athlete and the individual who accompanies him/her will be provided with verbal or written instructions, which may include monitoring, limitation of certain activity, and additional assessments (*see* Concussion Take-Home Instructions in Appendix E for an example of information typically provided upon discharge).
3. As appropriate, the sports medicine staff should communicate with Academic Services for Student-Athletes to assist in managing the return-to-learn protocol; Residence Hall or other Student Affairs staff to assist in managing supervision and other issues; and coaches and other Notre Dame athletics staff to assist in managing athletics-related issues.
4. Student-athletes with a prolonged recovery shall be evaluated by a physician to consider additional diagnoses (e.g., post-concussion syndrome, sleep dysfunction, migraine or other headache disorders, mood disorders, or ocular or vestibular dysfunction) and proper management options.

Return to Play Guidelines:

1. When the treating University physician determines that it is appropriate for the student-athlete to be evaluated for return to play, the sports medicine staff will supervise the return-to-play protocol set forth below. The sports medicine staff shall have unchallengeable authority on implementing concussion management and the return-to-play protocol.
2. The following steps will typically take place over several days. In select settings in which student-athletes have minimal concussive symptomology and no other modifiers that may prolong recovery, the return-to-play protocol may be modified. In contrast, in student-athletes with increased symptom burden and duration, the progression for return-to-play may be more conservative and each stage may take more than a day.
3. The initial stage includes limited physical and cognitive activity until the student-athlete has returned to baseline, then progresses within each step below provided that the student-athlete does not experience worsening or new symptoms.

Stage	Requirement	Rehabilitation Stage	Functional Exercise at Each Stage	Stage Objective
1		Limited activity	Limited physical and cognitive activity	Recovery
2		Light aerobic exercise without resistance training		Increase heart rate
3	Completion of Stage 2	Sport-specific exercise (non-contact, or without head impact)	Non-contact simple movement patterns specific to sport	Add movement
4	Completion of Stage 3	Non-contact training drills with progressive resistance	Progression to more complex training drills	Exercise, coordination, and cognitive load
5	Completion of Stage 4	Full-contact practice (or unrestricted training)	Following medical clearance, participate in normal activities	Restore student-athlete's confidence and coaching staff assess functional skills
6	Completion of Stage 5	Return to play	Normal game play	

4. No student-athlete can return to full activity, practice or competition until they are medically cleared to do so by a team physician. Team physicians shall have unchallengeable authority to determine medical clearance.
5. Any member of the Notre Dame sports medicine staff must report any attempt to interfere with proper concussion protocol to a member of the Executive Committee in the Department of Athletics.

Return-to-Learn Guidelines

1. The athletic trainer and team physician will serve as the primary contacts to assist a student-athlete who is diagnosed with a concussion on return-to-learn issues. The athletic trainer and team physician will work with campus partners as appropriate, including but not limited to counselors from Academic Services for Student-Athletes, other academic advisors, the Faculty Athletics Representative, the student-athlete's course instructors, the

Office for Students with Disabilities, the University Counseling Center, coaches and athletics administrators. Implementation of the return-to-learn protocol must be in compliance with the Americans with Disabilities Act (ADA).

2. Each student-athlete who is diagnosed with a concussion shall have an individualized plan that generally includes:
 - a. No classroom activity on the day the concussion is sustained;
 - b. Relative cognitive rest that minimizes potential cognitive stressors such as school work, video games, reading, texting and watching television;
 - c. Remaining at home if the student-athlete cannot tolerate light cognitive activity;
 - d. A gradual return to classroom and academic activities that may include modification of schedule or other academic accommodations for up to two weeks.

3. At any point during the return-to-learn protocol, a physician shall re-evaluate the student-athlete if he or she becomes symptomatic. For any student-athlete who is symptomatic for more than two weeks or whose symptoms cannot be managed through schedule modification or other academic accommodations, the athletic trainer and/or team physician shall work with the Office for Students with Disabilities and other campus partners to create a plan consistent with the ADA.

Reducing Exposure to Head Trauma

The University of Notre Dame will take steps to reduce student-athlete exposure to head trauma and otherwise act in the best interest of student-athlete health and safety, including adherence to the *Inter-Association Consensus: Diagnosis and Management of Sport-Related Concussion Guidelines*.

The above policy was adopted by the University of Notre Dame Department of Athletics effective July 1, 2014, revised July 31, 2015, July 1, 2016, May 1, 2017, May 1, 2018, and May 1, 2019, and is adapted in part from The University of North Carolina at Chapel Hill Sport Concussion Policy.