UNIVERSITY OF NORTHERN IOWA ATHLETIC TRAINING
CONCUSSION MANAGEMENT PLAN

The following policy and procedures on baseline testing, subsequent assessment and management of concussions as well as return to play guidelines have been developed in accordance with the University of Northern Iowa Sports Medicine/Athletic Training Services Department Mission Statement to provide quality healthcare services and assure the well-being of each student-athlete at UNI.

PURPOSE

The University of Northern Iowa Sports Medicine/Athletic Training Services Department recognizes that sport induced concussions pose a significant health risk for those student-athletes participating in athletics at UNI. With this in mind, the UNI Sports Medicine/Athletic Training Services Department has implemented policies and procedures to assess and identify those student-athletes who have suffered a concussion. The Department also recognizes that baseline neurocognitive testing on student-athletes who participate in those sports which have been identified as collision and or contact sports and/or who have had a history of concussions prior to entering the University of Northern Iowa will provide significant data for return to competition decisions. Baseline testing data combined with clinical assessment and a 5-step progressive exertional testing protocol will allow student-athletes to return to play only when their injuries are completely healed and they are physically prepared to return to competition.

CONCUSSION DEFINITION

A Concussion occurs when there is direct or indirect insult to the brain itself. As a result of this trauma, transient impairment of mental functions such as memory, balance/equilibrium and vision may occur. A concussion will not necessarily result in a loss of consciousness and, therefore, all suspected head injuries should be taken seriously. All UNI coaches and teammates can be helpful in identifying those who may potentially have a concussion, because a concussed athlete may not be aware of their condition or may potentially be trying to hide the injury to stay in a game or practice.

The University of Northern Iowa recognizes that concussions may occur outside of participating in a sport. Therefore the acute management of the student-athlete with such a concussion may occur outside the scope of this document. However, return to play decisions for the student athlete that may have suffered a concussion outside of sport participation will be guided by this policy. This policy includes, but is not limited to the management principles mandated by the NCAA.

Signs and Symptoms of Concussion:

Staff certified athletic trainers and athletic training students all need to be aware of the signs and symptoms of concussion to properly recognize and intervene on behalf of the student-athlete. Signs and symptoms of a concussion may include, but are not limited to the following:

<table>
<thead>
<tr>
<th>Physical Symptoms</th>
<th>Cognitive Symptoms</th>
<th>Emotionality Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>Memory Loss</td>
<td>Irritability</td>
</tr>
<tr>
<td>Vision Difficulty</td>
<td>Attention Disorders</td>
<td>Sadness</td>
</tr>
<tr>
<td>Nausea/Vomiting</td>
<td>Reasoning difficulty</td>
<td>Nervousness</td>
</tr>
</tbody>
</table>

1 (updated 4/5/17)
Dizziness
Sleep Disturbances

Balance Difficulties
Light sensitivity
Fatigue
Tinnitus (ringing ears)

Exercise or activities that require a lot of concentration may cause symptoms to re-appear or worsen, thus increasing the time one needs to recover from a concussion.

EDUCATION/RESPONSIBILITIES

The University of Northern Iowa will make the Concussion Management Plan and other education materials available on unipanthers.com.

1. Student-Athletes: University of Northern Iowa 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 athletic training/sports medicine staff will educate University of Northern Iowa student-athletes specifically about concussions. As part of that education, each student-athlete will receive the NCAA Concussion Fact Sheet and will sign the UNI Student-Athlete Concussion Responsibility Form. In signing the form, student-athletes will acknowledge that:

   - they have received and reviewed the NCAA Concussion Fact Sheet for Student-Athletes and participated in education related thereto; and
   - they accept the responsibility for truthfully and promptly reporting their illnesses and injuries to the athletic training/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: All University of Northern Iowa coaches (and appropriate athletics administrators) will receive the NCAA Concussion Fact Sheet for Coaches and will sign the Coach’s Concussion Responsibility Form, acknowledging that:

   - they have received and reviewed the NCAA Concussion Fact Sheet for Coaches and participated in education related thereto;
   - they will encourage their student-athletes to report their illnesses and injuries to the athletic training/sports medicine staff, especially any signs or symptoms of a concussion;
they will refer any student-athlete whom they suspect of sustaining a concussion to the proper medical authority; and

they have read and understand the University of Northern Iowa 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 and athletic training/sports medicine staff members have unchallengeable authority to determine concussion management, return-to-play, and medical clearance.

3. **Athletic Training/Sports Medicine Staff:** The University of Northern Iowa Athletic Training/Sports Medicine staff (athletic trainers and team physicians) will undergo at least annual training sessions on the diagnosis and treatment of head injuries and this Concussion Management Plan. Each member will receive the NCAA Concussion Fact Sheet for Coaches and will sign the Athletic Training/Sports Medicine Staff Concussion Responsibility Form, acknowledging that:

- they have received and reviewed the NCAA Concussion Fact Sheet for Coaches and participated in education related thereto;
- they will encourage the coaching staff and the student-athletes to report their illnesses and injuries, especially any signs or symptoms of a concussion;
- they have read and understand the University of Northern Iowa 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 and athletic training/sports medicine staff members have unchallengeable authority to determine concussion management, return-to-play, and medical clearance.

4. **Director of Athletics/Associate Directors of Athletics with Sport Oversight** will receive the NCAA Concussion Fact Sheet for Coaches and will sign the Coach’s Concussion Responsibility Form, acknowledging that:

- they have received and reviewed the NCAA Concussion Fact Sheet for Coaches and participated in education related thereto;
- they will encourage the coaching staff and the student-athletes to report their illnesses and injuries to the athletic training/sports medicine staff, especially any signs or symptoms of a concussion;
- they have read and understand the University of Northern Iowa 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 and athletic training/sports medicine staff members have unchallengeable authority to determine concussion management, return-to-play, and medical clearance.
**PRE-PARTICIPATION/BASELINE ASSESSMENT**

- All student-athletes will undergo a pre-participation history and physical examination by a University of Northern Iowa Team Physician which includes brain injury and concussion history.
- All student-athletes will undergo pre-participation baseline concussion assessment testing – specifically computerized neurocognitive testing using ImPACT and the Sport Concussion Assessment Tool – 3rd Edition (SCAT 3). These assessment tools include brain injury and concussion history, symptom evaluation, cognitive assessment, visual tracking, saccadic eye movements and balance evaluation.
- Team physician judgment will determine pre-participation clearance and/or the need for additional consultation or testing based upon known individual concussion modifiers.
- New baseline concussion assessment will be considered at six months or beyond for any student-athlete with a documented concussion, especially those with complicated or multiple concussion history. This will be determined by the team physician.
- Additionally, for all first year or transfer student-athletes in the following UNI contact/collision sports: football, basketball, pole vault, soccer and wrestling or new student-athletes with any pertinent medical history of concussion(s) a King-Devick baseline test.

**RECOGNITION AND EVALUATION**

1. Medical personnel from the UNI Athletic Training/Sports Medicine staff with training in the diagnosis, treatment and initial management of acute concussion must be present at all UNI NCAA competitions in the following contact/collision sports: football, basketball, pole vault, soccer and wrestling. To be present means to be on site directly at the NCAA competition site. Medical personnel may be from either team, or may be independently contracted for the event.

2. Medical personnel from the UNI Athletic Training/Sports Medicine staff with training in the diagnosis, treatment and initial management of acute concussion must be available at all UNI NCAA practices in the following contact/collision sports: football, basketball, pole vault, soccer and wrestling. To be available means that, at a minimum, the UNI medical personnel can be contacted at any time during the practice via telephone, message, email or other immediate communications means and arrangements can be made for the athlete to be evaluated.

3. If a student-athlete reports or displays signs, symptoms, or behaviors that a University of Northern Iowa athletics staff member believes are consistent with a concussion, the University of Northern Iowa athletics staff member shall inform the student-athlete's coach, as well as the student-athlete's team physician and/or team staff athletic trainer. The student-athlete shall be removed from any practice or competition, and will be evaluated by a team physician or athletic trainer with concussion management experience who will make a determination of whether there is a basis for a suspected concussion.

4. A student-athlete with a suspected concussion shall be evaluated by the by a team physician or athletic trainer for cognitive, physical, and behavioral signs and symptoms of a concussion, included but not limited to: headaches, amnesia, nausea, dizziness, balance and visual disturbances, poor SCAT3 scores versus the baseline, and light sensitivity. If these symptoms are present following the SCAT3 test, the student-athlete will be initially withheld from athletic activity for the remainder of the calendar day.

5. A student-athlete with a suspected concussion shall be clinically assessed for cervical spine trauma, skull fractures and inter-cranial bleeding by a team physician or staff athletic trainer.
6. The University of Northern Iowa Athletic Training/Sports Medicine Emergency Action Plan is enacted if any student-athlete shows signs of prolonged unconsciousness, spinal injury, repetitive emesis (vomiting), focal neural deficit or a diminishing neurological status or Glasgow Coma Scale <13. A physician will evaluate the student-athlete at the hospital and the student-athlete will be hospitalized if their condition warrants.

7. 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 team staff 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.

8. A treating team staff 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.

9. 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 follow-up testing (which may include but is not limited to SCAT III testing); the timing and nature of any follow-up testing are in the discretion of the treating team physician.

10. Student-athletes and/or athletic training/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 University of Northern Iowa 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 team staff athletic trainer, and the team physician or athletic trainer shall initiate normal evaluation and return-to-play procedures.

11. 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 athletic training/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.

12. Visiting team student-athletes evaluated by University of Northern Iowa athletic training/sports medicine staff will be managed under the same guidelines as University of Northern Iowa student-athletes while under the evaluation of University of Northern Iowa athletic training/sports medicine staff.

13. If a University of Northern Iowa student-athlete reports or displays signs, symptoms, or behaviors that a University of Northern Iowa 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 University of Northern Iowa athletic trainer shall manage the student-athlete under the guidelines set forth in this Plan, and should consult with a local 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.
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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 UNI Emergency Action Plan/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
- Focal neural deficit or a diminishing neurologic status or Glasgow Coma Scale <13

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). In the alternative, such student-athletes should be liberally referred to Sartori Hospital for observation.

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 for an example of information typically provided upon discharge).

3. As appropriate, the athletic training/sports medicine staff should communicate with UNI 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 University of Northern Iowa 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

- A student-athlete diagnosed with a concussion is required to be medically cleared by a physician (i.e., team physician or other medical physician designated by the University of Northern Iowa Athletic Training/Sports Medicine staff) before returning to practice or competition.
- Team physicians shall have unchallengeable authority to determine concussion management, return-to-play and medical clearance. In the absence of a team physician, athletic trainers have unchallengeable authority to withhold a student-athlete from practice or competition.
A team physician may allow monitored exertional activity prior to asymptomatic status.

After symptoms return to baseline, follow up ImPACT, King-Devick and SCAT3 will be completed and results reviewed by team physician.

Rate of return to play progression shall be determined and supervised by a team physician and the team staff athletic trainer.

Return to play progression involves a gradual, step-wise increase in physical demand, sport specific activities and the risk for contact. Each step requires the student athlete to progress through each step listed below without his/her condition becoming worse before with 24 hours taking place between each step before he/she will be allowed to return to activity and play. If during the course of the progressive steps any signs or symptoms reoccur, the student-athlete must return to the previous step until the signs and symptoms no longer occur.

Step 1: Light aerobic exercise without resistance training (e.g. exercise bike). HR 100-140/RPE 3-4

Step 2: Sport specific activity without head impact (e.g. strength training and sport specific agility drills). HR 120-160/RPE 4-6

Step 3: Non-contact practice or equivalent with progressive resistance training. HR 140-180/RPE 6-8

Step 4: Unrestricted training including contact drills. HR 160-200/RPE 8-10

Step 5: Return to game/competition activity.

- If symptoms return with activity, the progression should be halted and restarted at the preceding symptom-free step.
- RPE: Rate of Perceived Exertion = subjective measurement of exercise intensity on a 0-10 scale.

RETURN TO LEARN GUIDELINES

- Following a diagnosis of concussion cognitive rest will be immediately prescribed. No classroom activity on the same day as a concussion injury.
- In consultation with the athletic training services/sports medicine staff, the athletic department academic services staff member assigned to the student-athlete’s sport will be considered the point-person(s) to assist the student-athlete in navigating the return to academic and team cognitive activities. This academic services staff member will assist with modification of schedule and academic accommodations as appropriate.
- The gradual return to cognitive (classroom/studying) activity is based on the return of concussion symptoms following cognitive exposure and involves a step-wise increase in cognitive demand:
  - a. If the student-athlete cannot tolerate light cognitive activity, he/she should remain at home/dorm.
  - b. Gradual return to classroom/studying as tolerated.
- Student-athletes with concussion symptoms lasting greater than two weeks should be reevaluated by a team physician as appropriate.
- Student-athletes with symptoms that worsen with academic challenges should be re-evaluated by a team physician.
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- For complex cases of prolonged return-to-learn, the level of academic adjustment needed will be decided by a multi-disciplinary team that may include, but is not limited to: the team physician, staff team athletic trainer, team neurologist, faculty athletics representatives, academic services staff, course instructors, administrators, disability services, coaches, etc.
- A student-athlete with persistent or prolonged concussion symptoms whose academic challenges cannot be managed through schedule modification/academic accommodations will be referred to the Office of Disability Services on campus for consideration of additional academic accommodations consistent with the ADAAA.

DOCUMENTATION OF CONCUSSION MANAGEMENT

- Team physicians will document their clinical care for each concussion in the student athlete’s patient record/file.
- The team staff athletic trainer(s) will document their clinical care and details about return to play progression for each concussion in the student athlete’s SportsWare electronic medical record/file.

REDUCING EXPOSURE TO HEAD TRAUMA

The University of Northern Iowa is committed to creating a culture of reducing exposure to head trauma. The following principles will be adhered to:

- The University of Northern Iowa will take a “safety first” approach to all of our sports.
- The University of Northern Iowa will provide education to coaches and student-athletes regarding safe play, proper technique and taking the head out of contact.
- The University of Northern Iowa will adhere to the NCAA Inter-Association Consensus: Year-Round Football Practice Contact Guidelines.
- The University of Northern Iowa will adhere to the NCAA Inter-Association Consensus: Independent Medical Care Guidelines.
- The University of Northern Iowa will aim to reduce gratuitous contact during practices in all sports.

KEY LITERATURE REVIEWED:


8 (updated 4/5/17)