Grinnell College Head Injury Assessment, Management, and Return to Participation Guidelines

Introduction

Grinnell College is committed to ensuring the health and safety of its student-athletes. In order to limit the amount and severity of head trauma, and in accordance with NCAA legislation [Division I Constitution 3.2.4.18; Division II Constitution 3.3.4.16; Division III Constitution 3.2.4.16], Grinnell College has adopted the following Concussion Safety Protocol for all student-athletes. This protocol establishes and/or identifies: (1) a sport-related concussion definition; (2) concussion safety multidisciplinary team; (3) independent medical care; (4) preseason education; (5) pre-participation assessment; (6) recognition and diagnosis of concussion; (7) concussion management; (8) return to activity, including both return-to-learn and return-to-play; (9) reducing exposure to head trauma; and (10) written certificate of compliance signed by the athletics health care administrator.

1. Concussion Definition

The 5th International Conference on Concussion in Sport defines concussion as follows:

Sport-related concussion (SRC) is a traumatic brain injury induced by biomechanical forces. Several common features that may be utilized to clinically define the nature of a concussion head injury include:

- SRC may be caused either by a direct blow to the head, face, neck or elsewhere on the body with an impulsive force transmitted to the head.
- SRC typically results in the rapid onset of short-lived impairment of neurological function that resolves spontaneously. However, in some cases, signs and symptoms evolve over a number of minutes to hours.
- SRC may result in neuropathological changes, but the acute clinical signs and symptoms largely reflect a functional disturbance rather than a structural injury and, as such, no abnormality is seen on standard structural neuroimaging studies.
- SRC results in a range of clinical signs and symptoms that may or may not involve loss of consciousness. Resolution of the clinical and cognitive features typically follows a sequential course. However, in some cases symptoms may be prolonged.
- The clinical signs and symptoms cannot be explained by drug, alcohol or medication use, other injuries (such as cervical injuries, peripheral vestibular dysfunction, etc.) or other comorbidities (e.g., psychological factors or coexisting medical conditions).

2. Concussion Management Multidisciplinary Team

Grinnell College recognizes that, in many cases, a single medical professional is insufficiently equipped to manage all aspects of recovery from head trauma in a collegiate environment. As such, a multidisciplinary team will be utilized and will include, but is not limited to, Athletic
Trainers, Team Physician, Athletics Administrator, Student Health and Wellness, and the Office for Disability Resources.

3. Independent Medical Care

As required by NCAA Independent Medical Care legislation, team physicians and athletic trainers shall have unchallengeable autonomous authority to determine concussion management and return-to-activity decisions for all student-athletes. Further, the athletics administrator shall ensure that the concussion safety protocol is available for, and rehearsed by, all athletics personnel.

4. Preseason Education

All Grinnell College student-athletes will complete, on an annual basis, an acceptance of risk form prior to participating in Grinnell College athletics. The acceptance of risk form specifically identifies signs and symptoms of concussions and the student-athlete must sign acknowledging that they understand they are responsible to report their injuries, including signs and symptoms of a concussion. First year student-athletes will also be provided with concussion education, consisting of XLNTbrain Concussion Awareness video and pass a quiz demonstrating concussion awareness. Grinnell College will allow all student athletes the opportunity to discuss the concussion education material.

All Grinnell College head coaches, team physicians, athletic trainers, administrators, and other personnel involved in student-athlete health and safety decision making will be given the NCAA Concussion Fact Sheet, on an annual basis, and be required to understand that if they suspect a student athlete has suffered a concussion that student athlete should be immediately removed from practice or competition and be evaluated by someone knowledgeable in concussion assessment and management. Grinnell College will allow all personnel the opportunity to discuss the concussion education material.

5. Pre-Participation Assessment

All NCAA student-athletes will complete a one-time, pre-participation baseline neurocognitive assessment encompassed in the web-based XLNTbrain Sport Concussion Management Program, prior to their first season of NCAA competition. No athlete will be allowed to participate in any activity until the education and testing has been completed. Within XLNTbrain, student-athletes must also sign in acknowledgement that they understand the material and will report any suspected head injury. This pre-participation assessment will include the following:

- History of concussion, or brain injury, neurologic disorder, and mental health symptoms and disorders.
- Symptom evaluation. (Likert scale)
- Neuro-cognitive assessment. (XLNTbrain-Cog test)
- Balance evaluation. (BESS)
The team physician determines pre-participation clearance and any need for additional consultation or testing. Special consideration will be given for new baseline concussion assessment six months or beyond for NCAA student-athletes who have suffered a concussion or who have a complicated concussion history.

6. Recognition and Diagnosis of Concussion

A member of the Grinnell College medical team with training in the diagnosis, treatment and initial management of acute concussion will be present at all NCAA competitions in the following high-risk sports at Grinnell College: football, soccer, pole vault, basketball, diving, baseball and softball.

**NOTE:** To be present means to be on site at the campus or arena of the competition. Grinnell College will ensure that such personnel will be from Grinnell College, from the opposing team, or will be contracted independently for the event.

A member of the Grinnell College medical team with training in the diagnosis, treatment and initial management of acute concussion will be available at all NCAA practices in the following high-risk sports at Grinnell College: football, soccer, pole vault, basketball, diving, baseball and softball.

**NOTE:** 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. Further, the case can be discussed through such communication, and immediate arrangements can be made for the athlete to be evaluated.

Symptoms of concussion include, but are not limited to: (1) physical symptoms of headache, nausea, balance problems, dizziness, visual difficulty, fatigue, sensitivity to light, sensitivity to noise, headache, feeling "out of it" or "foggy," vision changes, feeling dazed or stunned; (2) cognitive symptoms of feeling mentally foggy or slowed down, difficulty concentrating, difficulty remembering, forgetfulness, confusion, feeling slow; (3) emotional symptoms of irritability, sadness, nervousness, feeling more emotional; (4) sleep symptoms of drowsiness, sleeping more or less than usual, difficulty falling asleep.

Visible signs of concussion include but are not limited to: lying motionless, unconsciousness, vomiting, vacant look, slow to get up, balance difficulty or incoordination, clutching the head.

If an athlete, teammate, coach, official or member of medical staff identifies signs, symptoms, or behaviors consistent with concussion, the following will take place immediately:

- The student-athlete must be removed from practice or competition for evaluation.
- The student-athlete must be evaluated by a member of the medical team with concussion experience.
• The student-athlete must be removed from practice/play for, at a minimum, that calendar day if concussion is confirmed or suspected.
• The team physician will be contacted and arrangements will be made for the student athlete to have an evaluation with the team physician.
• The student-athlete will have regular weekly follow-up visits with the team physician while symptomatic to allow for continued follow up and monitoring of their condition.
• The student-athlete who has been diagnosed with a concussion must be cleared by a physician before being permitted to return to play in practice or competition.
• The student athlete may only return to play the same day if they have been evaluated by a member of the medical team trained in the evaluation of concussion and a concussion is no longer suspected.

The initial concussion evaluation, using a clinical assessment and the XLNTbrain Sideline Assessment Tool if available, may include:

• Clinical assessment for cervical spine trauma, skull fracture, intracranial bleed and catastrophic injury.
• Symptom assessment. (Likert Scale)
• Physical and neurological exam. (Standard Assessment of Concussion)
• Cognitive assessment. (Standard Assessment of Concussion)
• Balance exam. (Modified Balance Error Scoring System)
• Vestibular and Oculomotor testing. (Vestibular and Oculomotor Sensitivity assessment)

Completion of the entire assessment is not required if the athlete is severely impaired and obviously concussed.

If a student-athlete receives an impact to the head but no immediate concussive symptoms are observed and a diagnosis of concussion is not made during the injury assessment, the athlete will be allowed to return to play. However, it is understood that symptoms of concussion can be delayed and the student-athlete will have a follow-up evaluation the next day with a member of the medical team.

7. Post-concussion Management

An emergency action plan will be in place for any suspected or diagnosed concussion. This plan includes rehearsed arrangements for emergency medical transportation. The emergency action plan will be activated for any of the following:

• If performed, Glasgow Coma Scale < 13 on initial assessment, or GCS <15 at 2 hours or more post-initial assessment.
• Prolonged loss of consciousness.
• Focal neurological deficit suggesting intracranial trauma.
• Repetitive emesis.
• Persistently diminished/worsening mental status or other neurological signs/symptoms.
• Spine injury.
Because concussion may evolve or manifest over time, for all suspected or diagnosed concussions, the student-athlete will be re-assessed for symptom severity every 30 minutes as needed after initial injury, as well as every 24 hours to identify worsening or continuing symptoms.

For all cases of diagnosed concussion, the student-athlete and another responsible adult will be provided oral and/or written care regarding concussion management. Such instructions must be documented. The Resident Life Coordinator on call will be notified and informed of the student-athlete's condition and recommended care instructions for all Grinnell College student-athletes suffering from a suspected concussion.

As most student-athletes with concussion have resolution of symptoms in 7-10 days, all student-athletes with atypical presentation or persistent symptoms in order to consider additional diagnoses, best management options, and consideration of referral. will be re-evaluated by a physician. Such re-evaluation will be performed to confirm the concussion diagnosis, or to consider co-morbid or post-concussion diagnoses such as: fatigue and/or sleep disorder, migraine or other headache disorders; mood disorders such as anxiety and depression; ocular or vestibular dysfunction; cervicalgia/neck pain; or other post-concussion diagnoses.

8. Return to Activity

Student-athletes require a graduated program of care following concussion, both for return-to-learn and return-to-play. Both will be considered carefully.

Return-to-Learn

Returning to academic activities after a concussion is a parallel concept to returning to play after concussion. After concussion, brain energy may not be available to perform normal cognitive exertion and function. The return-to-learn concept should follow an individualized and step-wise process overseen by a point person within the athletics department, who will work in conjunction with a multidisciplinary team.

The Grinnell College multidisciplinary team may vary student-to-student, depending on the difficulty in returning to a normal school schedule. Such team will include, but not necessarily be limited to:

- Team physician.
- Athletic trainer.
- Student Health and Wellness.
- Neuropsychologist consultant.
- Faculty athletics representative.
- Academic counselor.
- Course instructor(s).
- College administrators.
- Office of Disability Resources representative.
- Coaches.
Student-athletes who have suffered a concussion will not return to classroom on the same day. Following the first day of rest, the student-athlete will undergo an individualized plan that will include the following:

- The plan will be compliant with ADAAA.
- The student-athlete will remain at home or in the dorm if he/she cannot tolerate light cognitive activity. Otherwise, return to the classroom and studying will be as tolerated and on a gradual basis as allowed by the team physician.
- The student-athlete will meet with Student Health and Wellness to assist in notifying professors and others about the student-athlete’s cognitive restrictions and classroom/activity modifications.
- The student-athlete may be referred to the Office of Accessibility and Disability Resources for further assistance in returning to classroom participation.

The academic schedule will normally not need to be adjusted for more than two weeks. If the student-athlete continues to require accommodations after two weeks, the following will occur:

- The student-athlete will be re-evaluated by a physician (or their designee), which will confirm the diagnosis or consider other post-concussion diagnoses.
- Other members of the multi-disciplinary team will become engaged as needed.
- For more prolonged return-to-learn cases, consideration will be given to working with other campus resources, all of which will be consistent with ADAAA. Such resources will include any of the following:
  - Learning specialists.
  - Office of Disability Resources.
  - ADAAA office.

**Return-to-Sport**

It is important to recognize each return-to-sport plan will be individualized and supervised by a Grinnell College health care provider with expertise in concussion management. Final determination of unrestricted return-to-sport will be made by the Grinnell College team physician or qualified designee.

The initial treatment for all NCAA student-athletes following concussion is at least 1-2 days of relative physical and cognitive rest. Relative rest should continue until the student-athlete has returned to their respective pre-concussion baseline status. Discretion can be used by the health care provider to introduce mild aerobic activity during the transition period of returning to pre-concussion baseline status, so long as such activity does not exacerbate post-concussion symptoms or signs.

Once the student-athlete has returned to XLNTbrain baseline status a stepwise return-to-sport protocol will take place. Progression from one step in the protocol to the next can take place when the stepwise activity does not lead to worsening or new symptoms. The stepwise progression includes:
1. Light aerobic exercise such as walking, swimming or riding a stationary bike for at least 15 minutes. No resistance training is permitted. If asymptomatic with light aerobic exercise, then;

2. Heavy aerobic training/Sport-specific activity (mode, duration and intensity specific) exercise with no head impact. If asymptomatic with sport-specific activity, then;

3. Non-contact sport drills and resumption of progressive resistance training. If asymptomatic with non-contact drills and resistance training, then;

4. Full-contact practice and unrestricted training. If asymptomatic with full-contact practice, then;

5. Unrestricted return-to-sport is allowed, with clearance by Grinnell College team physician or qualified designee.

Unrestricted return-to-sport should not occur prior to unrestricted return-to-learn for injuries occurring while the athlete is enrolled in classes.

If, at any point in the RTP protocol, the student-athlete experiences a return of their symptoms the activity will be stopped and the athlete will rest for at least 24 hours or until their signs and symptoms return to baseline (whichever is longer). The student-athlete may then resume the RTP protocol. Although most symptoms clear within a few days, post concussive symptoms may last weeks or months. As concussions may have long term effects on the brain, an athlete who presents with severe or multiple concussions, or shows delayed resolution of symptoms, may be referred to a neurologist or neuropsychologist for further evaluation.

9. Limiting Exposure to Head Trauma

Grinnell College is committed to student-athlete health and safety. To that end, Grinnell College will be proactive in efforts to minimize exposure to head trauma, in a manner consistent with Interassociation Recommendations: Preventing Catastrophic Injury and Death in Collegiate Athletics. The following procedures are in place:

- Concussion Fact Sheets, plus education regarding safe play and proper technique, are made available to student-athletes on an annual basis.
- Viewing of the concussion awareness video and taking a concussion awareness quiz through XLNTbrain as part of a baseline concussion assessment.
- Concussion Fact Sheets, plus education regarding safe play and proper technique, are made available to coaches, sport administrators, team physicians, athletic trainers and strength and conditioning coaches on an annual basis.
- Adherence to ‘Interassociation Consensus: Year-Round Football Practice Contact Recommendations.’
- Reducing gratuitous contact during practice.
- Taking the head out of contact.
- Teams will take a “safety-first” approach to sport.
- All practices and competitions adhere to existing ethical standards.
- Using playing or protective equipment (including helmets) as a weapon is strictly prohibited during all practices and competitions.
• In all practices and competitions, deliberately inflicting injury on another player is prohibited.
• All playing and protective equipment (including helmets), as applicable, meet relevant equipment safety standards and related certification requirements.
• All contact/collision, helmeted practices and competitions adhere to keeping the head out of blocking and tackling.