Williams College Athletic Concussion Policy 2024

It is the goal of Williams College to provide its student-athletes with the highest level of care. This document serves as an outline for the consistent management of closed head injuries. It was developed using the most recent scientific research, and therefore will be periodically reviewed to ensure its consistency with the latest standards of care. For the purpose of this document, the terms closed head injury, mild traumatic brain injury (mTBI), and concussion will be used interchangeably. While this policy will guide medical professionals’ decision making related to closed head injuries sustained by the college’s student athletes, it does not supplant the clinical judgment of the professionals responsible for evaluation, treatment, and return-to-sport clearance of those students. Treatment will be individualized to match the needs of each specific case.

**Concussion Definition:** According to the Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport – Amsterdam, October 2022: Sport-related concussion is a traumatic brain injury caused by a direct blow to the head, neck or body resulting in an impulsive force being transmitted to the brain that occurs in sports and exercise-related activities. This initiates a neurotransmitter and metabolic cascade, with possible axonal injury, blood flow change and inflammation affecting the brain. Symptoms and signs may present immediately, or evolve over minutes or hours, and commonly resolve within days, but may be prolonged. No abnormality is seen on standard structural neuroimaging studies (computed tomography or magnetic resonance imaging T1- and T2-weighted images), but in the research setting, abnormalities may be present on functional, blood flow or metabolic imaging studies. Sport Related concussion results in a range of clinical symptoms and signs that may or may not involve loss of consciousness. The clinical symptoms and signs of concussion cannot be explained solely by (but may occur concomitantly with) drug, alcohol, or medication use, other injuries (such as cervical injuries, peripheral vestibular dysfunction) or other comorbidities (such as psychological factors or coexisting medical conditions).

The following concepts will be implemented in the process of educating, assessing, treating, and safely returning the student-athlete to academics and/or athletics:

**Education**

- Student-athletes are required to review both the NCAA Concussion Fact Sheet and view an NCAA Concussion Safety Video on an annual basis. Completion of these requirements should take place prior to participation in their respective sport season and will be recorded in the form of signed acknowledgement within the College's Electronic Medical Records System. Information will be reviewed in group sessions with student-athletes who will be encouraged to discuss the education materials and ask questions.
- Coaches, the Director of Athletics, Athletic Trainers, and any Physicians and other personnel involved in student-athlete health and safety decision making are required to review the NCAA Fact Sheet for Coaches annually. Coaches signatures will be recorded in the roster management system (ARMS). Any of the aforementioned parties, who are not eligible to receive education electronically through the ARMS system, will complete physical copies with signed acknowledgement of their review to be kept on file with the office of Sports Medicine. Information will be reviewed in group sessions with coaches and administrators who will be encouraged to discuss the education materials and ask questions.
Reducing Head Impact Exposure

Williams College is committed to protecting the health of and providing a safe environment for each of its participating NCAA student-athletes. To this end and in accordance with NCAA association-wide policy, additional measures aimed at reducing exposure to head injuries will be consistent with the Interassociation Recommendations: Preventing Catastrophic Injury and Death in Collegiate Athletes and Consensus Statement on Concussion in Sport: The 6th International Conference on Concussion in Sport - Amsterdam October 2022 Examples include:

- Teams will adhere to existing ethical standards in all practices and competitions.
- Using playing or protective equipment (including the helmet) as a weapon will be prohibited during all practices and competitions.
- Deliberately inflicting injury on another player will be prohibited in all practices and competitions.
- All playing and protective equipment (including helmets), as applicable, will meet relevant equipment safety standards and related certification requirements.
- Teams will keep the head out of blocking and tackling in contact/collision, helmeted practices and competitions.
- Teams will emphasize education of proper technique to reduce head impact exposure for all contact and collision sports, with special emphasis in the pre-season.
- Team will adhere to policies and rules in sport that limit the number and duration of contact practices and activities in contact-collision sports.
- It is recommended that all ice hockey players wear a mouthguard.

Pre-Participation Baseline Assessment Testing*

Baseline testing for pre-participation in athletics will include the following assessments at the prescribed intervals:

- Brain Injury and Concussion History (completed annually as part of the pre-participation screening documentation with Sports Medicine)
- Cognitive Assessment and Symptom Evaluation (completed annually as part of the ImPACT baseline test)
- Balance Testing & Reaction Time (completed annually as part of the SWAY baseline test)
- Additional cognitive baseline measurements including inspection time, impulse control, and memory, may be administered through the SWAY App. Additional information about SWAY is available in Appendix C.

*Baseline testing may inform post-injury evaluation; however, student-athletes who have suffered a concussion may perform at the same level or even better than their baseline testing, as motivation and other factors may differ in post-concussion testing. Ultimately, baseline testing serves as one of many potential factors in making a clinical decision.

Incoming student-athletes (SA) with a concerning history of concussion(s) will have their information reviewed by a college physician or his/her designee prior to granting clearance for athletic participation. Examples of a concerning history may include:

- SAs who are currently symptomatic or who are participating in on-going concussion rehab therapy
• SAs with history of concussion in the past calendar year that have not been cleared by a physician or returned to full athletic participation since the time of injury
• SAs who identify a history of 3 or more concussions within the past 5 years

Returning student-athletes who did not complete the return-to-sport process during the previous academic year will also need to be cleared to play by a Williams College physician prior to resuming athletic activity.

**Availability of Medical Personnel at Competitions and Practices**

• Medical personnel, such as Athletic Trainers, with training in the diagnosis, treatment and initial management of acute concussion must be “present” at all NCAA competitions in the following contact/collision sports: alpine skiing; baseball; basketball; diving; field hockey; football; ice hockey; lacrosse; pole vault; rugby; soccer; softball; volleyball; wrestling. 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.
• Medical personnel, such as Athletic Trainers, with training in the diagnosis, treatment and initial management of acute concussion must be “available” at all NCAA practices in the following contact/collision sports: Alpine skiing; baseball; basketball; diving; field hockey; football; ice hockey; lacrosse; pole vault; rugby; soccer; softball; volleyball; wrestling. 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.

**Initial Suspected Concussion Evaluation**

• Any student-athlete who exhibits the signs, symptoms, and/or behaviors consistent with concussion will be removed from practice or competition for evaluation. Signs that warrant immediate removal from play include actual or suspected loss of consciousness, seizure, tonic posturing, ataxia, poor balance, confusion, behavioral changes and amnesia.
• A qualified health care professional will assess and manage any student-athletes who exhibit these signs, symptoms, and/or behaviors, in such a manner as outlined in this policy.
• Initial Suspected Concussion Evaluation should allow ample time for the completion of a multimodal assessment
• Initial suspected concussion assessment will look for evidence of cervical spine trauma, skull fracture, intracranial bleed, and/or other catastrophic injury, including those listed in the Emergency Action Plan below. Additional evaluation measures will include symptom assessment, physical & neurological exam, cognitive assessment, and balance testing.
• The SWAY application will be used to evaluate and record the components of the initial suspected concussion evaluation. This includes the assessment of red flags, symptom evaluation, other physical & neurological tests (including the documentation of cranial nerves assessment), cognitive & balance examination through the use of the following modules: sideline evaluation, symptom score, reaction time, impulse control, inspection time, memory, and m-BESS test. In the event the technology is unavailable, or for the evaluation of visiting student-athletes, the standard sideline evaluation outlined in Appendix B will be utilized.
• Student-athletes will not be allowed to participate, or continue to participate, in practice or game situations on the same calendar day if concussion is confirmed or suspected by the
evaluating medical professional.

- A student-athlete may only return to play the same day if the evaluating health care professional determines that the sign was not related to a concussion (eg, the player has sustained a musculoskeletal injury and is thus unable to balance) Even in such cases, the professional should consider a follow-up assessment the next day because initial symptoms may evolve over hours.
- Notification that a concussion assessment has occurred should be sent via e-mail to all appropriate health care personnel (see Appendix A). Copy of this initial email notification should also be entered into the College’s EMR system

**Emergency Action Plan**

Immediate removal from play and assessment for possible transport to local hospital/trauma center will occur when any of the following symptoms are present:

- Neck pain or tenderness. • Seizure or convulsion. • Double vision • Loss of consciousness
- Weakness or tingling/burning in more than one arm or in the legs. • Deteriorating conscious state. • Vomiting. • Severe or increasing headache. • Increasingly restless, agitated or combative behavior • Visible deformity of the skull

**Post-Injury Management Plan**

- If evidence of a concussion is identified, consultation or referral will be made to the Student Health Center for further evaluation by the appropriate health care provider generally within a 72 hr period since initial evaluation.
- Any evaluation records not directly entered into the electronic SWAY application will be faxed to the Student Health Center for review by the appropriate health care providers. Examples may include sideline evaluations and symptom score sheets completed on the forms listed in Appendix B. For those initial evaluations entered directly into the SWAY application, the evaluating providers in Sports Medicine will be responsible for scanning a copy of the evaluation directly into the College’s EHR system for record keeping purposes.
- Student-athletes who have been evaluated for a concussion will be given written instructions (Appendix E) that identify pertinent information regarding the injury including both follow-up instructions and emergency signs and symptoms and be shared with an additional responsible person.
- Student-athletes with suspected concussions will be advised to refrain from significant physical and cognitive activity until further diagnosis and treatment plan has been determined by the providers at the Student Health Center. Symptom-limited, light aerobic physical activity such as walking can generally begin within 24-48 hours. Complete rest and isolation is not to be advised even in the initial 24-48 hr time frame. Reduced screen use in the first 48 hours after injury may be advised.

**Student Health Center - Follow-Up Evaluation**

Post-Injury evaluation at the Student Health Center will include mechanisms for:

- Symptom evaluation • Immediate and delayed memory. • Concentration. • Orthostatic vital signs. • Cervical spine assessment. • Neurological evaluation. • Balance and tandem gait assessment. • Modified VOMS
Further evaluation for the following will occur as clinically indicated:

- Screening for fear, anxiety or depression or other mental health issues. • Screening for sleep disturbance. • Graded aerobic exercise testing

Instructions regarding permissible levels of physical activity, ADLs (including screening time), and academic accommodations/limitations will be discussed

Student-athletes with atypical presentation or persisting symptoms of > 4 weeks will be re-evaluated in order to consider additional diagnoses, management options, and/or referral. Examples of additional diagnoses include, but are not limited to:

- Fatigue and/or sleep disorder. • Migraine or other headache disorders. • Mental health symptoms and disorders. • Ocular dysfunction. • Cervical and vestibular dysfunction. • Cognitive impairment. • Autonomic dysfunction, including orthostatic intolerance and postural orthostatic tachycardia syndrome • Pain

**Academic Accommodations and Return to Learning**

It is recognized that many incidences of injury will require a period of cognitive rest prior to resuming academic activities. While the vast majority of young adults have a full return-to-learn with no additional academic support by 10-days post-injury, the effects of mTBI can vary greatly from case to case, and an individualistic multidisciplinary approach will be taken with regards to managing a student’s return to the academic environment for both classroom attendance and studying as tolerated.

- Academic Accommodations and the Return to Learn (RTL) will be managed by the overseeing providers through the Williams College Student Health & Wellness Services in conjunction with the Office of Accessible Education.
- Additional members of the multidisciplinary team may include, but are not limited to:
  - Professors/Instructors
  - Athletic Trainers/Physical Therapist
  - Dean/Academic Adviser
  - Psychologists/Counselors
  - Faculty Athletic Representative (FAR)
- Students who are unable to engage in light cognitive activity will be instructed to refrain from participation in academic work until a point where it can be tolerated without significantly increasing their symptom score. Individualized initial plans may address environment, physical, curriculum, and/or testing adjustments. Staying at home/dorm may be an acceptable practice during the initial steps of the process.
- Individual needs and progressive steps within the process will be overseen by the providers of the Williams College Health Services in consultation with the appropriate members of the multidisciplinary team.
- Students requiring academic accommodations will be referred to the Office of Accessible Education in compliance with the Americans with Disabilities Act (ADA).
- Modifications to the student’s academic schedule and load will continue as long as necessary provided the relevant multi-disciplinary team is in agreement that the individual is making progress, following up with all medical appointments, and may still meet the academic requirements that have been agreed upon.
- Students whose concussion symptoms worsen with academic work or who continue to have difficulty engaging in moderate cognitive activity after a period of two weeks will be evaluated by the overseeing physician where additional external resources will be discussed.
**Return-to-Sport Criteria**

The return-to-sport process is under the direction of Williams College health care providers with the clearance for returning to practice or competition to be made by the overseeing physician. Determining the length of rest and return to play will be based on the nature, severity, and duration of symptoms as well as the student athlete’s medical, psychiatric, and prior concussion history and will usually follow the return-to-sport progression described below. General criteria for Return-to-Sport include:

- Successfully tolerates any symptom-limited activity including ADLs, light to moderate aerobic exercise (including light resistance training), and sport specific individual training as dictated by the overseeing provider (if applicable).
- Concussion related signs and symptoms have resolved and any non-concussion related signs and symptoms have returned to baseline levels
- Is able to fully engage in academic activities without symptoms or additional accommodation
- Successfully completes post-injury SWAY testing protocol for balance and reaction time within the standard <10% accepted deviation
- Successfully completes the post-injury ImPACT test and physician review
- Successfully completes asymptomatic exercise protocol (aerobic, resistance, sport specific)
- Remains symptom-free during non-contact training activities
- Remains symptom-free during unrestricted training activities

Any NCAA student-athlete re-engaging in the same athletic season in which the injury occurred must complete the steps outlined in the Return to Sport criteria listed above.

In consultation with a medical provider from the Student Health Center, Athletic Trainers may implement physical activity prior to clearance from the overseeing physician. However, final clearance must be given prior to both “non-contact” and “unrestricted” practice/training drills

Student-athletes whose symptoms have returned to baseline, and who have fully reengaged in exercise and athletic activity, may be cleared for return to collegiate athletics without progressing through the individual steps of the Return to Sport process. Examples of these occurrences may include student-athletes who have recovered over a period of absence from the College, such as an academic break, or those who were unable to return within their given season and have shown complete recovery over time. A decision to deviate from the standard Return to Sport process must be approved by a physician.

**Return-to-Sport Progression**

The Return to Sport (RTS) process is a step-wise approach involving the gradual progression of exercise and sport-related activities. The progression outlined below is a standing order from the overseeing physician to be implemented by his or her designee, the athletic trainer. Symptomatic exercise prescription should be discussed with a provider at the Health Center prior to implementation. Student-Athletes may begin Step 1 (ie, symptom-limited activity) within 24 hours of injury, with progression through each subsequent step typically taking a minimum of 24 hours. If more than mild exacerbation of symptoms (ie, more than 2 points on a 0–10 scale) occurs during Steps 1–3, the student-athlete should stop and attempt to exercise the next day. Athletes
experiencing concussion-related symptoms during Steps 4–6 should return to Step 3 to establish full resolution of symptoms with exertion before moving back to step 4. Documented determination of readiness for Steps 4-6 should be provided by a healthcare provider. After receiving clearance for progression by the overseeing Williams College physician, the athletic trainer may return the athlete to full competition status if the student-athlete successfully advances through Steps 4-6 of the RTS progression without the return of symptoms. (see also Appendix D)

1. Symptom-Limited Activity (24-48 hrs post-injury)

The student-athlete may participate in daily activities that do not exacerbate symptoms (i.e. walking)

2. Aerobic Exercise with light resistance training (not to exceed mild and brief exacerbation of symptoms)*

- 2A - Light Aerobic Exercise (up to 55% maxHR)
  - Stationary cycling up to 20 min max
  - May proceed to 2B, on the following day, if tolerated with only mild and brief exacerbated symptoms or less
- 2B - Moderate Aerobic Exercise (up to 70% max HR) & light resistance training
  - Stationary cycling up to 30 min max
  - May proceed to light resistance training (gradually increasing and not to exceed 50% 1RM) if moderately aerobic exercise is tolerated with only mild and brief exacerbated symptoms or less

*Mild and brief exacerbation of symptoms are described as an increase of no more than 2 points on a verbally self-reported scale of 0–10, for less than an hour, when compared with the baseline value reported prior to physical activity (0 = no symptoms & 10 = severe). **Patients must be at a described 7/10, or less, prior to beginning exercise.**

3. Individual Sport Specific Exercise: Sport-specific training away from the team environment

- Examples include running, change of direction and/or individual training drills away from the team environment without increased risk of head impact.
- Approximately 30 minutes
- Sport specific exercise may occur during the symptomatic phase with provider approval, given it does not raise symptoms above a mild and brief exacerbation

**Baseline Testing: SWAY & ImPACT**

Prior to progressing to the asymptomatic exercise prescription, the student-athlete must demonstrate the ability to complete the balance and reaction time modules from the SWAY application to a set deviation of less than 10% from baseline.

Additionally, progression to the asymptomatic exercise prescription requires the completion of the ImPACT test that is reviewed and interpreted by the provider who deems the resulting scores do not
deviate beyond an acceptable percentage below baseline. Interpretation of test scores are at the discretion of the providers of the Health Center and the overseeing physician. In cases where a baseline test was not obtained, results will be compared to statistical norms for the given population.

For more information regarding the SWAY & ImPACT tests please refer to Appendix C.

**Proceed to Step 4 only after resolution of signs and symptoms related to current concussion, including with and after physical exertion**

4. *Non-Contact Training Drill*** Often termed a “non-contact” practice, this step is intended to include sport specific activities without risking further contact to the head. The student-athletes may exercise to high intensity including more challenging training drills (eg, passing drills, multiplayer training) and can integrate into a team environment. The student-athlete should immediately stop if any symptoms occur.

5. *Unrestricted Training Drills:* The student-athlete may participate in normal training activities without restriction. The student-athlete should immediately stop if any symptoms occur.

6. *Clearance for Full Competition Situations:* Upon successful completion of the Return-to-Sport plan, the student-athlete can be cleared to fully participate in competition. After returning to sport, the student-athlete should immediately stop if any symptoms occur.

**Academic Accommodations and Return to Learn Considerations**

If academic accommodations were deemed necessary by participating members of the interdisciplinary staff, then the student-athlete, to the satisfaction of the overseeing medical provider, must be fully engaged in academic course load and attending all classes while remaining asymptomatic prior to advancing to non-contact training drills. Exceptions to this would include physician/practitioner directed exercise aimed at symptom improvement.

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**Appendix A: Health Care Personnel**

Notification of a concussion assessment should be sent via email to:

- **Health Center Providers and Physician**
  - Keri Noel, NP
  - Deanna Traversa, PA
  - Rachel Coffield, NP
  - Kristin Lamontagne, MD

- **Sports Medicine Staff and Team Physicians**
  - ATCs: Rodd Lanoue, Yasmin Wilkinson, Kelly Waller, Brian Dowling, Jillanna Simon, Carol MacQuarrie, Mike Becker
  - Suk Namkoong, MD & Eric Holmgren, MD
## Appendix B: Williams College Concussion Assessment

<table>
<thead>
<tr>
<th>Name: __________________________</th>
<th>Date/Time of Injury: __________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanism of injury: __________________</td>
<td></td>
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<tr>
<td>History of previous concussions: __________________</td>
<td></td>
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</tbody>
</table>

**See Attached Sheet for Symptom Checklist**

<table>
<thead>
<tr>
<th>Head/Skull: Normal Abnormal __________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck Pain: No / Yes: Tender to Palpation __________________</td>
</tr>
<tr>
<td>Loss of Conscious: No / Yes: Length of Time __________________</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Amnesia: No / Yes</th>
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</thead>
<tbody>
<tr>
<td>Retrograde Anterograde</td>
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</tbody>
</table>

**Orientation/Memory/Cognitive State:**

____________
____________
____________

**Cranial Nerve 2-12 Assessment:**

Grossly Intact / Not Intact
____________
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**Eyes:**

<table>
<thead>
<tr>
<th>Equal/Reactive: Yes / No</th>
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</thead>
<tbody>
<tr>
<td>Convergence: Yes / No</td>
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<tr>
<td>Nystagmus: Yes / No</td>
</tr>
<tr>
<td>Abnormal: __________________</td>
</tr>
</tbody>
</table>

**Balance:**

<table>
<thead>
<tr>
<th>Rhomberg: WNL / Abnormal</th>
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</thead>
<tbody>
<tr>
<td>Single Leg: WNL / Abnormal</td>
</tr>
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</table>

**Motor:**

<table>
<thead>
<tr>
<th>Tandem Walking: WNL / Abnormal</th>
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</thead>
<tbody>
<tr>
<td>Finger to Nose: WNL / Abnormal</td>
</tr>
</tbody>
</table>

**Follow-up:** Hospital / Physician / Athletic Trainer / Health Center

**Additional Testing/Follow-up Notes:** __________________

________________________________________________________

Evaluator: __________________________ Date: ________________

Reviewed By: __________________________ Date: ________________
# Concussion Graded Checklist - SCAT 6

**Name:** __________________________  **Date:** __________________________

**Date/Time of Injury:** __________________________  **Sport:** __________________________

<table>
<thead>
<tr>
<th>Symptom</th>
<th>None</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
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</thead>
<tbody>
<tr>
<td>Headache</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>“Pressure in head”</td>
<td></td>
<td></td>
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<tr>
<td>Neck Pain</td>
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<tr>
<td>Nausea or vomiting</td>
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<tr>
<td>Dizziness</td>
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<tr>
<td>Blurred vision</td>
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<tr>
<td>Balance problems</td>
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<tr>
<td>Sensitivity to light</td>
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<tr>
<td>Sensitivity to noise</td>
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<tr>
<td>Feeling slowed down</td>
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<tr>
<td>Feeling like “in a fog”</td>
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<tr>
<td>“Don’t feel right”</td>
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<tr>
<td>Difficulty concentrating</td>
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<tr>
<td>Difficulty remembering</td>
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<tr>
<td>Fatigue or low energy</td>
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<tr>
<td>Confusion</td>
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<tr>
<td>Drowsiness</td>
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<tr>
<td>Trouble falling asleep</td>
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<tr>
<td>More emotional</td>
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<tr>
<td>Irritability</td>
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<tr>
<td>Sadness</td>
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<tr>
<td>Nervousness or Anxious</td>
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<tr>
<td><strong>Total Symptom Score</strong></td>
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** Evaluated By: __________________________  **Date: __________________________
Appendix C: SWAY & ImPACT Testing

*Baseline Testing: SWAY*

The Sway System combines objective balance and cognitive measures to support healthcare professionals in performing accurate and informed evaluations. The application provides multiple modules aimed at aiding in the assessment of a patient’s balance, cognitive function, and symptom evaluation.

- **Balance Assessment:** The SWAY balance application measures stability using the built-in motion sensors of any mobile device or tablet to quantify postural sway. While the device is pressed against the chest, a proprietary motion analysis algorithm calculates stability. The Sway Balance assessment has shown strong agreement ($r > 0.83$) with the Balance Error Scoring System (BESS) in laboratory settings. Sway has been repeatedly validated against force platform technology and reliability has been shown in clinical studies analyzing test-retest variability in independent research studies.

- **Cognitive Function** may be evaluated using any single or combination of the following baseline modules:
  - **Reaction time** is a measure of visual processing and neuromotor function. The SWAY test measures simple reaction time stimulus recognition and processing, followed by the initiation of a neuromotor response.
  - **Impulse control** is a measure of response inhibition, the ability to quickly process information and initiate the correct response. Impulse control is measured through go/no-go tests, which include go trials requiring a timed response and no-go trials, where the user should inhibit a response.
  - **Inspection time** is a measure of visual information processing speed, measured by testing the ability to identify a simple stimulus presented at different time intervals. The shortest time interval required to visually identify the physical characteristics of a stimulus is the inspection time.
  - The **memory test** includes both working memory and delayed recall tests. The delayed recall test displays a 3 letter sequence for the user to memorize and recall after a distraction period. The working memory test requires the user to memorize a growing sequence of squares to determine their ability to quickly store and recall information.

**Symptom Evaluation:** The presence and severity of 22 standard symptoms can be scored by the individual in timestamped entries, using a 6-point subjective scale.

For the purpose of the sideline evaluation, the presence or absence of ‘red flags’, symptoms evaluation, and 5 baseline modules (balance, reaction time, inspection time, impulse control, & memory) within the SWAY application may be used as the primary Concussion Assessment Tool. Confirmation of the completion of the cranial nerve assessment will also be recorded in the application. **For the purposes of evaluation, a departure of 10% or greater as compared to baseline will serve as the marker for automatic disqualification in any continued athletic participation on that given day.** These results are not meant to confirm or deny the presence of a concussion, but will trigger an automatic suspension of activity for that given day. If the functions of the application are not available to AT (i.e. tech-related issues/lack of WiFi) or the individual does not have an existing baseline (i.e. visiting team), the evaluator will default to the standard Williams College Assessment Tool.
Baseline Testing: ImPACT

- The use of neuro-cognitive testing (ImPACT) is recognized as an assessment tool that can be employed in decision making. However, it will not be used as the sole determinant for return to play.
- Baseline ImPACT testing will be conducted on all NCAA student-athletes. Additions to the NCAA recommended list may include Club sports with higher incidence of contact and collision (for example Rugby), and/or individuals deemed pertinent by the overseeing medical providers.
- Post-injury ImPACT testing will be implemented after concussion related symptoms have resolved/returned to baseline for 24-48hrs. However, in a case of long term persistent symptoms, the Sports Medicine staff or physician may decide to administer ImPACT testing prior to resolution of symptoms, for use as an evaluation tool. Testing will not take place on the same day as the injury.
- If a student-athlete does not achieve a passing score, a re-test may occur no sooner than 48hrs. provided no additional symptoms develop. If the second ImPACT trial is unsuccessful, referral will be made back to the Health Center for a follow-up evaluation.
- The physician has the final decision on implementation of ImPACT testing, interpretation, and the decision to proceed with progressive exercise. After completion of the ImPACT test, a timely review by the overseeing physician will occur.
Appendix D: Concussion Return to Sport Flowsheet

<table>
<thead>
<tr>
<th>Return to Sport</th>
<th>Date</th>
<th>ATC Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-Athlete is able to complete daily activities that do not significantly</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>exacerbate symptoms*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-Athlete is able to perform light to moderate aerobic exercise and light</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>resistance training that does not significantly exacerbate symptoms*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-Athletes is able to fully meet academic requirements without further</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>academic accommodation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-Athlete successfully meets the requirements of the SWAY test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-Athlete successfully meets the requirements of the ImPACT test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-athletes is able to perform moderate aerobic work (up to 70% max HR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and light resistance training (up to 50% 1RM) and remains asymptomatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-Athlete is able to complete Sport Specific exercise and remains</td>
<td></td>
<td></td>
</tr>
<tr>
<td>asymptomatic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

– Physician Clearance is required prior to advancing to non-contact practice activities –
Student-Athlete successfully completes a non-contact practice

Student-Athlete successfully completes an unrestricted full practice

Student-Athlete receives clearance for full participation in competition

*Mild and brief exacerbation of symptoms (ie, an increase of no more than 2 points on a 0–10 point scale for less than an hour when compared with the baseline value reported prior to physical activity). Athletes may begin Step 1 (ie, symptom-limited activity) within 24 hours of injury, with progression through each subsequent step typically taking a minimum of 24 hours. If more than mild exacerbation of symptoms (ie, more than 2 points on a 0–10 scale) occurs during Steps 1–3, the athlete should stop and attempt to exercise the next day. Athletes experiencing concussion-related symptoms during Steps 4–6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities.
Appendix E: Williams College Concussion Home Instructions

Name: ______________________________________________________________
Sport: __________________________ Date/Time of Injury: __________________

You have sustained or are suspected of having sustained a concussion. In some instances, the signs of a concussion do not become obvious until several hours or days after the injury. Please be especially observant for the following signs and symptoms. Call 911 if any of the following symptoms occur:

- Any loss of consciousness (or decreasing level of consciousness)
- Severe headache
- Vomiting
- Persistent or worsening nausea, dizziness, or ringing in the ears
- Increasing visual disturbances—difficulty focusing, double vision, loss of vision, or pupils become unequal in size
- Inability to awaken
- Increasing restlessness, unusual aggressiveness or notable changes in personality or behavior
- Seizures
- Increasing memory loss
- Painful neck or weakness in facial, leg, or arm muscles
- Loss of bladder or bowel control
- Blood or thin clear fluid in ears or nose
- Slurred speech

The best guideline is to note symptoms that worsen and behaviors that seem to represent a change in the injured person. If you have any questions or concerns at all about the symptoms you are observing, contact your Athletic Trainer/Thompson Health Center or seek medical attention at the closest emergency department. Otherwise, you can follow the instructions outlined below:

**It is OK to:**
- Use acetaminophen (Tylenol) for headaches
- Use ice on head & neck as needed for comfort
- Eat a light diet
- Go to sleep
- Rest (NO strenuous activity or sports)

**There is NO need to:**
- Check eyes with a penlight
- Wake up every hour
- Test reflexes
- Stay in bed

**Do NOT:**
- Drink alcohol or use stimulants
- Focus on TV or other electronic devices
- Drive while symptomatic
- Exercise or lift weights
- Take ibuprofen, aspirin, naproxen, or other NSAIDs unless instructed otherwise

**You should NOT attempt to participate in any academic activities until you have been evaluated for that need by the Health Center Staff. Following this recommendation may speed your recovery and allow you to return academic responsibilities as soon as possible**

Please report to the Thompson Health Center between the hours of 9am and 5pm, Monday-Friday for this important “Academic Accommodation” evaluation

If you are unsure or have questions, please call: Thompson Health Center: 413-597-2206
Athletic Trainer __________________________________________________________
Contact # ____________________________________________________________