3.4 CONCUSSION MANAGEMENT PLAN/HEAD INJURY PROTOCOL

Purpose:
In accordance to the NCAA Concussion Policy and Legislation, The SUNY Cortland Department of Intercollegiate Athletics and the Cortland Athletic Training Staff have developed the following guidelines and protocols in an effort to educate, prevent, identify, evaluate and manage concussions and traumatic brain injuries. These guidelines are put forth with a commitment to the highest level of health care for the safety and well-being of its student-athletes.

Definition of Concussion: Concussion in athletics is the most common form of traumatic brain injury (TBI). A concussion may be caused by a direct blow to the head, face, neck or body with force transmitted to the head. A concussion often results in rapid onset of clinical symptoms, and impairment of neurological function that typically resolves spontaneously. A concussion may or may not involve loss of consciousness, and can include a wide range of clinical symptoms. Occasionally a concussive head injury presents differently for each athlete.

Signs and Symptoms of Concussion: (include but not limited to)
- Headache
- Confusion or disorientation
- Balance problems or dizziness
- Nausea and/or vomiting
- Visual disturbances
- Drowsiness, sleepiness or feeling foggy
- Difficulty speaking or slurred speech
- Concentration or memory problems
- Restless, irritability or change in emotional control
- Double or fuzzy vision
- Unequal pupils or dilated pupils
- Slowed reaction time
- Sensitive to light or noise
- Ringing in the ears
- Loss of consciousness
- Amnesia
- Vacant stare

The Concussion Management Plan:
Directed by the school medical director with consultation and input from trained medical providers (Neurologist, Certified ImPACT Consultant, etc.)

Student-athletes (S-A) are required to sign a statement stating that they understand and accept responsibility for reporting injuries and illnesses to the SUNY Cortland Athletic Training staff including signs and symptoms of concussions.

1. Education:
The athletic training staff will provide NCAA concussion fact sheets or other applicable educational material annually to student-athletes, coaches, team physicians, athletic trainers and athletic directors.

A. Coaches will receive annual review of the concussion management plan, which includes education on the signs and symptoms of concussions, as well as the procedures to follow in the event that an athletic trainer is not immediately available (i.e. Remove athlete from participation, initiate emergency action plan if necessary and contact a SUNY Cortland athletic training staff member at the first available opportunity).
B. Education of student-athletes on signs and symptoms and care for concussions will be given prior to the start of their season at the NCAA Compliance meeting as well as during the baseline testing process (Appendix E).

C. Student-athletes will acknowledge and sign the SUNY Cortland Athletic Training Concussion Reporting Form indicating that they have read and understand the NCAA Concussion Fact Sheet (Appendix F) and acknowledge that they agree to inform the athletic training staff of a possible concussion.

2. Preseason/Baseline Testing:
   A. Every SUNY Cortland Student-athlete will undergo baseline testing (at least one of the following tests SCAT5 and/or ImPACT/BESS) prior to the beginning of the 2017-2018 athletic year. This information will be documented and placed in each Student-Athlete’s medical file.
   B. Baseline testing will be conducted on incoming student-athlete in subsequent years.
   C. Baseline testing will include:
      1. Brain injury/concussion history
      2. Symptom evaluation
      3. Cognitive assessment
      4. Balance evaluation

3. Recognition and Diagnosis of Concussion
   A. In the event that a student-athlete sustains a concussion or shows signs and symptoms of a concussion, the student-athlete will be removed immediately from practice/competition and evaluated by an Athletic Trainer and or Team Physician on or near the site.
   B. The clinical evaluation performed by the AT or Team Physician is supported by student-athlete’s report of symptoms, physical evaluation, neurological evaluation, cognitive evaluation and balance evaluation.
   C. A student-athlete who is determined to have sustained a concussion will not return to activity for the remainder of that day.
   D. Athletic Trainers will enact the EAP and refer student-athletes with head injuries to advanced medical care, if they notice one or more of the following

      1. A rapid loss of consciousness
      2. Prolonged mental confusion (lasting > 15-minutes)
      3. Prolonged post-traumatic amnesia (lasting > 15-minutes)
      4. Increasing headache
      5. Pupils that are unequal or nonreactive to light
      6. Uncoordinated or involuntary movement of the eyes
      7. Signs about the head indicating skull fracture
      8. Unusual slowing of heart rate and increasing blood pressure
      9. Signs or symptoms of injury to spine.
      10. Seizure activity

4. Post-concussion Management
   A. Student-athlete will be monitored for deterioration or any changes in signs and symptoms throughout the remainder of the practice or competition as well as any travel time from an
away contest back to SUNY Cortland.

B. Student-athlete will be provided oral and written instructions (Appendix G) upon discharge with a roommate, guardian or another individual who understands and can follow the instructions given.

C. Student-athletes will be referred to Student Health Services to be evaluated by the school physician or his/her designee.

D. Student-athlete will return the following day for re-evaluation and be monitored regularly for the status of the concussion related symptoms by an Athletic Trainer or school physician.

E. Once a concussion has been determined, return to play decisions will be directed by the school physician or designee, with consultation from the athletic trainers conducting the post-concussion assessments and in some cases where a Certified ImPACT Consultant and/or Neurologist is consulted.

F. Subsequent testing in the event of a concussion will occur once student-athlete self-reports asymptomatic. Testing results will be compared to the baseline test results and shared with the medical provider responsible for clearance.

G. Medical clearance shall be determined by the team physician, and or school physician or designee.

H. In some instances S-A still exhibiting symptoms may begin symptom-limited activity while staying below cognitive and physical exacerbation threshold at the discretion of the medical director or designee. Otherwise, once asymptomatic and post-exertion assessments are within normal limits, student-athlete’s return to play will be monitored and progressed in accordance with the Consensus statement on concussion in sport—5th international conference on concussion in sport in Berlin, October 2016 (Appendix B) by an athletic trainer under the guidance of the school physician. (see Graduated Return-To-Play Protocol)

5. Return To Play (RTP)

A. To consider return to activity, the physical exam, BESS, SCAT5 and ImPACT test results must be “normal” when compared to baseline results to be considered “asymptomatic” for the return to play examination. Neurocognitive test ImPACT/SCAT5/BESS test results will be evaluated by a physician. The team physician or his designee will determine the return to play status.

B. School or team physician has the final determination for RTP.

C. Each student-athlete suffering from a concussion will undergo a supervised step-wise progression by an Athletic Trainer.

D. The student-athlete will have limited physical and cognitive activity until the baseline standards have been met then the graduated RTP protocol will progress.

Graduated Return to Play Protocol:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Aim</th>
<th>Activity</th>
<th>Goal of each step</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Symptom-limited activity</td>
<td>Daily activities that do not provoke symptoms</td>
<td>Gradual reintroduction of work/school activities</td>
</tr>
<tr>
<td>2</td>
<td>Light aerobic exercise</td>
<td>Walking or stationary cycling at slow to medium pace. No resistance training</td>
<td>Increase heart rate</td>
</tr>
<tr>
<td>3</td>
<td>Sport-specific exercise</td>
<td>Running or skating drills. No head impact activities</td>
<td>Add movement</td>
</tr>
<tr>
<td>4</td>
<td>Non-contact training drills</td>
<td>Harder training drills, eg, passing drills. May start progressive resistance training</td>
<td>Exercise, coordination and increased thinking</td>
</tr>
<tr>
<td>5</td>
<td>Full contact practice</td>
<td>Following medical clearance, participate in normal training activities</td>
<td>Restore confidence and assess functional skills by coaching staff</td>
</tr>
</tbody>
</table>
Final determination of RTP resides with the school/team physician or physician designate.

6. Return To Learn Protocol
   The objective of recovery is for the injured student/athlete to be able to participate in pre-injury educational and physical activities at the same level as prior to his or her concussion.

Cognitive (Mental) recovery

The mainstay of care for the concussed student athlete is rest, both physical and mental during the acute phase (first 24-48 hours). Following the acute phase of rest, the S-A may be encouraged to gradually become active while avoiding either physical and cognitive addition of or increase of symptoms. Any symptoms of concussion that are triggered by mental activity are signs that the brain is still recovering and not fully healed from the injury.

The student athlete will not return to classroom activity the same day as the sport-related concussion.

Prior to engaging in physical activities, the concussed student/athlete must be capable of performing normal and routine mental activities without the return of symptoms and signs that indicate he or she has not improved. If, however, cognitive activities cause or worsen symptoms/signs of a concussion, these activities should be gradually introduced in a progressive manner that does not result in a worsening state.

There currently are no validated benchmarks to gauge mental improvement with graduated cognitive activities.

Activities to reintroduce progressively in the following order could be activities such as:

- Reading
- Playing a board game
- Playing a memory game
- Watching television
- Playing video games for half an hour

These activities should not cause any symptoms, notably headache, nausea, or decreased frustration tolerance. If the concussed student/athlete can progress to the point where they can perform these mental activities for about 30 minutes without symptoms, this usually means that they can return to their academic duties. Student athletes should not return to any physical activity until they can perform their academic duties (including full class participation) without any return of symptoms.
A clinician at Student Health Service will evaluate a student athlete who is exhibiting symptoms with cognitive activity. If the student athlete needs to refrain from going to class or completing assigned learning activities, the SHS clinician will send a Dean’s memo excusing the student athlete and requesting accommodation from the faculty. It is the student athlete’s responsibility to also communicate with each of his/her instructors to discuss any needed accommodations and/or make up work/time.

When the concussed student/athlete is allowed to return to school, educational accommodations may still be needed. The athletic trainer and/or Student Health Service staff is responsible for monitoring the student/athlete’s progress. The student athlete must communicate regularly and honestly with the AT and SHS staff. The concussion care staff communicates regularly with the concussed student/athlete, and as needed with the Associate Deans/Faculty, family, coaching staff, and Disability Services as necessary to discuss student’s progress and possible accommodations. In the case of prolonged symptoms, they will communicate with Disability Services as necessary to establish any accommodations needed, including:

- Rest breaks
- Lessened workload and homework
- Reduced computer time, at school and at home
- Postponement of national or merit testing, because the results may not reflect the concussed student/athlete’s actual capabilities

Prolonged symptoms which preclude full academic participation may also require referral to a concussion specialist or center, such as the Upstate Concussion Center.


**Appendices/Concussion Forms:**
- Consensus statement on concussion in Sport Berlin
- NATA Concussion Position Statement.pdf
- Concussion Management Memorandum.pdf
- Concussion Reporting Form
- NCAA Concussion Fact Sheet SA.pdf
- Concussion Take Home Head Instructions.pdf

**References:**