

Appendix A: East Stroudsburg University Sports Concussion and Head Injury Policy and Protocol for Student-Athletes

East Stroudsburg University Department of Intercollegiate Athletics Athletic Training

Sports Concussion and Head Injury Policy and Protocol for Student-Athletes

If a member of ESU's Department of Intercollegiate Athletics' Athletic Trainer has a concern that a student-athlete may have sustained a sports concussion or closed head injury due to their participation in athletics, or if one or more individuals express concern to a member of the Athletic Training Staff that a student-athlete may have suffered a sports concussion or a closed head injury, this Policy and Protocol will be followed. **The health and welfare of the student-athlete will be the primary concern throughout the process.**

Definition of Sports Concussion:

Concussion is:

- a change in brain function,
- following a force to the head, which
- may be accompanied by temporary loss of consciousness, but is
- identified in awake individuals, with
- measures of neurologic and cognitive dysfunction.

(Carney N, Ghajar J, Jagoda A et al. Concussion Guidelines Part 1: Systematic review of prevalent indicators. *Neurosurgery*, accepted in press.)

Definition of Head Injury:

Any injury to the head can cause damage to the brain stem and other vital centers of the brain. This can include but is not limited to traumatic brain injury, cerebral contusion, epidural hematoma, and subdural hematoma. (NATA Position Statement: Management of Sport Related Concussion, 2004)

Signs and Symptoms of Sports Concussion and/or Head Injury:

A sports concussion and/or head injury will be suspected if any ESU Student-athlete presents with one of the following sign, symptoms, or problems, in excess of his/her baseline score on the Impact Concussion test, after sustaining direct or indirect contact to the head. Any student-athlete with signs, symptoms, or problems will be removed from play that day, monitored and will not return to play on the day of injury.

The following is a list of possible signs, symptoms, or problems of a sports concussion or head injury: This list is not an all inclusive list, other signs, symptoms, or problems may occur that are not listed

- Headache
- Nervous or Anxious
- “Pressure in the head
- Trouble falling asleep
- Neck Pain
- Sleeping more than usual
- Balance problems/ Dizzy
- Drowsiness
- Nausea or Vomiting
- Fatigue
- Feeling like “in a fog
- Slurred speech
- Convulsions or Seizures
- Vision Problem
- More emotional than usual
- Hearing Problems/ringing in ears
- Irritability
- Feeling “dazed”
- Sadness
- Confusion
- Sensitivity to light
- Feeling slowed down
- Sensitivity to noise
- Loss of Consciousness
- “Don’t feel right
- Difficulty concentrating

Pre-Season Education:

Student-athletes in each sport will be presented with NCAA concussion fact sheets and educational material on concussions by the ESU Sports Medicine Department prior to the athlete’s season. Student-athletes will review the material with the understanding that they accept responsibility for reporting all of their injuries and illnesses to the medical staff, including signs and symptoms of concussions. Each student-athlete will initial and sign an acknowledgement of receipt, reading and understanding of concussion education on their Athletic Training Athlete Portal. The student-athlete also completes a three questions Concussion Quiz in which the staff evaluates to ensure the student-athlete has knowledge of concussions.

Coaches, Athletic Administrators, and the Athletics Director will be educated about concussions and the Concussion Safety Protocol as follows:

Concussion education will be provided to coaches, Athletic Administrators and the Athletics Director prior to the beginning of the academic year through the *Sports Safety International* ConcussionWise Module which can be found at the following website: <https://www.sportsafetyinternational.org/cw-coaches-course/>

Coaches should understand their responsibility for helping to identify student-athletes exhibiting potential signs, symptoms or behaviors consistent with a concussion and getting them evaluated by the Athletic Trainer and/or Team Physician. After watching the module, the viewer will be prompted to take a 10 question quiz to test their understanding. Coaches, Athletic Administrators, and the Athletics Director will take the quiz, and print the Sports Safety Certificate that will be provided after passing the quiz. The certificates will be provided to and housed in the Athletic Directors office. .

Referral Guidelines

Once a student-athlete has presented with any of the above signs, symptoms, or problems; they will be monitored, including vital signs and level of consciousness,

every several minutes after the onset of symptoms. Monitoring will continue until one of the following scenarios is determined:

1. Immediate Referral to Emergency Room:

Any student-athlete presenting with any of the following signs, symptoms, or problems will be referred to the emergency room immediately upon on field assessment:

- Deterioration of neurological function
- Decreasing level of consciousness
- Irregularity in respirations
- Irregularity in pulse
- Unequal, dilated, or unreactive pupils
- Any signs or symptoms of associated injuries, e.g. spine or skull fracture, or bleeding
- Mental status changes: lethargy, difficulty maintaining arousal, confusion, or agitation
- Seizure activity

2. Referral to Physician or Emergency Room on the Day of Injury:

- a. Any student-athlete presenting with any of the following signs, symptoms, or problems when compared to the initial on-field assessment, will be referred to a physician or ER on the day of injury:

- Loss of Consciousness
- Amnesia lasting longer than 15 min.
- Increase in blood pressure
- Cranial nerve deficits
- Vomiting
- Motor deficits subsequent to initial on-field assessment
- Sensory deficits subsequent to initial on-field assessment
- Balance deficits subsequent to initial on-field assessment
- Cranial nerve deficits subsequent to initial on-field assessment
- Post concussion symptoms that worsen
- Additional post concussion symptoms as compared with those on the field

- b. A student-athlete will also be referred to a physician or ER on the day of injury if he/she has not shown improvement in their signs, symptoms or problems by the end of practice or competition

3. Release of the Student-Athlete from the Supervision of a Certified Athletic Trainer with Take-Home Instructions:

If the student-athlete has shown an improvement in their signs, symptoms or problems by the end of the practice or competition, they will be given Take-Home Instructions (**See Appendix A.1**) for care while they are at home and not under the supervision of a certified Athletic Trainer. These instructions will be given and explained to a responsible individual as determined by the Certified Athletic Trainer. The student-athlete will be continually monitored for deterioration every few hours and day afterwards as problems could arise over the next 24-48 hours. The student-athletes will be monitored regularly until they are symptom free.

4. Delayed Referral (after the day of injury):

If a student-athlete that was released from the supervision of a Certified Athletic Trainer and given Take-Home Instructions presents with any of the following signs, symptoms, or problems after the day of injury, he/she will be referred to a physician as determined by the Certified Athletic Trainer.

- Any of the findings in the “Referral to Physician or Emergency Room on the day of Injury” category that have developed since the initial evaluation
- Post concussion symptoms worsen or do not improve over time
- Significant increase in the number of post concussion symptoms reported
- Post concussion symptoms begin to interfere with the athlete’s daily activities (i.e., sleep disturbances or cognitive difficulties)

Any student-athlete that has presented with signs, symptoms, or problems related to a sport concussion will be monitored regularly using the Impact Concussion Computer test and the Post Concussion Symptoms Scale (**See Appendix A. 2**).

Best Practice Guidelines for returning to academics

Cognitive rest is an often neglected component of concussion/head injury recovery. A student recovering from a concussion is often faced with challenges in the academic setting. Mental/physical fatigue, headaches, and sleep disturbances etc. may leave student-athletes without the mental capacity to participate in classes and/or the ability to complete assignments or partake in scheduled examinations. Therefore in addition to eliminating/limiting physical activity, a student-athlete may need to employ cognitive rest by decreasing and/or eliminating demands pertaining to learning and concentration. The Department of Athletics, Athletic Trainers will communicate with the student-athlete’s professors as to the said student’s injury and the recommendations for recovery. In prolonged or severe cases the Athletic Training Staff will also work in conjunction with

the Office of Accessible Services for Individualized for Students (formally known as Office of Disability Services) to determine the appropriate academic recommendations

RETURN-TO-PLAY ASSESSMENT

Assessment Tools:

The ESU Department of Intercollegiate Athletics' Athletic Trainers will utilize the Impact Concussion Computer Program and Balance Testing. Impact is a standardized method of evaluating cognition after concussion used in conjunction with manual evaluation.

Testing:

All ESU student-athletes must undergo baseline Impact prior to each student-athlete's first day of practice. Each subsequent year will only require freshmen and first-time student-athletes at ESU to be tested.

RETURN TO PLAY GUIDELINES

Once a student-athlete has displayed any of the signs, symptoms, or problems stated above the student athlete will be removed from practice or competition for the remainder of that day. When the student-athlete is symptom free for 24 hours, the student-athlete will be retested using the Impact test. The student-athlete will not be physically tested until the Impact test results have returned to baseline.

IMPACT TESTING/RETESTING

Criteria 1

If a student-athlete is symptom free or has returned to baseline on the Post-Concussion Symptom Scale, within the first 24 hours he/she will be Impact retested. If the first attempt of the Impact retest has returned to baseline, the student-athlete can begin light aerobic activity (see table below for concussion management progression). The student-athlete must return to baseline on the Impact test, be symptom free throughout all exercise testing, and remain symptom free until the next day before he/she can advance through the concussion management progression to return to play (see table below).

If the student-athlete has a recurrence of signs, symptoms, or problems during any phase, or by the next day, he/she must follow Criteria 2 for return to play.

Phase 1	Light aerobic exercise such as walking, swimming or riding a stationary bike. No resistance training. If asymptomatic with light aerobic exercise, then;
Phase 2	Mode, duration and intensity-dependent exercise based upon sport. If asymptomatic with such exertion, then

Phase 3	Sport-specific activity with no head impact. If asymptomatic with sport-specific activity, then;
Phase 4	Non-contact sport drills and resumption of progressive resistance training. If asymptomatic with non-contact drills and resistance training, then;
Phase 5	Full-contact practice. If asymptomatic with full-contact practice, then;
Phase 6	Return-to-play. Medical clearance will be determined by the team physician/physician designee, or athletic trainer in consultation with a team physician.

Criteria 2:

If the student-athlete is not symptom free within the first 24 hours after the injury he/she will not be retested with the Impact retest until he/she is symptom free for 24 hours. If the first attempt of the Impact retest has returned to baseline, the student-athlete can begin the light aerobic exercise on the same day. If athlete remains asymptomatic after aerobic activity, the athlete will be able to begin Phase 2 on the next day, and Phase 3 on the following day, etc. If the first attempt of the Impact retest has NOT returned to baseline, but the student-athlete continues to have no signs, symptoms, or problems, he/she must follow Criteria 3 for return to play.

Criteria 3:

If the student-athlete is not symptom free within the first 24 hours after the injury he/she will not be retested with Impact until he/she is asymptomatic for 24 hours. If the first attempt of the Impact retest has not returned to baseline, the student-athlete must wait 24 hours to take the Impact retest each time it has not returned to baseline. Once the Impact test has returned to baseline, the student-athlete can begin Phase 1 testing that day. If athlete remains asymptomatic after aerobic activity, the athlete will be able to follow the appropriate progressions on subsequent days.

Concussion Management Progression:

The student-athlete must be symptom free for 24 hours before he/she can progress to the next step in the sequence, with the exception of Criteria 1. If a student-athlete experiences any signs, symptoms, or problems at any one step he/she will begin at the previous step once he/she has been symptom free for 24 hours once again.

Phase 1	Light aerobic exercise such as walking, swimming or riding a stationary bike. No resistance training. If asymptomatic with light aerobic exercise, then;
Phase 2	Mode, duration and intensity-dependent exercise based upon sport. If asymptomatic with such exertion, then
Phase 3	Sport-specific activity with no head impact. If asymptomatic with sport-specific activity, then;
Phase 4	Non-contact sport drills and resumption of progressive resistance training. If asymptomatic with non-contact drills and resistance training, then;
Phase 5	Full-contact practice. If asymptomatic with full-contact practice, then;
Phase 6	Return-to-play. Medical clearance will be determined by the team physician/physician designee, or athletic trainer in consultation with a team physician.

Disqualification:

If the data shows that a student-athlete has suffered a sports concussion or closed head injury, a multidisciplinary approach will be taken to return the student-athlete to active status. The student-athlete will be spoken with regularly until symptom free. Because no two concussions are the same, disqualification for a season or career will be determined by the certified athletic trainer, team physician, and any other involved medical specialists.

References

National Athletic Trainers' Association Position Statement: management of Sports-Related Concussion, *Journal of Athletic Training*, 2004; 39(3): 280-297

Summary and agreement statement of the first International Conference on Concussion in Sport, Vienna 2001, *British Journal of Sports Medicine*, 2002;36: 6-7

Summary and agreement statement of the 2nd International Conference on Concussion in Sport, Prague 2004, *British Journal of Sports Medicine*, 2005;39: 196-204

Sex Differences and the Incidence of Concussions Among Collegiate Athletes, *Journal of Athletic Training*, 2003; 38(3); 238-244

Appendix A.1: Take-Home-Instructions

Any student-athlete who experiences any of the signs, symptoms, or problems of a sports concussion and is not being referred to a physician or emergency room the day of injury will be given these Take-Home-Instructions. The student-athlete must be monitored for possible deterioration as problems could arise over the first 24-48 hours. **The student-athlete should not be left alone and must go to the hospital at once if you experience any of the following:**

- | | |
|---|---|
| • Have a headache that gets worse | • Have slurred speech |
| • Are very drowsy or can't be awakened (woken up) | • Experiences changes in breathing / pulse rate |
| • Can't recognize people or places | • Experiences any memory deficits |
| • Have repeated vomiting | • Experiences any vision difficulties |
| • Behave unusual or seem confused; are very irritable | • Experiences anything out of the ordinary |
| • Have seizures (arms and legs jerk uncontrollably) | • Experiences any increases in symptoms |
| • Have weakness or numbness in arms, legs, or face | |
| • Are unsteady on your feet (Dizziness) | |

*****Remember, it is better to be safe.*****

I believe that _____ sustained a concussion on _____. To make sure he/she recovers, please follow the following important recommendations:

1. Please **remind** _____ to report to the Koehler Fieldhouse Athletic Training Room on _____ at _____ for a follow-up evaluation.

2. Please **review** the items outlined above. If any of these problems develop prior to his/her visit, please go to the hospital immediately. Otherwise, you can follow the instructions outlined below.

It is OK to:

- *Wake up every several hour to monitor symptoms
- *Use ice pack on head and neck as needed for comfort
- *Eat a light diet
- *Return to school
- *Go to sleep
- *Rest (no strenuous activity or sports)

There is NO need to:

- *Check eyes with flashlight
- *Test reflexes
- *Stay in bed

Do NOT:

- *Drink alcohol
- *Do drugs
- *Drive
- *Take medications for symptoms
- *Exert yourself physically or mentally

Appendix A.2: Impact Post Concussion Symptom Scale

Instructions: The Post Concussion Symptom Scale should not only be used for the initial evaluation, but for each subsequent follow-up assessment until all symptoms have cleared at rest and during physical exertion. In lieu of simply checking each symptom present, the ATC can ask the student-athlete to grade or score the severity of the symptom on a scale of 0-6, where 0 = none, 1-2 = mild, 3-4 = moderate, and 5-6 = most severe. These symptoms are checked and recorded in the student-athlete's athlete portal within the ATS database.

Student-Athlete: _____

Symptom	Date: Time:	Date: Time:	Date: Time:	Date: Time:	Date: Time:
Headache					
Nausea					
Vomiting					
Balance Problems					
Dizziness					
Fatigue					
Trouble Falling to sleep					
Excessive sleep					
Drowsiness					
Light sensitivity					
Noise sensitivity					
Irritability					
Sadness					
Nervousness					
More Emotional than Usual					
Numbness					
Feeling "slow"					
Feeling "foggy"					
Difficulty concentrating					
Difficulty remembering					
Visual Problems					
Other:					
Other:					
Other:					
Other:					