

Lewiston-Porter Central School District

Athletic Department Procedures and Management of a Sports- Related Concussion

Medical management of sports-related concussion is evolving. In recent years, there has been a significant amount of research into sports-related concussion in high school athletes. Lewiston Porter Central Schools has established this protocol to provide education about concussion for athletic department staff and other school personnel. This protocol outlines procedures for staff to follow in managing head injuries, and outlines school policy as it pertains to return to play issues after concussions.

Lewiston-Porter Central Schools seeks to provide a safe return to activity for all athletes after injury, particularly after concussions. In order to effectively and consistently manage these injuries, procedures have been developed to aid in insuring that concussed athletes are identified, treated and academic assistance, and are fully recovered prior to returning to activity.

In addition to recent research, two (2) Primary Documents were consulted in developing this protocol. The "Summary and Agreement Statement of the 5th International conference on Concussion in Sport, Berlin and the "National Athletic Trainers" Association Position Statement: Management of Sports-Related Concussion" (referred to in this document as the NATA Statement).

This Protocol will be reviewed on a yearly basis, by the LPCSD medical staff. Any changes or modifications will be reviewed and given to athletic department staff and appropriate school personnel in writing.

All athletic department staff will attend a yearly in-service meeting in which procedures for managing sports-related concussions are discussed.

Contents:

- Recognition of concussion
- Management and referral guidelines for all staff
- Procedures for the Certified Athletic Trainer (ATC)
- Guidelines and procedures for coaches
- Follow-up care during the school day
- Return to play procedures

I. Recognition of concussion

A. Common signs and symptoms of sports-related concussion

1. Signs (observed by others):

- Athlete appears dazed or stunned
- Confusion (about assignment, plays, etc.)
- Forgets plays
- Unsure about game, score, opponent
- Moves clumsily (altered coordination)
- Balances problems
- Personality change

- Responds slowly to questions
- Forgets events prior to hit
- Forget events after the hit
- Loss of consciousness (any duration)

2. Symptoms (reported by athlete):

- Headache
- Fatigue
- Nausea or vomiting
- Double vision, blurry vision
- Sensitive to light or noise
- Feels sluggish
- Feels “foggy”
- Problems concentrating
- Problems remembering

3. These signs and symptoms are indicative of probable concussion. Other causes of symptoms should also be considered.

B. Cognitive impairment (altered or diminished cognitive function)

1. General cognitive status can be determined by simple sideline cognitive testing.
 - a. AT may utilize SCAT5 (Sports Concussion Assessment Tool), SAC, sideline
 - b. Coaches should utilize the basic UPMC cognitive testing form.

II. **ImPACT neuropsychological testing requirements**

1. ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing) is a research Based software tool utilized to evaluate recovery after concussion. It was developed at the University of Pittsburgh Medical Center (UPMC). ImPACT evaluated multiple aspects of Neurocognitive function, including memory, attention, brain processing speed, reaction time, and post-concussion symptoms.
 - a. Neuropsychological testing is utilized to help determine recovery after concussion.
2. All contact sport athletes (football, soccer, cheerleading, wrestling, ice hockey, and lacrosse) are required to take a baseline ImPACT test prior to participation in sports at LPSCD.
 - a. All athletes will view a video presentation entitled: “Heads Up: Concussion in High School Sports,” prior to their respective sports season or baseline test.
3. Athletes in collision and contact sports (as defined by the American Academy of Pediatrics Classifications) are required to take a “new” baseline test prior to participation their junior year. (Football, Soccer, Cheerleading, Wrestling, Ice Hockey, and Lacrosse).

III. Management and Referral Guidelines for all Staff

Suggested Guideline for Management of Sports-Related Concussion

1. Any athlete with a witnessed loss of consciousness (LOC) of any duration should be spine boarded and transported immediately to the nearest emergency department. via emergency vehicle.
2. Any athlete who has symptoms of a concussion and who is not stable (i.e., condition is changing or deteriorating), is to be transported immediately to the nearest emergency department. via emergency vehicle.
3. An athlete who exhibits any of the following symptoms should be transported immediately to the nearest emergency department, via emergency vehicle.
 - a. Deterioration of neurological function
 - b. Decreasing level of consciousness
 - c. Decrease or irregularity in respirations
 - d. Decrease or irregularity in pulse
 - e. Unequal, dilated, or unreactive pupils
 - f. Any signs or symptoms or associated injuries, spine, or skull fracture, or bleeding
 - g. Mental status change: lethargy, difficulty maintaining arousal, confusion or agitation
 - h. Seizure activity
 - i. Cranial nerve deficits
4. An athlete who is symptomatic but stable, may be transported by his or her parents. The parents should be advised to contact the athlete's primary care physician or seek care at the nearest emergency department, on the day of the injury.
 - a. ALWAYS give the parents the option of emergency transportation, even if you do not feel it is necessary.

IV. Procedures for the Certified Athletic Trainer (AT)

- A. The AT will assess the injury, or provide guidance to the coach if unable to personally attend to the athlete.
 1. Immediate referral to the athlete's primary care physician or to the hospital will be made when medically appropriate (see section II).
 2. The AT will perform serial assessments following recommendations in the NATA Statement and utilize the SCAT-5 (Sport concussion Assessment tool), as recommended by the Prague Statement, or sideline ImPACT, if available.
 - a. The Athletic Trainer will notify the athlete's parents and give written and verbal home and follow-up care instructions.
- B. The AT will notify the school nurse of the injury, prior to the next school day, so that the school RN can initiate appropriate follow-up in school immediately upon the athlete's return to school.
 1. The AT will continue to provide coordinated care with the school RN, for the duration of the injury.

2. The AT will communicate with the athlete's guidance counselor regarding the athlete's neurocognitive and recovery status, if needed.
- C. The AT is responsible for administering post-concussion ImPact testing.
 1. The initial post-concussion test will be administered within 48-72 hours post-injury whenever possible.
 - a. Repeat post-concussion test will be given at appropriate intervals, dependent upon clinical presentation.
 2. The AT will review post-concussion test data with the athlete and the athlete's parent
 - a. ImPACT data will be forwarded to the school physician for review and consultation.
 3. The AT will forward testing results to the athlete's treating physician, with parental permission and signed release of information form.
 4. The AT or the athlete's parent may request that a neuropsychological consultant review the test data. The athlete's parents will be responsible for charges associated with the consultation.
 5. The AT will monitor the athlete, and keep the School Nurse informed of the individual's symptomatology and neurocognitive status, for the purposes of developing or modifying an appropriate health care plan for the student athlete.
 6. The AT is responsible for monitoring recovery & coordinating the appropriate return to play activity progression.
 7. The AT will maintain appropriate documentation regarding assessment and management of the injury.

V. Guidelines and procedures for coaches:

RECOGNIZE, REMOVE, REFER

A. **Recognize** concussion

1. All coaches should become familiar with the signs and symptoms of concussion that Described in section I.
2. Very basic cognitive testing should be performed to determine cognitive deficits.
 - a. See appendix E.

B. **Remove** from activity

1. If a coach suspects the athlete has sustained a concussion, the athlete should be removed from activity until evaluated medically.
2. Any athlete who exhibits signs and symptoms of a concussion should be removed immediately, assessed, and should not be allowed to return to activity that day.

C. **Refer** the athlete for medical evaluation

1. Coaches should report all head injuries to the LPCSD Certified Athletic Trainer (AT) As soon as possible, for medical assessment and management, and for coordination of home instructions and follow-up care.
 - a. The AT can be reached at
 - b. The AT will be responsible for contacting the athlete's parents and providing follow-up instructions.
2. Coaches should seek assistance from the host site AT if at an away contest.

3. If the LPCSD AT is unavailable, or the athlete is injured at an away event, the coach is responsible for notifying the athlete's parents of the injury.
 - a. Contact the parents to inform them of the injury and make arrangements for them to pick the athlete up at school.
 - b. Contact the AT at the above number, with the athlete's name and home phone number, so that follow-up can be initiated.
 - c. Remind the athlete to report directly to the school nurse before school starts, on the day he or she returns to school after the injury.
4. In the event that an athlete's parents cannot be reached, and the athlete is able to be sent home (rather than directly to MD):
 - a. The coach or AT should insure that the athlete will be with a responsible individual, who is capable of monitoring the athlete and understanding the home care instructions, before allowing the athlete to go home.
 - b. The coach or AT should continue efforts to reach the parent.
 - c. If there are any questions about the status of the athlete, or if the athlete is not able to be monitored appropriately, the athlete should be referred to the emergency department for evaluation. A coach or AT should accompany and remain with the athlete until the parent can arrive.
 - d. Athletes with suspected head injuries should not be permitted to drive home.

VI. FOLLOW-UP CARE OF THE ATHLETE DURING THE SCHOOL DAY

Responsibilities of the school nurse after notification of the student's concussion

1. The athlete will be instructed to report to the school nurse upon his or her return to school at that point, the school nurse will:
 - a. Re-evaluate the athlete utilizing a graded symptom checklist.
 - b. Provide an individualized health care plan on both the athlete's current condition and initial injury information provided by the AT or parent.
2. Notify the student's guidance counselor and teachers of the injury immediately via the individualized health care plan form.
3. Notify the student's P.E. teacher immediately that the athlete is restricted from all physical activity until further notice.
4. If the school RN receives notifications of a student-athlete who has sustained a concussion from someone other than the AT (athlete's parent, athlete, physician note), the AT should be notified as soon as possible, so that an appointment for ImPACT testing can be made.
5. Monitor the athlete on a regular basis during the school day.

Responsibilities of the student's guidance counselor

1. Monitor the student closely and recommend appropriate academic accommodations for students who are exhibiting symptoms of post-concussion syndrome.
2. Communicate with school health office on regular basis, to provide the most effective care for the student.

VII. RETURN TO PLAY (RTP) PROCEDURES AFTER CONCUSSION

Returning to participate on the same day of injury

1. As previously discussed in this document, an athlete who exhibits signs or symptoms of concussion or has abnormal cognitive testing, should not be permitted to return to play on the day of the injury. Any athlete who denies symptoms but has abnormal cognitive testing should be held out of activity.
2. "When in doubt, hold them out."

Return to play after concussion

1. The athlete must meet all of the following criteria in order to progress to activity:
 - a. Asymptomatic at rest and with exertion (including mental exertion in school) AND:
 - b. Within normal range of baseline on post-concussion ImPACT testing AND:
 - c. Have written clearance from primary care physician or specialist (athlete must be cleared for progression to activity by a physician other than an emergency room physician).
2. Once the above criteria are met, the athlete will be progressed back to full activity following a stepwise process (as recommended by both the Prague and NATA Statements), under the supervision of the AT.
3. Progression is individualized, and will be determined on a case by case basis. Factors that may affect the rate of progression include: previous history of concussion, duration and type of symptoms, age of the athlete, and sport/activities in which the athlete participates. An athlete with a prior history of concussion, one who has extended duration of symptoms, or one who is participating in collision or contact sport should be progressed more slowly.
4. Stepwise progression as described in the Prague Statement:
 - a) No activity-do not progress to step 2 until asymptomatic
 - b) Light aerobic exercise-walking, stationary bike
 - c) Sport-specific training (e.g. skating in hockey, running in soccer)
 - d) Non-contact training drills
 - e) Full-contact training after medical clearance
 - f) Game play