

Lancaster Mennonite Concussion Protocol & Return to Play Guidelines

This protocol will be reviewed on a yearly basis, by the Athletic Trainer and school Physician. 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 concussion are discussed.

Definition of Concussion:

A concussion is a disturbance in brain function caused by a direct or indirect force to the head. It results in a variety of non-specific symptoms (like those listed below) and often may not involve loss of consciousness. Concussion should be suspected in the presence of **any one or more** of the following:

Signs and Symptoms

1. Signs (observed by others):

- Appears dazed
- Confused about play
- Moves clumsily
- Answers slowly
- Personality changes
- Memory Loss
- Loss of Consciousness
- Irritability

2. Symptoms (reported by athlete):

- Headache
- Nausea
- Balance Problems
- Double vision
- Sensitivity to Light
- Sluggish
- Foggy
- Change in sleep pattern
- Cognitive changes

Cognitive impairment (altered or diminished cognitive function)

General cognitive status can be determined by simple sideline cognitive testing. AT may utilize SCAT (Sports Concussion Assessment Tool), SAC, or other standard tool for sideline cognitive testing.

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 evaluates multiple aspects of neurocognitive function, including memory, attention, brain processing speed, reaction time, and post-concussion symptoms.
2. Neuropsychological testing is utilized to help determine recovery after concussion.
3. Athletes participating in contact and collision sports at Lancaster Mennonite School are required to take a baseline ImpACT test prior to participation in PIAA sports at LMS. Baseline testing will be done during the student athletes' 9th and 11th grade years. Those 10th and 12th graders whom have not had a baseline test within 2 years at LMS must take it prior to participation as well. (Sports Tested: Boys' Soccer, Basketball, Lacrosse, and Baseball; Girl's Soccer, Field Hockey, Basketball, and Softball).

Management and Referral Guidelines for All Staff

1. Any athlete with a witnessed loss of consciousness (LOC) of any duration should be spine boarded and transported immediately to 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 of associated injuries, spine or skull fracture, or bleeding appearing to be from the ear canal
 - g. mental status changes: 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. ALWAYS give parents the option of emergency transportation, even if you do not feel it is necessary.

Procedures for the Certified Athletic Trainer (AT)

1. The AT will assess the injury, or provide guidance to the coach if unable to personally attend to the athlete.
2. Immediate referral to the athlete's primary care physician or to the hospital will be made when medically appropriate.
3. The AT will perform serial assessments following recommendations in the NATA Statement, and utilize the SAC (Standardized Assessment of Concussion).
4. The Athletic Trainer will notify the athlete's parents and give written and verbal home and follow-up care instructions.
5. The AT is responsible for administering post-concussion ImPACT testing.
 - a. The initial post-concussion test will be administered prior to resuming play, and when student-athlete is asymptomatic, so that it does not exacerbate concussion-like symptoms, unless warranted by special circumstances deemed by athletic trainer and/or physician.
 - b. Repeat post-concussion tests will be given at appropriate intervals, dependent upon clinical presentation.
 - c. The AT will review post-concussion test data with the athlete and the athlete's parent.
 - d. The AT will forward testing results to the athlete's treating physician, with parental permission, as well as the team physician.
 - e. 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.
 - f. 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.

Follow-up Care of the Athlete during the School Day

1. Notify the student's guidance counselor and teachers of the injury immediately.
2. Notify the student's P.E. teacher immediately that the athlete is restricted from all physical activity until further notice.
3. If the school RN receives notification 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,
4. Monitor the athlete on a regular basis during the school day.

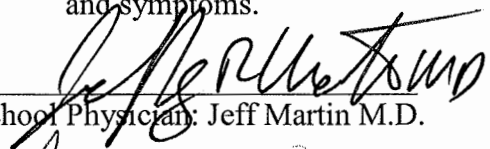
Return to Play Guidelines after Concussion- Flow Chart

1. Athlete presents with any of the signs/symptoms listed above after a suspected traumatic head injury.
2. Athlete may **not** return to play on the same day if a concussion is suspected by the athletic trainer or physician.
3. The athlete must meet all of the following criteria in order to progress to activity:
 - a. Asymptomatic at rest, medication free, 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. Even if the Physician clears an athlete to play, they **all** must still go through the graduated return to play protocol (listed below).
4. Each stage of this protocol takes 24 hours so that it would take approximately one week to proceed through the full rehabilitation protocol once they are symptom free with provocative exercise. If any post-concussion symptoms occur while in the stepwise program, then the patient should drop back to the previous asymptomatic level and try to progress again after a further 24- hour period of rest has passed.

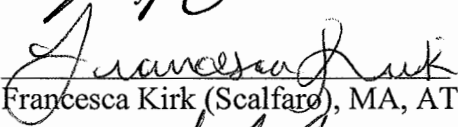
Graduated Return to Play Protocol		
<u>Rehabilitation Stage</u>	<u>Functional Exercise in each Rehab Stage</u>	<u>Objective of each Stage</u>
No activity	Complete physical and cognitive rest	Recovery
Light Aerobic Exercise	Walking, swimming, or stationary cycling keeping intensity under 70% of maximum capacity, no resistance training	Increase Heart Rate
Sport-specific Exercise	Stick drills in field hockey, running drills in soccer, no head impact activities	Add Movement
Non-contact training drills	Progression to more complex training drills, i.e. Passing drills, may start progressive resistance training	Exercise, coordination, and cognitive load
Full Contact Practice	Following medical clearance, participate in normal training activities	Restore confidence and assess functional skills by coaching staff
Return to Play	Normal game play	

Home Care

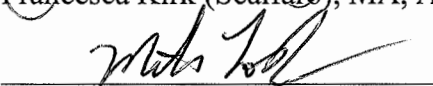
1. The parent/guardian of the athlete with a concussion will be instructed to avoid taking medications, unless acetaminophen or other medications are prescribed by a physician.
2. The parent/guardian of any athlete with a concussion will be instructed to encourage the athlete to rest, but complete bed rest is not recommended. The athlete will resume normal activities of daily living as tolerated, while avoiding activities that potentially increase symptoms.
3. The parent/guardian will be instructed to look for changes or an increase in signs and symptoms.


 School Physician: Jeff Martin M.D.

8/3/12
 Date


 Francesca Kirk (Scalfaro), MA, ATC, LAT

8/6/12
 Date


 Mike Yoder, AD

8/8/12
 Date