

Jack Barrack Hebrew Academy

Concussion Management Protocol

Background: Concussions have become an injury on the frontlines of the medical field for several reasons. Misconceptions, misdiagnosis, and impact on life after sports have all led to developing educational tools for coaches and parents. All coaches at Jack Barrack Hebrew Academy are required to take the NFHS concussion recognition certification. The Concussion Management Protocol is the guide that Jack Barrack Hebrew Academy uses to direct a prudent course of action.

Concussion: defined as a complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces. A concussion can be caused by a direct blow to the head, face, or neck or elsewhere on the body with an impulsive force transmitted to the head.

On-Field or Sideline Evaluation of Acute Concussion

When a player shows ANY features of a concussion:

- The player will be evaluated by a certified athletic trainer, physician, or other licensed healthcare provider onsite using standard emergency management principles. Particular attention will be given to ruling out a cervical spine injury.
- The appropriate disposition of the player will be determined by the treating healthcare provider in a timely manner.
- Once the first aid issues are addressed, an assessment of the concussive injury will be made using the SCAT3 or other sideline assessment tool
- The player will not be left alone following the injury. Serial monitoring for deterioration is essential over the initial few hours following injury.
- A player with any symptoms of a concussion after sustaining a blow to the head will not be allowed to return to participation on the day of injury.

*IF AN ATHLETE LOSES CONSCIOUSNESS AFTER A BLOW TO THE HEAD, FACE, NECK, OR ELSEWHERE TO THE BODY, EMERGENCY MEDICAL SERVICES (EMS) WILL BE ACTIVATED BY DIALING 911 (See emergency action plan for specific details)

Signs and Symptoms

The diagnosis of an acute concussion usually involves the assessment of a range of domains, including clinical symptoms, physical signs, behavior, balance, sleep, and cognition. These symptoms must be closely monitored and documented. Often these symptoms are exacerbated by cognitive function and may require an adjustment of their academic schedule. This is directed by the physician, school nurse, athletic trainer, and guidance counselor.

Symptoms may include but are not limited to:

- Headache
- Irritability
- Drowsiness
- Feeling of being “foggy”
- Sadness/Depression
- Loss of Consciousness
- Amnesia
- Nausea/Vomiting
- Tinnitus/Ringing in the ears
- Blurred Vision/Changes in Pupil Dilation
- Double Vision
- Balance
- Confusion
- Sensitivity to Light

ImPact Test

ImPact Concussion Program provides computerized neurocognitive assessment tools and services that are used by certified athletic trainers, doctors, and other health professionals to assist in determining if an athlete is ready to return to participation after suffering a concussion.

- Baseline testing will be established prior to participation and test results will be used as a standard measure for comparison in the event that an athlete is diagnosed with a concussion.
 - AT NO TIME ARE STUDENTS PROGRESSED THROUGH THE PROTOCOL WHILE SYMPTOMATIC. It is only upon cessation of symptoms that the student progresses.
 - Jack Barrack Hebrew Academy is strongly recommending that all athletes be baseline tested.
- **Post-Concussion Testing** will be provided at the discretion of the athletic training staff and team physician. Post-concussion ImPact testing will be completed when the athlete is asymptomatic, and will be used as one criterion for return to participation.
 - If a baseline test does not exist for an athlete, the post-concussion ImPact test will be used and compared with the test normative values.
 - Should a parent choose to opt out of a baseline and/or post-concussion ImPact test, the return to participation timeframe will be doubled to ensure the athlete has significant time to heal.

Home Care

After an athlete has been diagnosed with a concussion, the following should be monitored closely by a parent/guardian:

- Deteriorating symptoms
- Newly-presenting symptoms
- Deteriorating level of consciousness

In the event that any or all symptoms noted above change or occur, seek immediate medical attention.

The Sports Medicine Team at Jack Barrack Hebrew Academy does not advise taking any non-prescribed medication because medication can mask symptoms. Should an athlete need medication, a physician should be consulted.

Medication that should be avoided include, but are not limited to:

- Aspirin
- NSAIDS (Non-Steroidal Anti-Inflammatory Drugs)
 - Advil/Ibuprofen

Concussions impair cognitive functions, and in the event of a concussed athlete, the athletic trainer will alert the school nurse, main office, and school counselor in the event of absence. Performance in school and concentration may be negatively affected.

Return to Participation Guidelines

After an athlete is diagnosed with a concussion, he/she MUST have a written note from a physician in order to return to participation. After being cleared by a physician, the athlete will begin the return to participation guidelines. The return to participation guidelines are a progression used by the athletic training staff and team physicians to determine when an athlete is capable of returning to participation. With this progression, the athlete will proceed to the next level if asymptomatic at the current level. Each step should take 24 hours, so an athlete should take approximately one week to proceed through the full protocol once asymptomatic. If any post-concussion symptoms occur while in the progression, the athlete must go 24 hours asymptomatic, and will then regress to the previous level.

Exertion Testing: Though students are asymptomatic at rest, physical activity can cause symptoms to return. The last step in our protocol is a graduated increase in exercise to observe this response. We begin with low level, general exercise and work to high level, sport specific tasks. Exertion testing is performed with the athletic trainer

- Day 1
 - No activity
 - ImPact Post-Concussion Test administered
 - *Objective: Recovery*
- Day 2
 - Light aerobic exercise
 - Examples: walking, stationary cycling
 - *Objective: Increase heart rate*

- Day 3
 - Sport-specific exercise
 - *Objective: Add movement*
- Day 4
 - Non-contact training drills
 - Progression to more complex training drills
 - May start progressive resistance training
 - *Objective: Exercise, coordination and cognitive load*
- Day 5
 - Full contact practice
 - Following medical clearance, participate in normal training activities
 - *Objective: Restore confidence and assess functional skills*
- Day 6
 - Return to full participation, no restrictions

***ALL CONCUSSED STUDENTS ARE REQUIRED TO COMPLETE THE RETURN TO PLAY PROTOCOL. EVEN WHEN OUTSIDE MEDICAL ADVICE IS TAKEN, THE ATHLETE WILL NOT RETURN TO SPORT UNTIL THESE STEPS ARE SATISFIED.**

References

1. Guskiewicz KM, Bruce SL, Cantu RC, et al. National athletic trainer's association position statement: management of sports related concussion. *J Athl Train.* 2004;39(3):280-297.
2. McCrory P, Meeuwisse W, Johnston K, et al. Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, 2012. *Br J Sports Med.* 2013;47(5):250-258.