



## Belmont Hill Concussion Protocol

This document is for use by Belmont Hill Medicine Clinicians (Director of Health Services, School Nurse, and Athletic Trainers) when treating Student-Athletes who have suffered a sport-related concussion or are suspected of having suffered such a concussion.

### OVERVIEW

A sport-related concussion is a traumatic brain injury induced by biomechanical forces. This can be caused by a direct blow or impulsive forces transmitted to the head and typically results in a rapid onset of short-lived neurological impairments that resolve spontaneously. The clinical signs and symptoms can evolve over a number of minutes or hours and may result in neuropathological changes. These acute signs and symptoms reflect a functional injury, not a gross structural injury, and may or may not include loss of consciousness (LOC). A concussion is not identifiable on standard imaging (CT, MRI).

Any athlete who is deemed to have suffered a concussion, or is suspected of suffering such a concussion after experiencing trauma shall be removed from all physical activity for the remainder of that calendar day. Belmont Hill requires an evaluation of the athlete as soon as possible. If it is determined that the athlete has suffered a concussion, that Student Athlete will be held from further activity and will be guided and monitored through the protocols outlined in this document. Return to play clearance will be determined by the student's physician or appropriately trained and licensed health care clinician and the progression and clearance will be documented.

### PRE-SEASON EDUCATION & PREVENTION/EDUCATION

#### STUDENTS:

1. **Annual Review of Concussion Educational Material:** Student-athletes in each sport will be presented with educational material on concussions via "Heads Up" from the CDC. 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.
2. Documentation of physical examination within 13 months prior to student-athletes' participation in athletic activities.
3. **ImPACT Testing:** Every 2 years (entering Form I, III, IV) and all new students will undergo computerized neurocognitive testing, ImPACT Testing, prior to participation. Student-Athletes will not be able to participate until Baseline Tests are completed.

## **COACHES/FACULTY:**

1. Coaches are required by Massachusetts State Law to complete the HEADS UP to Youth Sports: Online Training Program Annually. Coaches will be required to submit certification of completion to Health Center.

## **ACUTE/EMERGENCY EVALUATION AND CARE**

At any time that a concussion is suspected, the Student Athlete shall be removed from further participation and undergo an initial concussion evaluation.

If the Student Athlete is conscious and alert and without evidence of other limiting injuries (i.e. c-spine injury), they will be removed to the sideline/bench/athletic training room for evaluation. After allowing the Student Athlete to settle to a 'resting state', the clinician will, at a minimum, perform the following exam:

- The injury history, date/time, and history of previous concussion will be determined and recorded including any loss of consciousness
- A concussion assessment tool will be used (ex. SCAT 5) which will evaluate:
  - brief neurologic assessment, including pupil examination
  - cognitive screening
  - symptom assessment
  - upper & lower extremity coordination assessment, including balance
  - cervical spine assessment

The above exam shall be carried out in such a manner as to obtain accurate information with care taken to perform the assessment without any time constraint. In general, 10 minutes of real time would be a minimum examination period. If the Student Athlete is symptomatic and the clinician determines that the Student Athlete is concussed, serial monitoring will occur until symptoms stabilize or improve. Depending on sport, timing, and location, the helmet may be taken away from the injured player to ensure they do not return to the session. Once symptoms stabilize, the player will continue to be monitored at regular intervals but shall not return to practice, play, or perform any other type of physical activity that day.

Findings of this initial assessment and serial monitoring will be recorded and will later be documented for the Student Athlete's medical record.

The Emergency Action Plan shall be initiated and the Student Athlete should be removed from the venue utilizing c-spine precautions as needed and transported to the closest emergency department if any of the following are present:

- Prolonged Loss of Consciousness (LOC)
- Focal neurologic defect as found with intracranial injury
- Repeated or worsening vomiting
- Significant alteration or deterioration in mental status
- Glasgow Coma Scale score of less than 13
- Or another concerning signs or symptoms deemed necessary for transfer

## **EXCLUSION FROM PLAY**

1. Any Student Athlete who during a practice or competition, sustains a head injury or suspected concussion, exhibits signs and symptoms of a concussion, or loses consciousness, even briefly, shall be removed from the practice or competition immediately and may not return to the practice or competition that day.
2. Each Student Athlete who is removed from practice or competition for a head injury or suspected concussion, or loses consciousness, even briefly, or exhibits signs and symptoms of a concussion, **MUST follow-up with a doctor as soon as possible and ideally within 48 hours.**
3. Parents will be notified at the time of injury and will be provided with a CDC Parent's Fact Sheet.
4. The ultimate return to play decision is a medical decision that may involve a multidisciplinary approach, including consultation with parents, the Director of Health Services, and faculty/coaches.
5. The student shall not return to practice or competition unless and until the student provides medical clearance
6. The Coach/Athletic Trainer/Nurse shall communicate the nature of injury directly to the parent/guardian in person or by phone immediately after the practice or competition in which a student has been removed from play for head injury, suspected concussion, signs and symptoms of a concussion, or loss of consciousness. The parent will be provided information in writing, either paper or electronic, by the end of the day.
7. The Director of Health Services and Head Athletic Trainer will be notified that the student has been removed from practice or competition.
8. Each student who is removed from practice or competition and is subsequently diagnosed with a concussion shall have a written graduated reentry plan for return to full academic and athletic activities.
  - a. The written plan shall include instructions for physical and cognitive rest as appropriate and a gradual return to academic activities and athletic activities.

## RETURN TO PLAY CONSIDERATIONS

American Academy of Pediatrics Return to Play Guidelines

Stage	Aim	Activity	Goal of Step
1	Symptom-limited activity	Daily activities that do not provoke symptoms	Gradual reintroduction of work and/or school activities
2	Light aerobic exercise	Walking or stationary cycling at slow-to-medium pace; no resistance training	Increase heart rate
3	Sport-specific exercise	Running or skating drills; no activities with risk of head impact	Add movement
4	Noncontact training drills	Harder drills (eg, passing drills and team drills); may begin progressive resistance training	Exercise, coordination, and increased thinking during sport
5	Full-contact practice	After medical clearance, participate in full, normal training activities	Restore confidence and allow coaching staff to assess functional skills
6	Return to sport	Normal game play	Full clearance/participation

**\*While self-evident, when following all of the guidelines outlined in this document, it should be noted that at no time will a Student-Athlete be allowed to return to play if they still require academic adaptations or accommodations related to their concussion.**

## **SPECIAL CONSIDERATIONS**

If the Student Athlete's symptoms have not totally resolved after 48 hours post injury, the athlete may commence light exercise. This exercise shall be a non-impact cardiovascular activity and will have a short duration at a submaximal exertional level which should not exacerbate existing, or trigger any new, cognitive, or physical symptoms. The length of these workouts may progress in duration daily but will remain at a submaximal level.

The sports medicine clinician may consider obtaining a neurological consult or an adjustment of the Return to Play progression in certain situations. Find below a list of some of those situations that may warrant a change in the normal protocol.

- Structural Head Injury
- Multiple Concussions
- Extensive duration of symptoms
- Significant amnesia or LOC greater than 1 minute
- Comorbidities such as a past medical history of migraine, depression, ADHD, sleep disorder, and/or other mental health issues

## **SUMMARY**

It is important to note that concussion evaluation and management must be handled on a case-by-case basis. As clinicians, we will protect and promote the safety, health, and well-being of every student athlete and will provide and coordinate the care of our athletes while working with our coaches as they prepare for athletic competition. Post concussive care will focus on limiting the potential catastrophic and long term risks involved with concussive injuries.