



Chelsea Public Schools

Office of the Superintendent

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CHELSEA PUBLIC SCHOOLS ATHLETIC CONCUSSION POLICY August 26, 2013

The purpose of this policy is to provide information and standardized procedures for persons involved in the prevention, training management and return to activity decisions regarding students who incur head injuries while involved in extracurricular athletic activities¹ including, but not limited to, interscholastic sports, in order to protect their health and safety as required by Massachusetts law and regulations, specifically 105 CMR 206.000. The requirements of the law apply to all public middle and high schools, however configured, serving grades six through high school graduation. In addition to any training required by law, the following persons shall complete one of the head injury safety training programs approved by the Massachusetts Department of Public Health (DPH) as found on its website: coaches; certified athletic trainers; trainers; volunteers; school and team physicians; school nurses; athletic directors; directors responsible for a school marching band; employees or volunteers; and students who participate in an extracurricular activity and their parents.

Upon the adoption of this policy by the School Committee, the Superintendent shall ensure that DPH receives an affirmation on school district letterhead that the district has developed policies and the School Committee has adopted a final policy in accordance with law. This affirmation shall be updated by September 30, 2013 and every two years thereafter upon review or revision of its policies.

The Superintendent shall maintain or cause to be maintained complete and accurate records of the district's compliance with the requirements of the Concussion Law, and shall maintain the following records for three years or, at a minimum, until the student graduates, unless state or federal law requires a longer retention period:

1. Verifications of completion of annual training and receipt of materials;
2. DPH Pre-participation forms and receipt of materials;
3. DPH Report of Head Injury Forms, or school based equivalents;
4. DPH Medical Clearance and Authorization Forms, or school based equivalents; and 5.
5. Graduated reentry plans for return to full academic and extracurricular athletic activities.

This policy also applies to volunteers who assist with extracurricular athletic activities. Such volunteers shall not be liable for civil damages arising out of any act or omission relating to the requirements of law, unless such volunteer is willfully or intentionally negligent in his act or omission.

Most student athletes who sustain a concussion can fully recover as long as their brain has time to heal

¹ Extracurricular Athletic Activity means an organized school sponsored athletic activity generally occurring outside of school instructional hours under the direction of a coach, athletic director or marching band leader including, but not limited to, Alpine and Nordic skiing and snowboarding, baseball, basketball, cheer leading, cross country track, fencing, field hockey, football, golf, gymnastics, horseback riding, ice hockey, lacrosse, marching band, rifle, rugby, soccer, skating, softball, squash, swimming and diving, tennis, track (indoor and outdoor), ultimate frisbee, volleyball, water polo, and wrestling. All interscholastic athletics are deemed to be extracurricular athletic activities.

before sustaining another hit; however, relying only on an athlete's self-report of symptoms to determine injury recovery is inadequate as many high school athletes are not aware of the signs and symptoms or the severity concussive injuries pose, or they may feel pressure from coaches, parents, and/or teammates to return to play as quickly as possible. One or more these factors will likely result in under-diagnosing the injury and a premature return to play. Massachusetts General Laws and Department of Public Health regulations make it imperative to accurately assess and treat student athletes when concussions are suspected.

Student athletes who receive concussions may appear to be "fine" on the outside, when in actuality they have a brain injury and are not able to return to play. Incurring a second concussion can prove to be devastating to a student athlete. Research has shown that young concussed athletes who return to play before their brain has healed are highly vulnerable to more prolonged post-concussion syndrome or, in rare cases, a catastrophic neurological injury known as Second Impact Syndrome.

The following protocol will discuss and outline what a concussion is, the mechanism of injury, signs and symptoms, management and return to play requirements, as well as information on Second Impact Syndrome and post concussion syndrome. Lastly, this policy will discuss the importance of education for our athletes, coaches and parents and other persons required by law.

This protocol should be reviewed on a yearly basis with all staff to discuss the procedures to be followed to manage sports-related concussions. This protocol will also be reviewed on a yearly basis by the athletic department as well as by nursing staff. Any changes in this document will be approved by the school committee and given to athletic staff, including coaches and other school personnel in writing. An accurate synopsis of this policy shall be placed in the student and faculty handbooks.

Section I. What is a Concussion?

A concussion is defined as a transient alteration in brain function without structural damage, but with other potentially serious long-term ramifications. In the event of a concussion, the brain sustains damage at a microscopic level in which cells and cell membranes are torn and stretched. The damage to these cells also disrupts the brain at a chemical level, as well as causing restricted blood flow to the damaged areas of the brain, thereby disrupting brain function. A concussion, therefore, is a disruption in how the brain works; it is not a structural injury. Concussions are difficult to diagnose because the damage cannot be seen. A MRI or CT scan cannot diagnose a concussion, but they can help rule out a more serious brain injury to a student athlete. Because concussions are difficult to detect, student athletes must obtain medical approval before returning to athletics following a concussion.

Section II. Mechanism of Injury:

A concussion is caused by a bump, blow or jolt to the head or body. Any force that causes the brain to bounce around or twist within the skull can cause a concussion. A bump, blow or jolt to the head or body can be caused by either indirect or direct trauma. The two direct mechanisms of injury are coup-type and contrecoup-type. Coup-type injury is when the head is stationary and struck by a moving object such as another player's helmet, a ball, or sport implement, causing brain injury at the location of impact. Contrecoup-type injury occurs when the head is moving and makes contact with an immovable or slowly moving object as a result of deceleration, causing brain injury away from the site of impact. Indirect forces are transmitted through the spine and jaw or blows to the thorax

that whip the head while the neck muscles are relaxed. Understanding the way in which an injury occurred is vital in understanding and having a watchful eye for athletes who may exhibit symptoms of a concussion so these student athletes can receive the appropriate care.

Section III. Signs and Symptoms:

Signs (what you see):

- Confusion
- Forgets plays
- Unsure about game, score, opponent
- Altered coordination
- Balance problems
- Personality change
- Slow response to questions
- Forgets events prior to injury (retrograde amnesia)
- Forgets events after injury (anterograde amnesia)
- Loss of consciousness (any duration)

Symptoms (reported by athlete):

- Headache
- Fatigue
- Nausea or vomiting
- Double vision/ blurry vision
- Sensitivity to light (photophobia)
- Sensitivity to noise (tinnitus)
- Feels sluggish
- Feels foggy
- Problems concentrating
- Problems remembering
- Trouble with sleeping/ excess sleep
- Dizziness
- Sadness
- Seeing stars
- Vacant stare/ glassy eyed
- Nervousness
- Irritability
- Inappropriate emotions

If any of the above signs or symptoms are observed after a suspected blow to the head, jaw, spine or body, they may be indicative of a concussion and the student athlete must be removed from play immediately and not allowed to return until cleared by an appropriate allied health professional.

Section IV. Post Concussion Syndrome:

Post Concussion Syndrome is a poorly understood condition that occurs after a student athlete receives a concussion. Student athletes who receive concussions can have symptoms that last a few days to a few months, and even up to a full year, until their neurocognitive function returns to normal. Therefore, all school personnel must pay attention to and closely observe all student athletes for post concussion syndrome and its symptoms. Student athletes who are still suffering from concussion symptoms are not

ready to return to play. The signs and symptoms of post concussion syndrome are:

- Dizziness
- Headache with exertion
- Tinnitus (ringing in the ears)
- Fatigue
- Irritability
- Frustration
- Difficulty in coping with daily stress
- Impaired memory or concentration
- Eating and sleeping disorders
- Behavioral changes
- Alcohol intolerance
- Decreases in academic performance
- Depression
- Visual disturbances

Section V. Second Impact Syndrome:

Second impact syndrome is a serious medical emergency and a result of an athlete returning to play and competition too soon following a concussion. Second impact syndrome occurs because of rapid brain swelling and herniation of the brain after a second head injury that occurs before the symptoms of a previous head injury have been resolved. The second impact that a student athlete may receive may only be a minor blow to the head or it may not even involve a hit to the head. A blow to the chest or back may create enough force to snap the athlete's head and send acceleration/deceleration forces to an already compromised brain. The resulting symptoms occur because of a disruption of the brain's blood autoregulatory system which leads to swelling of the brain, increasing intracranial pressure and herniation.

After a second impact a student athlete usually does not become unconscious, but appears to be dazed. The student athlete may remain standing and be able to leave the field under his/her own power. Within fifteen seconds to several minutes, the athlete's condition worsens rapidly, with dilated pupils, loss of eye movement, loss of consciousness leading to coma and respiratory failure. The best way to handle second impact syndrome is to prevent it from occurring altogether. All student athletes who incur a concussion must not return to play until they are asymptomatic and cleared by an appropriate health care professional.

Section VI. Management and Referral Guidelines:

1. When any of the above signs or symptoms listed in Section III are observed after a suspected blow to the head, jaw, spine or body, the athletic trainer and/or similarly trained medical professional will evaluate the student in accordance with established medical practice and, if necessary, activate Emergency Medical Services (EMS) to transport the injured athlete to a hospital via ambulance. In the event a student is transported to a hospital, a parent shall be notified and a school staff member, if available, shall accompany the student to the hospital until a parent or guardian arrives at the hospital.

If the athletic trainer or similarly trained medical professional is not available, the coach, volunteer or responding individual should immediately activate EMS, provide emergency first aid if

necessary and if so trained and not move the athlete until help arrives.

2. Individuals removed from an activity due to a suspected concussion by an athletic trainer and/or similarly trained medical professional will be monitored for signs and symptoms of more significant brain injury as listed in Section III and appropriate medical care will be sought if any of those signs or symptoms appears to be worsening.
3. Whenever it is medically confirmed that a student athlete has sustained a concussion, the athletic trainer will manage the student's condition and monitor the status of new and/or existing symptoms in accordance with the guidelines set forth in the Consensus Statement on Concussion in Sports forms from the 3rd International Conference on Concussion in Sports or a similar, medically-recognized assessment tool, to document the student athlete's concussion.
4. An individual removed from an activity, including practice, games, or events, due to a suspected concussion, who is symptomatic but stable (not worsening) is allowed to go home with his/her parent(s)/guardian(s) following the head injury. Parent(s)/guardian(s) will receive important information regarding signs and symptoms of deteriorating brain injury/function prompting immediate referral to a local emergency room as well as return to play requirements. Parent(s)/guardian(s), as well as student athletes, must read and sign the Concussion Information and Gradual Return to Play form and bring it back to the certified athletic trainer before starting with the return to play protocol. If on-site, the athletic trainer will provide consultation to the parent/guardian prior to leaving the venue.

VII. Gradual Return to Play Protocol:

1. Returning individuals to academic and athletic participation after sustaining a concussion will be managed by appropriately trained medical professional in accordance with established medical practices.
2. Following any concussion, the athletic trainer or, in the absence of the athletic trainer, the coach will notify the athletic director and school nurse of the injury.
3. Individuals removed from an activity due to a must have the Concussion Information and Gradual Return to Play form signed by a physician, physician assistant, licensed neuropsychologist, nurse practitioner, or athletic trainer stating when the athlete is allowed to return to play.

Exertional Post Concussion Tests:

Exertional post concussion tests shall be administered by the athletic trainer for student athletes removed from an activity after sustaining a concussion. Such tests shall be administered by appropriately trained medical professional in accordance with established medical practices. Tests shall be of increasing exertion as set forth in the following example:

- A. Test 1: (30% to 40% maximum exertion): Low levels of light physical activity.
- B. Test 2: (40% to 60% maximum exertion): Moderate levels of physical activity.
- C. Test 3: (60% to 80% maximum exertion). Non-contact sports specific drills.
- D. Test 4: (80% maximum exertion). Limited, controlled sports specific practice and drills.
- E. Test 5: Full contact and return to sport with monitoring of symptoms.

Section VIII. School Nurse Responsibilities:

1. May assist in testing student athletes in accordance with the Athletic Concussion Policy.
2. Participate and complete the proscribed training course on concussions. A certificate of completion will be recorded by the nurse leader yearly.
3. Complete symptom assessments in accordance with established protocols when a student enters the Health Office (HO) with questionable concussion during school hours.
4. Observe students with a concussion in accordance with established protocols.
5. If symptoms are present, notify parent/guardian(s) and instruct parent/guardian(s) that student must be evaluated by an MD.
 - (a) If symptoms are not present, the student may return to class.
6. If symptoms appear after a negative assessment, MD referral is necessary.
7. Allow students who are in recovery to rest in HO when needed.
8. Develop plan for students regarding pain management.
9. School nurse will notify teachers and guidance counselors of any students or student athletes who have academic restrictions or modifications related to their concussion.
10. Educate parents and teachers about the effects of concussion and returning to school and activity.
11. If injury occurs during the school day, inform administrator and complete accident/incident form.
12. Enter physical exam dates and concussion dates into the student information system.

Section IX. School Responsibilities:

1. Review and, if necessary, revise, the concussion policy every 2 years.
2. Once the school is informed of the student's concussion, a contact or "point person" should be identified (e.g. the guidance counselor, athletic director, school nurse, school psychologist or teacher).
3. Point person to work with the student on organizing work assignments, making up work and giving extra time for assignments and tests/quizzes.
4. Assist teachers in following the recovery stage for student.
5. Convene meeting and develop rehabilitative plan.
6. Decrease workload if symptoms appear.
7. Recognize that the student's ability to perform complex math equations may be different from the ability to write a composition depending on the location of the concussion in the brain.
8. Educate staff on the signs and symptoms of concussions and the educational impact concussions may have on students.
9. Include concussion information in student handbooks.
10. Develop a plan to communicate and provide language-appropriate educational materials to parents with limited English proficiency.

Section X. Athletic Director Responsibilities: The Athletic Director is designated to have administrative authority as to this policy.

1. Provide parents, athletes, coaches, and volunteers with educational training and concussion materials yearly.
2. Ensure that all educational training programs are completed and recorded.
3. Ensure that all students meet the physical exam requirements consistent with 105 CMR 200.000 prior to participation in any extracurricular athletic activity
4. Ensure that all students participating in extracurricular athletic activity have completed and submitted their pre-participation forms, which include a MIAA approved form or any other

- comprehensive health history form that includes specific questions related to previous head injury.
5. Ensure that athletes are prohibited from and receive instruction about engaging in any unreasonably dangerous athletic technique that endangers the health or safety of an athlete, including using a helmet or any other sports equipment as a weapon.
 6. Ensure that all head injury forms completed by parent/guardian(s) or coaches are reviewed by the coach, athletic trainer, school nurse and school physician.
 7. Inform parent/guardian(s) that the health information requested must be completed and received in order for their child to participate in athletic extracurricular activities.

Section XI. Parent/Guardian Responsibilities:

1. Complete and return concussion history form to the athletic department. All students must have annual physical examinations and proof of such submitted to the School prior to participating in athletics.
2. Inform school if student sustains a concussion outside of school hours. Complete new concussion history form following new injury.
3. If student suffers a concussion outside of school, complete head injury form and return it to the school nurse.
4. Complete a training provided by the school on concussions and return certificate of completion to the athletic department.
5. Watch for changes in your child that may indicate that your child does have a concussion or that your child's concussion may be worsening. Report to a physician:
 - A. Loss of consciousness
 - B. Headache
 - C. Dizziness
 - D. Lethargy
 - E. Difficulty concentrating
 - F. Balance problems
 - G. Answering questions slowly
 - H. Difficulty recalling events
 - I. Repeating questions
 - J. Irritability
 - K. Sadness
 - L. Emotionality
 - M. Nervousness
 - N. Difficulty with sleeping
6. Encourage your child to follow concussion protocol.
7. Enforce restrictions on rest, electronics and screen time.
8. Reinforce recovery plan.
9. Request a contact person from the school with whom you may communicate about your child's progress and academic needs.
10. Observe and monitor your child for any physical or emotional changes.
11. Request to extend make up time for work if necessary.
12. Recognize that your child will be excluded from participation in any extracurricular athletic event if all forms are not completed and on file with the athletic department.

Section XII. Student and Student Athlete Responsibilities:

1. Complete any required post-concussion tests or forms prior to participation in athletics.
2. Return medical clearance form to athletic trainer prior to return to play.
3. Participate in all concussion training and education and return certificate of completion to the athletic department prior to participation in athletics.
4. Report all symptoms to athletic trainer and/ or school nurse.
5. Follow the prescribed recovery plan, which may include rest, no participation in athletics, strict limits on screen time and electronics, and limits for books or backpacks that are too heavy.
6. Be honest with your teachers if you are having difficulty with your class work after a head injury.
7. See the athletic trainer and/or school nurse for pain management.
8. Return to sports only when cleared by physician and the athletic trainer.
9. Follow Gradual Return to Play Guidelines.
10. Report any symptoms to the athletic trainer and/or school nurse and parent(s)/guardian(s) if any occur after return to play.
11. Students who do not complete and return all required trainings, testing and forms will not be allowed to participate in sports.

Section XIII Coach & Band Instructor Responsibilities:

1. Participate in Concussion Education Course offered by the National Federation of State High School Associations (NFHS) on a yearly basis. Complete certificate of completion and return to the athletic department.
2. Receive a written assurance from the Athletic Director that all student athletes under the supervision of a Coach or Band Instructor have returned concussion history and health history forms prior to participation in athletics.
3. Complete a head injury form if their player suffers a head injury and the athletic trainer is not present at the athletic event. This form must be shared with the athletic trainer and school nurse within 48 hours.
4. Ensure all students have completed a concussion educational training and returned their certificate of completion prior to participation in athletics.
5. Remove from play any student athlete who exhibits signs and symptoms of a concussion.
6. Do not allow student athletes to return to play until cleared by an appropriately trained medical professional.
7. Follow Gradual Return to Play Guidelines.
8. Refer any student athlete with returned signs and symptoms back to the athletic trainer or other appropriately trained medical professional.
9. Any coach, band instructor, or volunteer coach for extracurricular activities shall not encourage or permit a student participating in the activity to engage in any unreasonably dangerous athletic technique that unnecessarily endangers the health of a student athlete, including using a musical instrument, helmet or any other sports equipment as a weapon.