

## **ATHLETIC CONCUSSION REGULATIONS**

### **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 sight 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. Exclusion from Play:**

Any student, who during a practice or competition, sustains a head injury or suspected concussion, or 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.

The student shall not return to practice or competition unless and until the student provides medical clearance. The coach or athletic trainer shall provide the necessary forms for the student to take to their medical provider. A completed medical clearance form is necessary before starting the return to play protocol.

The Coach or Athletic Trainer shall communicate the nature of the injury directly to the parent in person or by phone immediately feasible in which a student has been removed from play due to a head injury, suspected concussion, signs and symptoms of a concussion, or loss of consciousness.

The coach or his or her designee shall communicate, by the end of the next business day, with the Athletic Director, the school athletic trainer and school nurse that the student has been removed from practice or competition for a head injury, suspected concussion, signs and symptoms of a concussion or loss of consciousness.

### **Section V. Return to Play:**

A Westfield Public School multidisciplinary team will develop a plan for the student's return to play. This team will consist of athletic trainer, school nurse, school physician, teaching staff, guidance counselor, primary care physician or physician managing the student's recovery, parent, and other individuals as needed.

The plan shall include the academic recovery plan, any recommendations from the physician and the return to play protocol of the athletic trainer.

Students must be symptom free and medically cleared in order to return to play. The following individuals may authorize a return to play:

- A duly licensed physician
- A duly licensed certified athletic trainer in consultation with a licensed physician
- A duly licensed nurse practitioner in consultation with a licensed physician; or
- A neuropsychologist in coordination with the physician managing the student's recovery.

Final return to play in the Westfield Public Schools requires the approval of the Athletic Director and/or certified athletic trainer.

### **Section VI. School Nurse Responsibilities:**

1. Complete the annual educational training on concussions and submit completion to the athletic office.
2. Complete symptom assessment when student athlete enters Health Office (HO) with questionable concussion during school hours.
3. If symptoms are present, notify parent/guardian(s) and instruct parent/guardian(s) that student must be evaluated by an MD. If symptoms are not present the student may return to class.
4. School nurse will notify guidance counselors of any students or student athletes who have academic restrictions or modifications related to their concussion.
5. If injury occurs during the school day, inform administrator and complete accident/incident form.
6. Allow students who are in recovery to rest in the HO when needed.
7. School nurse will notify teachers and guidance counselors of any students of student athletes who have academic restrictions or modifications related to their concussion.
8. Educate parents and teachers about the effects of concussion and returning to school activity.
9. If injury occurs during the school day, inform administration and complete accident/incident report.

### **Section VII. 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 recover stage for student.
5. Convene meeting and develop rehabilitative plan.
6. Educate staff on the signs and symptoms of concussions and the educational impact concussions may have on students. Educations can included but is not limited to department meetings, professional development, handouts, etc.
7. Include concussion information in student handbooks.

### **Section VIII. Athletic Director Responsibilities:**

1. Provide parents, athletes, coaches, band director, 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 health history form, concussion history form, and MIAA form.
5. Ensure that athletes are prohibited from 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 are completed by parent/guardian(s) or coaches and reviewed by the school nurse.
7. Inform parent/guardian(s) that, if all necessary forms are not completed, their child will not participate in athletic extracurricular activities.

### **Section IX. Athletic Trainer Responsibilities:**

1. Review in collaboration with the school nurse the Pre-participation Questionnaire and Report of Report forms.
2. Identify students with head injury or concussion that occur in practice or competition and remove them from play
3. Monitor the symptoms of students with head injuries and maintain written documentation of such monitoring.
4. Implement the individual Concussion Return-to-Play Protocol after diagnosis.
5. Collaborate with coaches to ensure that the Concussion Return-to-Play protocol is being followed.
6. Determine return to play eligibility.
7. Require, after consultation with the school physician, further medical clearance from the student's physician who is managing their recovery. This additional medical clearance may be required for students who may have repeated concussions or severe concussion and who in the opinion of the athletic trainer may be at greater risk of suffering from concussions and potential long term effects from these multiple concussions.
8. Maintain all Concussion Return-to-Play protocols for students with head injury or concussion in a secure location.

### **Section X. Parent/Guardian Responsibilities:**

1. Complete and return concussion history form to the athletic department.
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 DPH approved training course on concussions.
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:
  - Loss of consciousness
  - Headache
  - Dizziness
  - Lethargy
  - Difficulty concentrating
  - Balance problems
  - Answers questions slowly
  - Cannot recall events
  - Repeating questions
  - Irritability
  - Sadness
  - Emotional
  - Very nervous
  - 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/point 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 XI. Student and Student Athlete Responsibilities:**

1. Return required concussion history form prior to participation in athletics.
2. Participate in all concussion training and education prior to participation in athletics.
3. Report all symptoms to athletic trainer and/ or school nurse.
4. Follow recovery plan.
5. Participate in all concussion training and education and return certificate of completion to the athletic department prior to participation in athletics.
6. Report all symptoms to athletic trainer and/ or school nurse.
7. Follow recovery plan.
8. REST.
9. NO ATHLETICS.
10. BE HONEST!

11. Keep strict limits on screen time and electronics.
12. Don't carry books or backpacks that are too heavy.
13. Tell your teachers if you are having difficulty with your class work.
14. See the athletic trainer and/or school nurse for pain management.
15. Return to sports only when cleared by physician and the athletic trainer.
16. Go through Gradual Return to Play Guidelines.
17. Report any symptoms to the athletic trainer and/or school nurse and parent if any occur after return to play.
18. Return medical clearance form to athletic trainer prior to return to play.
19. Students who do not complete and return all required trainings, testing and forms will not be allowed to participate in sports.

### **Section XII. 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. Ensure all student athletes have returned concussion history and health history form prior to participation in athletics.
3. Complete the Report of Head Injury form upon identification of a student with a head injury or suspected concussion that occurs during practice or competition. Promptly notify athletic director, athletic trainer and school nurse.
4. Promptly notify parent of any student removed from practice or competition and provide written notification to parent by the end of the next business day.
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 a physician and athletic trainer.
7. Follow Gradual Return to Play Guidelines.
8. Refer any student athlete with returned signs and symptoms back to athletic trainer or school nurse.
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.

### **Section XIII. 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 listen 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 XIV. 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 XIII. Concussion Education:**

It is extremely important to educate coaches, athletes and the community about concussions. On a yearly basis, all coaches must complete the online course called "Concussion In Sports: What You Need to Know". This course is offered by the National Federation of State High School Associations (NFHS). Student athletes also need to know the importance of reporting a concussion to their coaches, parents, athletic trainer and other school personnel. Every year student athletes and parents will participate in an educational training on concussions and complete a certificate of completion.

- CDC Heads-Up Video Training or
- Training provided by the school district

The school district may also offer seminars, speakers, and discussion panels on the topic of Concussions. Seminars offer a chance for the certified athletic trainer, athletic director and nurse leader to speak about concussions on the field at practices and games and to discuss the protocol and policy that the district has enacted. Providing education within the community will offer the

residents and parents of athletes an opportunity to ask questions and voice their concerns on the topic of brain injury and concussions. When it comes to concussions, everyone should be aware of the potential dangers and remember that a concussion is a mild brain injury. Whenever anyone has a doubt about a student athlete with a concussion, **SIT THEM OUT and have them see the appropriate healthcare professional!**

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**Resources:**

**Chapter 166 of the Acts of 2010, An Act Relative to Safety Regulations for School Athletes:**  
<http://www.malegislature.gov/Laws/SessionLaws/Acts/2010/Chapter166>

**MA DPH Resources:**

<http://www.mass.gov/eohhs/consumer/wellness/injury-prevention/sports-related-concussionsand-head-injuries.html>

**MIAA Resources:**

[http://www.miaa.net/contentm/easy\\_pages/easy\\_page\\_view.php?sid=38&page\\_id=103](http://www.miaa.net/contentm/easy_pages/easy_page_view.php?sid=38&page_id=103)

***Heads Up: Concussion in Youth Sports*** from the Centers for Disease Control and Prevention  
The first on-line course is available through the Centers for Disease Control and Prevention at:  
[http://www.cdc.gov/concussion/HeadsUp/online\\_training.html](http://www.cdc.gov/concussion/HeadsUp/online_training.html)

The training uses expert interviews and interactive elements to train coaches and others on concussion. This course includes additional materials for coaches, parents, athletes and school nurses. Additional educational materials on concussion and their impact can be found at:  
<http://www.cdc.gov/concussion/>

CDC has information available for individuals, including parents and athletes whose first language is Spanish and may not find the on-line course accessible:

The on-line courses can be found at:

- [http://www.cdc.gov/concussion/HeadsUp/online\\_training.htm](http://www.cdc.gov/concussion/HeadsUp/online_training.htm)
- <http://www.nfhslearn.com/electiveDetail.aspx?courseID=15000>

The written materials can be found at:

Student athletes:

- [http://www.cdc.gov/concussion/pdf/Athletes\\_Fact\\_Sheet-a.pdf](http://www.cdc.gov/concussion/pdf/Athletes_Fact_Sheet-a.pdf)
- [http://www.cdc.gov/concussion/pdf/Athletes\\_Fact\\_Sheet\\_Spanish-a.pdf](http://www.cdc.gov/concussion/pdf/Athletes_Fact_Sheet_Spanish-a.pdf)

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Parents:

- [http://www.cdc.gov/concussion/pdf/Parents\\_Fact\\_Sheet-a.pdf](http://www.cdc.gov/concussion/pdf/Parents_Fact_Sheet-a.pdf)
- [http://www.cdc.gov/concussion/pdf/Parents\\_Fact\\_Sheet\\_Spanish-a.pdf](http://www.cdc.gov/concussion/pdf/Parents_Fact_Sheet_Spanish-a.pdf)

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Coaches:

- [http://www.cdc.gov/concussion/pdf/Coach\\_Guide-a.pdf](http://www.cdc.gov/concussion/pdf/Coach_Guide-a.pdf)

- [http://www.cdc.gov/concussion/pdf/coaches\\_Engl.pdf](http://www.cdc.gov/concussion/pdf/coaches_Engl.pdf)

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School nurses:

- <http://www.cdc.gov/concussion/HeadsUp/schools.html>

***Concussion in Sports: What You Need to Know*** from the National Federation of State High School Associations. This on-line course is available through the NFHS. You will need to click the “order here” button and complete a brief registration form to take the course. However, you do not need to be a member of NFHS to access this course. Go to:

<http://www.nfhslearn.com/electiveDetail.aspx?courseID=15000>

### **How would I know if an athlete may have a concussion?**

While the symptoms of concussions vary from person to person, the Centers for Disease Control and Prevention have developed helpful materials that can assist you in understanding the signs.

[file://localhost/Go to/ http://www.cdc.gov/concussion/signs\\_symptoms.html](http://www.cdc.gov/concussion/signs_symptoms.html)

Sports-Related Head Injury Regulations: Frequently Asked Questions

<http://www.mass.gov/eohhs/docs/dph/com-health/injury/head-injury-faq.pdf>

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