Shrewsbury High School
Concussion Manual

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Shrewsbury Public Schools

Procedures for Head Injuries and Concussion in Extracurricular Athletics

Development of Policy and Procedures

The Concussion Policy and Procedures for Head Injuries and Concussion were developed according to 105 CMR 201.000 by a team of Shrewsbury Public School staff consisting of: Certified Athletic Trainer; Athletic Director; Director of Health, Nursing and Safety; High School Nurses; and Director of Guidance. The documents were reviewed by the HPS school physician, High School and Middle School Principals, Director of Pupil Services, teachers, and other members of the School Health & Safety Advisory Council.

The person responsible for implementing policies and protocols related to return to athletics is the Athletic Director. A Concussion team, including athletic trainer, school nurse, and guidance counselor, will review student incidents of concussion and develop students' reentry plans, which include resumption of academics and athletics. These individuals will maintain regular communication of information regarding student status, limitations, and progression within reentry plan after concussion. The procedures will be reviewed and updated annually or as needed.

Training of individuals in prevention and management of head injuries and concussion:

Each year, the Shrewsbury Public Schools (Athletic Department) will provide current training approved by the MDPH, written materials or a list and internet links for Department-approved on-line courses to all students who plan to participate in extracurricular athletic activities and their parents prior to the students' participation. Annual training in the prevention and recognition of sports-related head injury, and associated health risks including second impact syndrome will also be completed by SPS staff and associated individuals, including coaches, certified athletic trainers, trainers, volunteers, school and team physicians, school nurses, Athletic Directors, and Director of school marching band. Documentation of completion of this DPH-approved annual training will be maintained by the Athletic Director.

Teacher training related to impact of concussion on learning and reentry plans for return to academics will be provided on a one-time basis and offered as needed when requested and as laws, regulations or protocols change.

Requirements for students participating in extracurricular athletic activities:

Documentation of a physical examination prior to a student's participation in extracurricular athletic activities (one PE/year sufficient for multiple sports seasons) will be reviewed by a HPS nurse or athletic trainer for eligibility (consistent with 105 CMR 200.100 (B)(3): *Physical Examination of School Children*). Prior to student start of athletic activities, the Athletic Director will distribute to parents the Shrewsbury High School Athletic Participation Form and will maintain a record of completed forms. Students and their parents/guardians must sign this form prior to starting extracurricular athletic activities.

Reporting head injuries or suspected concussions:

Athletic trainer and/or coaches will report head injuries and/or suspected head injuries to the school nurse and counselor as soon as possible after injury. For head injuries and suspected concussions occurring during school day and non school-sponsored activities, school nurse, guidance counselor and other school staff will report to each other, athletic trainer. Teachers will be notified when medical diagnosis of concussion is confirmed.

Steps when student suffers head injury and suspected concussion during practice or competition:

The coach or athletic trainer removes student from play and performs assessment for signs and symptoms of concussion. Depending on the severity of symptoms, the coach or athletic trainer will activate EMS (for severe symptoms), keep the student out of play and notify parents/guardians (mild to moderate symptoms), or return to play (no signs or symptoms present).

The coach or athletic trainer will notify parents immediately in person or by phone if students has signs or symptoms of concussion; followed by information to parent in writing, paper or electronically, by the next business day. (201.010 C). Parent is provided two forms: 1) Report of Head Injury During Sports Season Form to be completed and signed by the coach, marching band director, or parent/guardian; and 2) Post Sports-Related Head Injury Medical Clearance and Authorization Form to be completed and signed by a duly licensed physician; a certified athletic trainer in consultation with a licensed physician; a duly licensed nurse practitioner in consultation with a licensed physician; a duly licensed neuropsychologist in coordination with the physician managing the student's recovery (105 CMR 201.011).

The coach or designee communicates by the end of the next business day with the Athletic Director and school nurse that student has been removed from practice or competition for a head

injury, suspected concussion, signs and symptoms of a concussion, or loss of consciousness. (201.010 D.)

Steps for student returning to academics after concussion:

The student will be returned to school and academics prior to resuming athletics.

HPS nurse assesses student for post-concussion signs and symptoms and completes return to academics protocol checklist (*see samples from Oregon – to be modified*), including completion of plan with instructions for modifications needed. The nurse will provide the student with a copy of the checklist to give to teachers and will communicate this information to the counselor, athletic trainer and teaches.

Steps for student returning to athletics after concussion:

The student will provide two forms to the coach, athletic trainer, school nurse or counselor: 1) Report of Head Injury During Sports Season Form completed and signed by the coach, marching band director, or parent/guardian; and 2) Post Sports-Related Head Injury Medical Clearance and Authorization Form signed by a duly licensed physician; a certified athletic trainer in consultation with a licensed physician; a duly licensed nurse practitioner in consultation with a licensed physician; a duly licensed neuropsychologist in coordination with the physician managing the student's recovery (105 CMR 201.011).

The return to play decision may also involve the parents, school nurse, counselors and teachers as appropriate.

Upon return to academics in school, the athletic trainer provides the student (and parent) as needed written instructions, which outline progressive stepped approach for gradual return to activity and steps to take if symptoms recur (Concussion Protocol Return-To-Play Checklist).

Shrewsbury Public Schools

ATHLETIC CONCUSSION POLICY

PURPOSE OF POLICY & MASSACHUSETTS LAW:

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 activities[1] including, but not limited to, interscholastic sports, in order to protect their health and safety as required by Massachusetts law and regulations.

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
- students who participate in an extra curricular activity and their parents

Volunteers shall not be liable for civil damages arising out of any act or omission related to the requirements of law, unless such volunteer is willfully or intentionally negligent in his act or omission.

CONCUSSION:

Most student athletes who sustain a concussion can fully recover as long as their brain has time to heal 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 of these factors will likely result in under-diagnosing the injury and a premature return to play.

[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, 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.

Massachusetts law and Massachusetts 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 the brain has healed are highly vulnerable to more prolonged post-concussion syndrome or, in rare cases, a catastrophic neurological injury know as Second Impact Syndrome

SCHOOL PROTOCOLS:

A School Department 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 protocol will discuss the importance of education for our athletes, coaches and parents and other persons as required by law.

This protocol will be reviewed on a yearly basis with all pertinent staff to inform them of 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.

Annually the School Department will report to the School Committee the number of concussions monitored, general outcomes and a rationale for any changes in the protocol.

RECORD KEEPING BY DISTRICT:

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 seven years or, at a minimum, until the student graduates, unless state or federal law requires a longer retention period:

1. Verification 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. Graduated reentry plans for return to full academic and extracurricular athletic activities.

Any changes in this policy 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 student and faculty handbooks.

Upon the adoption of this policy by the Shrewsbury 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 had 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.

Shrewsbury Public Schools

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 disrupt the brain at a chemical level, as well as causing restricted blood flow to the damaged area 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. Management and Referral Guidelines:

1. When an athlete loses consciousness for any reason, the athletic trainer or designee will start the EAP (Emergency Action Plan) including activating EMS; ABC's (airway, breathing, circulation); stabilize the cervical spine,; and transport the injured athlete to the appropriate hospital via ambulance if required. If the athletic trainer is not available, the coach should immediately call EMS, check ABC's and not move the athlete until help arrives.

2. Any athlete who is removed from the competition or event and begins to develop signs and symptoms of a worsening brain injury will be transported to the hospital immediately in accordance with the EAP. Worsening signs and symptoms requiring immediate physician referral include:

   A. Amnesia lasting longer than 15 minutes
   B. Deterioration in neurological function
   C. Decreasing level of consciousness
   D. Decrease or irregularity of respiration

E. Decrease or irregularity in pulse
F. Increase in blood pressure
G. Unequal, dilated, or unreactive pupils
H. Cranial nerve deficits
I. Any signs or symptoms of associated injuries, spine or skull fracture, or bleeding
J. Mental-status changes: lethargy, difficulty maintaining arousal, confusion, agitation.
K. Seizure activity
L. Vomiting/worsening headache
M. Motor deficits subsequent to initial on-field assessment
N. Sensory deficits subsequent to initial on-field assessment
O. Balance deficits subsequent to initial on-field assessment
P. Cranial nerve deficits subsequent to initial on-field assessment
Q. Post Concussion symptoms worsen
R. Athlete is still symptomatic at the end of the game

3. After a student athlete sustains a concussion, the athletic trainer will use the Standardized Assessment for Concussion (SAC) to assess and document the student athlete's concussion. The athletic trainer will also report on the student athlete's signs and symptoms by using the Signs and Symptoms Check-List. On the signs and symptoms checklist, the athletic trainer will also check pulse and blood pressure of each student athlete with a suspected concussion.

4. Any athlete who is symptomatic but stable is allowed to go home with his/her parent(s)/guardian(s) following the head injury.

   A. If the head injury occurs at practice, parent(s)/guardian(s) will immediately be notified and must come and pick up the student athlete and talk to the certified athletic trainer in person.
   B. If the injury occurs at a game or event the student athlete may go home with the parent/guardian(s) after talking with the certified athletic trainer.
   C. Parent(s)/guardian(s) will receive important information regarding signs and symptoms of deteriorating brain injury/function promoting 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.

V. Gradual Return to Play Protocol:

1. At the beginning of every sport season, student athletes are required to complete a concussion history form and return it to the athletic department. This information will be recorded in the student information system for tracking purposes.

2. Following any concussion the athletic trainer must notify the athletic director and school nurse within 24 hours.
3. Once a student athlete has been identified with a concussive injury, a physician's evaluation is required and delivered to the school nurse or athletic trainer.
4. The certified athletic trainer will also document the date on which the athlete is asymptomatic for 48 hours and begin Return to Play Protocol.
5. Student athletes who continue to exhibit concussion symptoms for a week or more must be re-evaluated by a physician before returning to play.

Exertional Post Concussion Tests:

Day 1: Light Aerobic Exercise: walking or stationary cycling, light jogging. No resistance training. No heavy exertion. Limit to 30 minutes.

Day 2: Sport Specific Training: stretching routine, agility drills, change of direction, sprinting. No *extended* exertion. No contact. No helmet or equipment.

Day 3: Light Contact Training: resume body contact drills, limit direct head contact (tackle drills in football, heading in soccer, checking in hockey), light resistance training (weight lifting).

Day 4: Full Contact PRACTICE: participation in all areas of practice, contact is allowed (tackle drills, heading, checking), resistance training is full.

Day 5: Game Play.

- **If any post-concussion symptoms develop at any stage, the student athlete must begin the *Return-to-Play Protocol* starting with Day 1 and try to progress again after 48 *symptom-free* hours.**
- **No medications may be taken at any step of the progression. This is to prevent masking a more serious underlying condition!**
- **You must check in daily with the athletic trainer every day *PRIOR* to practice to review these steps as well as for a minimum of 1 week after being cleared for full participation.**

Section VI. School Nurse Responsibilities:

1. Participate and complete the NFHS on-line training course on concussions. A certificate of completion will be recorded by the nurse leader yearly.
2. Complete symptom assessment when student athlete enters Health Office (HO) with questionable concussion during school hours. Repeat in 15 minutes.
3. Observe students with a concussion for a minimum of 30 minutes.

4. 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.
5. If symptoms appear after a negative assessment, MD referral is necessary.
6. Allow students who are in recovery to rest in HO when needed.
7. Develop plan for students regarding pain management.
8. School nurse will notify teachers and guidance counselors of any students or student athletes who have academic restrictions or modifications related to their concussion.
9. Educate parents and teachers about the effects of concussion and returning to school and activity.
10. If injury occurs during the school day, inform administrator and complete accident/incident form.
11. Enter physical exam dates and concussion dates into the student information system and maintain for the mandatory 7 years or given to the student upon graduation.

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 and teachers 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. Include concussion information in student and faculty handbooks.

Section VIII. Athletic Director Responsibilities:

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 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 and 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 coach, athletic trainer, school nurse and school physician.
7. Inform parent/guardian(s) that, if all necessary forms are not completed, their child will not participate in athletic extracurricular activities.

Section IX. 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 a 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 problem
    G. Answering questions slowly
    H. Difficulty recalling events
    I. Repeating questions
    J. Irritability
    K. Sadness
    L. Emotionality
    M. Nervousness
    N. Difficulty with sleeping
6. Support your child while following concussion protocol. Enforce restrictions on rest, electronics and screen time.
7. Reinforce recovery plan.
8. Contact the identified point person from the school with whom you may communicate about your child's progress and academic needs.
9. Observe and monitor your child for any physical or emotional changes.
10. 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 X. Student and Student Athlete Responsibilities:

1. Return required concussion history from prior to participation in athletics
2. Participate in all concussion training and education and return all appropriate forms to the athletic department prior to participation in athletics.
3. Report all symptoms to athletic trainer and/or school nurse.
4. Follow recovery plan

5. REST
6. NO ATHLETICS
7. BE HONEST!!
8. Keep strict limits on screen time and electronics.
9. Don't carry books or backpacks that are too heavy.
10. Tell your teachers if you are having difficulty with you class work.
11. See Athletic Trainer and/or school nurse for pain management.
12. Return to sports only when cleared by physician and the athletic trainer.
13. Follow *Return-to-Play* Guidelines
14. Report any symptoms to the athletic trainer and/or school nurse and parent(s)/guardians(s) if any occur after return to play
15. Return medical clearance form to athletic trainer prior t return to play.
16. Students who do not complete and return all required trainings, testing and forms will not be allowed to participate in sports.

Section XI. 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 he athletic department.
2. Ensure all students athletes have returned concussion history and health history form 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 the school nurse.
4. Ensure all students have completed a concussion educational training 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 a physician and athletic trainer.
7. Follow *Return-to-Play* Guidelines.
8. Refer any student athlete with returned signs and symptoms back to athletic trainer.
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 XII. 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 XIII. 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 pervious 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 re4sulting 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 XIV. 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 need to understand 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 educational training on concussions. This training may include:

- 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 an opportunity 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 needs to be aware of the potential dangers and remember that a concussion is a 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!

SHREWSBURY HIGH SCHOOL
CONCUSSION PROTOCOL

All coaches, athletic staff, parents, student-athletes, marching band members, volunteers, and any other persons involved with extracurricular activities must take the online concussion information course and provide certificate of completion prior to the start of the season as mandated by the MIAA and the State of Massachusetts.

Coaches: are prohibited from encouraging or permitting a student-athlete to return to play after suffering from a possible head injury. The coach must provide documentation of injury occurrence to the Athletic Department within 24 hrs of suspected injury.

Parents/Student-Athletes: are responsible under the new Massachusetts state law to provide the school district with information regarding any past medical history of head injury/concussion. The Athletic Department must receive this information prior to that start of the student's sports season.

RETURN-TO-PARTICIPATION PROTOCOL

This protocol allows a gradual increase in volume and intensity during the return-to-play process. The athlete is monitored for any concussion-like signs/symptoms during and after each activity period by the Certified Athletic Trainer. If symptoms return at any point during the re-exertion activity the athlete is expected to stop his/her activity for the day. The following day, if asymptomatic he/she may continue activities at the next step.

Once you are *symptom-free*, for 48 hours you may begin the steps for return to play.
Day 1: Light Aerobic Exercise: walking or stationary cycling, light jogging. No resistance training. No heavy exertion. Limit to 30 minutes.

Day 2: Sport Specific Training: stretching routine, agility drills, change of direction, sprinting. No *extended* exertion. No contact. No helmet or equipment.

Day 3: Light Contact Training: resume body contact drills, limit direct head contact (tackle drills in football, heading in soccer, checking in hockey), light resistance training (weight lifting).

Day 4: Full Contact PRACTICE: participation in all areas of practice, contact is allowed (tackle drills, heading, checking), resistance training is full. Take Post-Injury ImPACT test online if necessary.

Day 5: Game Play.

-If any post-concussion symptoms develop at any stage, drop back to the previous level and try to progress again after 48 *symptom-free* hours.

-No medications may be taken at any step of the progression. This is to prevent masking a more serious underlying condition!

-You must check in daily with your athletic trainer every day *PRIOR* to practice to review these steps as well as for a minimum of 1 week after being cleared for full participation.

The most recent consensus of experts is that athletes who have suffered multiple concussions should be held out of play for an extended period of time – 1-2 weeks – after symptoms have cleared, especially during the same sports season. For athletes who have suffered three mild/simple concussions or two moderate-severe/complex concussions in the same season, experts advise that they not be permitted to return to play again that season.

Head Injury Information

- A blow to the head can disrupt the normal function of the brain. Doctors often call this type of brain injury a "concussion" or a "closed head injury." They may describe these injuries as "mild" because concussions are usually not life threatening. However, the effects of a concussion can be serious.
- After a concussion, some people lose consciousness or are "knocked out" for a short time, but not always -- you can have a brain injury without losing consciousness. Some people are simply dazed or confused.
- Because the brain is very complex, every brain injury is different. Some symptoms may appear right away, while others may not show up for days or weeks after the concussion. Sometimes the injury makes it hard for people to recognize or admit that they are having problems.
- The signs of concussion are subtle. Early on, problems may be missed. People may look fine even though they are acting or feeling differently.
- Because all brain injuries are different, so is recovery. Most people with mild injuries recover fully, but it can take time. Some symptoms can last for days, weeks, or longer.
- People with a concussion need to be seen by a Doctor.

Signs and Symptoms

Some of the symptoms observed by MEDICAL STAFF:

_ Appears dazed or stunned
_ Is confused about assignment
_ Forgets sports plays
_ Is unsure of game, score, opponent
_ Moves clumsily
_ Slowness in thinking, acting, speaking, or reading
_ Loses consciousness (even briefly)
_ Memory loss
_ Difficulty paying attention or concentrating
_ Lack of energy
_ Severe mood changes

Some of the symptoms reported by ATHLETE:
_ Headache or pressure in head
_ Nausea
_ Balance problems or dizziness
_ Double vision or blurred vision
_ Sensitivity to light
_ Sensitivity to noise
_ Feeling sluggish or slowed down
_ Feeling in a fog or groggy
_ Increased fatigue

Danger Signs
In very rare cases, along with a concussion, a dangerous blood clot may form on the brain. Contact your Doctor or Emergency Department right away if you have any of the following symptoms:

_ Headaches that get much worse than at initial evaluation
_ Weakness, numbness, or decreased coordination
_ Repeated vomiting

The people checking on you should take you to an Emergency Department right away if you:
_ Cannot be awakened
_ Have one pupil (the black dot of your eye) larger than the other
_ Have convulsions or seizures
_ Have slurred speech
_ Are getting more confused, restless, or agitated

Recovery
- How fast people recover from a concussion varies from person to person.
- Although most people have a good recovery, how quickly depends on many factors.
- These factors include how severe the concussion was, what part of the brain was injured, their age, and how healthy they were before the concussion.
- Rest is very important after a concussion because it helps the brain to heal. You will need to be extremely patient because healing takes time. As the days go by, you can expect to gradually feel better.
- While you are healing, you should be very careful to avoid doing anything that could cause a blow to your head. On rare occasions, receiving another blow before a concussion has healed can be fatal. Here are some tips for healing:

_ Get plenty of sleep at night and rest during the day

_ Avoid use of electronics/media i.e. Ipods, video games, computer, cell phone/texting, television that may over stimulate the brain
_ Return to activities gradually, not all at once
_ Avoid activities that could lead to a 2nd brain injury until cleared by the Doctor
_ Take only those drugs that your Doctor has approved