



Portland Public Schools Athletic Training Department Concussion Management and Return to Play Protocol

Concussions are an injury to the brain caused by external forces or rotational forces which may or may not lead to loss of consciousness. Other terms used to describe this injury is mild traumatic brain injury (MTBI). Centers for Disease Control (CDC) has defined concussion as an epidemic in youth and high school sports. Concussions can cause cognitive impairments which leave athletes more at risk for secondary injury. Early recognition and proper care including appropriate return to play decisions is vital in the management of concussions.

The PPS Athletic Training Department Concussion Management and Return to Play Protocol lies in coherence with the *National Athletic Trainers Association Position Statement: Management of Sports Related Concussion, Consensus Statement on Concussion in Sport 3rd International Conference on Concussion in Sport Held in Zurich, November 2008 and the Maine Concussion Management Initiative Recommended Protocols*. The PPS Protocol states that athletes with a suspected head injury will receive a SCAT2 assessment and ImPACT post-concussion test as part of the management protocol.

The SCAT2 assesses orientation, immediate memory, neurological signs and symptoms, concentration, and delayed recall. You may receive a copy of this form from a PPS ATC.

ImPACT Concussion Management Software is a sophisticated research-based software tool developed to help sports-medicine clinicians evaluate recovery following concussion. ImPACT evaluates and documents multiple aspects of neurocognitive functioning including memory, brain processing speed, reaction time, post-concussive symptoms, and an injury documentation system.

All PPS athletes will have the opportunity to complete an ImPACT baseline evaluation that will assist the certified athletic trainers and treating physicians in providing the most appropriate return to participation recommendations for concussed athletes. More specific information regarding this sideline assessment of concussion can be obtained from the PPS Certified Athletic Trainers and/or team physicians.

Once an athlete has been diagnosed with a concussion specific measures will be taken prior to returning to play.

When an athlete shows ANY features of a concussion

- (a) The player should be medically evaluated onsite using standard emergency management principles, and particular attention should be given to excluding a cervical spine injury.
- (b) The appropriate disposition of the player must be determined by the ATC and/or team physician in a timely manner. If the ATC and/or physician is unavailable, the player should





be safely removed from practice or play and urgent referral to the athletic trainer or a physician arranged.

(c) Once the first aid issues are addressed, then an assessment of the concussive injury should be made using the SCAT2 or other similar tool.

(d) The athlete should not be left alone following the injury and should be placed in the care of a responsible adult. Serial monitoring for deterioration is essential over the initial few hours following injury. The athlete should NOT be given ANY medication for headache or any other concussion symptoms.

(e) An athlete with diagnosed concussion will NOT be allowed to RTP on the day of the injury nor be allowed to RTP without clearance from a physician and post-concussion ImPACT testing which is to be read by a credentialed ImPACT Consultant/Physician.

(f) While the athlete is recovering from the concussion, he/she will be under the care of a physician and ATC. During this time there will be a combined effort to progress the athlete through a graduated RTP protocol based on the 3rd International Conference on Concussion in Sport (Zurich) Guidelines. A copy of these guidelines can also be obtained from the PPS Certified Athletic Trainers and/or team physicians.

(g) An athlete who has sustained a concussion may be held from any and all academic as well as athletic activities. It is PPS policy that an athlete must be able to attend two full days of school prior to participating in ANY athletic activity.





**PORTLAND HIGH SCHOOL ATHLETIC TRAINING DEPT.
CONCUSSION HOME INSTRUCTIONS**

Your son/daughter _____ sustained a concussion on _____. To make sure that he/she recovers, please follow the following important recommendations:

1. Please remind _____ to check in with me tomorrow at _____ for a follow up evaluation.
2. Please review the items outlined on the Physician Referral Checklist on the back of this documents. If any of these problems develop prior to his/her follow-up with me, take your child to the Emergency Room at the nearest hospital.
3. If your son/daughter appears to be in stable conditions, you can follow the instructions outlined below.

It is OK to:

Use acetaminophen (Tylenol) for headaches
Use an ice pack for the head and neck as needed for comfort
Eat a light diet
Return to school
Go to sleep
Rest (no strenuous activity or sports)

There is NO need to:

Check eyes with a light
Wake Up every hour
Test reflexes

Do NOT:

Drink alcohol
Eat Spicy Foods
Exercise/Lift weights
Use the following:
computer
texting
video games
television

Specific Recommendations:

Recommendations provided to:

Recommendations provided by:

Please feel free to contact me if you have any questions or concerns. I can be reached at 207 318-4442

Signature: _____ **Date:** _____
Audrey J. McKenzie, ATC-L





Concussion Physician Referral Checklist

Day Of Injury Referral

Deterioration of neurologic function

Mental status changes: tiredness, confusion, agitation, difficulty maintaining arousal

Seizure activity

Vomiting

Increasing headache pain

Delayed Referral (after the day of the injury)

Concussion symptoms worsen or do not improve over time

Increase number of post-concussion symptoms reported

Post-concussion symptoms interfere with athlete's daily activities (sleep, disturbances or cognitive difficulties)

If you find any of these conditions occurring refer you child to the hospital emergency room as soon as possible.





Concussion Information Sheet

A concussion is mild traumatic brain injury which can result in a wide variety of severity and symptoms.

Name: _____ Date of Injury: _____

Mechanism of Injury: _____

Signs and Symptoms:

- Dizziness
- Loss of Consciousness
- Blurred Vision
- Double Vision
- Loss of Memory
- Ringing in the Ears
- Vomiting
- Nausea
- Headache
- Difficulty Concentrating
- Unbalanced
- Foggy or in a Daze
- Light Sensitivity
- Noise Sensitivity
- Slurred Speech
- Forgetfulness
- Uneven Pupils

Other Comments: _____

Signs to watch for:

Problems could arise over the first 24-48 hrs. Athlete should not be left alone and should go to the nearest hospital emergency department immediately if:

- Have a headache that gets worse
- Are very drowsy or can't be awakened
- Can't recognize people or places
- Have repeated vomiting
- Behave unusually or seem confused or very irritable
- Have seizures (arms and legs jerk uncontrollably)
- Have weak or numb arms or legs
- Are unsteady on your feet; have slurred speech





At home instructions:

- The athlete should remain relaxed in a quiet and comfortable environment.
- Rest and avoid activity
- Do not use aspirin or anti-inflammatory medication
- Avoid driving
- Avoid computer use, video games, television, reading, and texting, as these activities may exacerbate symptoms

Contact Information:

Emergency services (ambulance): 911

Maine Medical Center Emergency Dept: (207) 662-2381

Audrey McKenzie, ATC: 207-318-4442





PORTLAND PUBLIC SCHOOLS Concussion Symptom Checklist

NAME: _____

Please record the severity of each of the following symptoms using a scale of 0-6, where

0 = not present

1 = mild

3 = moderate

6 = most severe

	DATE	DATE	DATE	DATE
Headache				
Nausea				
Vomiting				
Balance Problems				
Dizziness				
Fatigue				
Trouble falling asleep				
Sleeping more than usual				
Sleeping less than usual				
Drowsiness				
Sensitivity to light				
Sensitivity to noise				
Irritability				
Sadness				
Nervousness				
Feeling more emotional				
Numbness or tingling				
Feeling slowed down				
Feeling mentally foggy				
Difficulty concentrating				
Difficulty remembering				
Visual problems				
Medication				
Total Symptom Score				





Audrey McKenzie, ATC-L
 Head Athletic Trainer
 Portland High School
 284 Cumberland Ave
 Portland, Maine 04101
 (207) 318-4442
 (207) 874-8248 (fax)

Dear Physician:

_____ has sustained a concussion while participating in _____ at Portland High School and has been referred to you for evaluation. The following information provides some background in regards to Portland High School's concussion management protocol. Our protocol includes the use of computerized neurocognitive testing, and our return to play guidelines.

NEUROCOGNITIVE TESTING

Portland High School has partnered with the Maine Concussion Management Initiative (MCMI) to utilize a software tool called ImPACT™ (Immediate Post Concussion Assessment and Cognitive Testing). ImPACT™ is a computerized exam developed by concussion experts at the University of Pittsburgh Medical Center and is utilized by many professional, collegiate, and high school sports programs across the country to assist with the diagnosis and management of concussion. Neurocognitive tests, such as ImPACT™ are fast becoming the "gold standard" in recognizing and managing head injuries. The test is non-invasive and tracks neurocognitive information such as memory, reaction time, processing speed and concentration. Additional information about ImPACT™ can be found at www.impacttest.com.

Portland High School Concussion Management Protocol

1. Any athlete suspected of sustaining a concussion will be referred to a physician.
2. Once asymptomatic and neurocognitive scores return to normal, the athlete will begin a graduated return-to-play protocol, following the Zurich Progression.* Athlete will be cleared by physician for return to full athletic participation.

Thank you for your assistance, and if you have any questions, please feel free to contact me.

Sincerely,

Audrey McKenzie, ATC-L
 Head Athletic Trainer
 Portland High School

Please indicate your diagnosis and treatment plan below:

***Zurich Progression as indicated on back**

<p>Date: _____</p> <p>Physician Diagnosis: _____</p> <p>Treatment plan:</p> <p>_____ Athlete should be held out of school for _____ days and physical education for _____ days.</p> <p>_____ Post concussion ImPACT™ testing will be administered at the physician's office.</p> <p>_____ When asymptomatic and when ImPACT™ scores return to normal, begin Zurich progression.</p> <p>_____ When Zurich progression is complete, administer ImPACT™.</p> <p>_____ The athlete will see me again before returning to play.</p> <p>Additional Comments:</p> <p>Physician's Name (please print): _____</p> <p>Phone: _____</p> <p>Fax: _____</p> <p>Physician's Signature: _____</p>





Portland High School Athletic Training Dept Graduated Return to Play Protocol

1. No activity
2. Light aerobic exercise: Intensity below 70%; no resistance training
3. Sport-specific exercise: Running, skating drills; no head impact drills
4. Non-contact training drills: Progression to more complex training drills, may start resistance training
5. Full-contact practice: Following physician clearance, participate in normal training
6. Return to play: Normal game play

If at any time post concussion symptoms occur during the graduated return, there will be at minimum a 24hr rest period. Once asymptomatic following the rest period the athlete will drop back to the previous asymptomatic level and the progression will resume.

*Consensus Statement on Concussion in Sport: The 3rd International Conference on Concussion in Sport Held in Zurich, November 2008





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Head Athletic Trainer
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Dear Parent/Guardian,

Portland High School is currently implementing an innovative program for evaluating and treating mild traumatic brain injuries (mTBI), more commonly known as a concussion. In Order to better manage concussions sustained by our student athletes, Portland High School has partnered with the Maine Concussion Management Initiative (MCMI) to acquire a software tool called ImPACT™ Immediate Post Concussion Assessment and Cognitive Testing). ImPACT™ is a computerized exam developed by concussions experts at the University of Pittsburgh Medical Center (UPMC) and used in many professional, collegiate, and high school sports programs across the country to assist with the diagnosis and management of mTBIs. Neurocognitive tests, such as ImPACT™ are fast becoming the “gold standard” in recognizing and managing mTBIs. Additional information about ImPACT™ can be found at www.impacttest.com.

We are asking students to take the computerized exam before beginning the sports season. The test is set up in a “video-game” format and takes about 20-25 minutes to complete. The ImPACT™ test is a pre-season physical for the brain. It records information such as memory, reaction time, speed, and concentration, but it is NOT an IQ test. The ImPACT™ test is non-invasive and poses no risk to your child.

If your child suffers a head injury and a concussion is suspected, your child will be referred to a physician or clinician for an evaluation. The physician or clinician may recommend that your child take the post-injury ImPACT™ test. Your child’s baseline (pre-season) and post-injury test data, if any, will be maintained on a secure server by ImPACT™. Your child’s test data will only be available to his/her physician or clinician, except as described below.

Your child’s test data may be available to persons other than the physician or clinician evaluating your child, as follows:

- The physician or clinician evaluating your child may choose to make your child’s test data available to other healthcare providers who are being consulted regarding the treatment of your child.
- Your child’s de-identified data may be utilized by the Maine Concussion Management Initiative at Colby College and UPMC for research purposes. However, the identity of your child will not be disclosed to MCMI, UPMC, or any researcher if the test results are used for this purpose.

At Portland High School, your child’s health and safety are at the forefront of the student athletic experience, and we are excited to work with the MCMI to implement this program.

Sincerely,

Audrey J McKenzie, ATC-LAT
Head Athletic Trainer





**PORLTAND HIGH SCHOOL ATHLETIC TRAINING DEPT
ImPACT™ BASELINE TESTING
PERMISSION SLIP**

For use of ImPACT™

I have read and understood the above information and GIVE permission for my son/daughter to take the ImPACT™ baseline test.

Printed Name of Athlete

Printed Name of Parent

Signature of Parent

Date

For use of ImPACT™

I have read and understood the above information and DO NOT give permission for my son/daughter to take the ImPACT™ baseline test.

Printed Name of Athlete

Printed Name of Parent

Signature of Parent

Date

Comments:

Portland High School
Audrey J McKenzie, ATC-L
207-318-4442 (cell phone)





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Concussion Sideline Report

Athlete's Name: _____ Date of Injury: _____

Loss of consciousness or unresponsive: _____

Pupils reaction to light: _____ Nystagmus: _____

Slurred Speech: _____

Poor orientation/confusion: _____

Memory: _____

Cognitive/Concentration: _____

Tender to palpation: _____

Reported Symptoms:

	NONE (0)	MILD (1-2)	MODERATE (3-4)	SEVERE (5-6)
Nausea				
Vomiting				
Balance Problems				
Dizziness				
Fatigue				
Drowsiness				
Sensitivity to light				
Sensitivity to noise				
Irritability				
Feeling more emotional				
Nervousness				
Numbness or tingling				
Feeling slowed down				
Feeling mentally foggy				
Difficulty concentrating				
Difficulty remembering				
Visual problems				
Medication				

