

Concussions, Concussion Management, and ImPACT

Athletic Concussion Management and ImPACT

What is a concussion?

Concussion is defined as a complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces. Concussions are caused by a bump, blow, or jolt to the head or from a blow to the body with an impulsive force that is transmitted to the head. Concussions can disrupt the way the brain works. Even a "ding" or a bump on the head can be serious and needs to be treated appropriately. Any athlete that exhibits symptoms of a concussion must be removed from sport and cannot return until cleared by a physician and completes the return to play protocol as described in the Consensus Statement on Concussion in Sport: Zurich 2008 1.

What are signs and symptoms of a concussion?

You can't see a concussion. Signs and symptoms of a Concussion can show up right after the injury or can take days or weeks to appear. If your teen reports any symptoms of a concussion, or if you notice the symptoms yourself, seek medical attention right away! Please note that brain imaging tests, such as CT scans, are not helpful in concussion diagnosis. Also note that even if these symptoms resolve quickly, it is still evidence of a concussion and proper treatment is required.

The following are some symptoms of a concussion:

Headache

Nausea and/or vomiting

Balance problems or dizziness

Double or fuzzy vision

Sensitivity to light or noise

Feeling sluggish, over tired, sleepy

Feeling foggy or groggy

Concentration or memory problems

Trouble remembering events before or after the hit

Confusion

Emotional response

Personality change

Loss of consciousness (an athlete does not need to be knocked out to have a concussion)

What to do now?

First 24 hours:

An athlete needs to have adult supervision so symptoms can be monitored.

No medication (Tylenol/Advil) for 24 hours.

If any symptoms continue to increase, immediate medical attention is required.

Awaken every two hours at night to check symptoms.

Beyond:

Rest (includes refraining from school, school work, video games, tv, reading etc.)

If symptoms are significant, student should stay home from school.

When feeling better (symptom free) and back at school, student should see the athletic trainer daily.

The athlete's teachers will be notified on their status. Students will have academic accommodations depending on symptoms, neurocognitive status, and physician recommendations.

What is the Return to Play Protocol?

Per State law, any athlete that exhibits signs of concussion needs to be evaluated by a licensed physician who is trained in the evaluation and management of concussions or a licensed psychologist neurophysiologically trained in the evaluation and treatment of concussions or has postdoctoral training in neuropsychology and specific training in the evaluation and management of concussions. See the athletic trainer for recommended physicians. An appointment with a specialist at the MossRehab Concussion Center can be made with the help of the athletic trainer for your convenience. Written clearance must be submitted to the Athletic Trainer before returning to sport.

The Return to Play Progression:

No Activity – Complete physical and cognitive rest until symptom free and no balance dysfunction.

Cognitive test (ImPACT test) that compares favorable against baseline.

When both are complete, then the following step wise progression of physical activity takes place. Each step takes place on a different day (24 hours). Any return of symptoms results in a return to the previous step after they are symptom free.

Light aerobic exercise (ie exercise bike)

Sport specific exercise (with athletic trainer)

Non-Contact Practice

Full Contact Practice (only after medical clearance)

Full Participation

Without exception ALL athletes must successfully complete the return to play progression before returning to competition. The return to play progression will be overseen by the school's athletic trainer.

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1. McCrory, P et al. Consensus statement on concussion in sport – The 3rd International Conference on concussion in sport, held in Zurich, November 2008. Journal of Clinical Neuroscience; 16 (2009) 755-763.

[Copy of Board Concussion Policy](#)

[High School Concussion Management Policy](#)

Concussion Fact Sheets from the CDC

[Fact Sheet for Parents and Students: CDC Fact Sheet](#)

CDC info webpage: <http://www.cdc.gov/headsup/youthsports/training/>

ImPACT Information

The Sports Concussion Program with Moss Sports Rehab focuses on the prevention, evaluation, and management of concussion injuries. The goal of the program is to safely return the athlete to play following a concussion through the implementation of a comprehensive concussion management program. As part of the concussion evaluation, the program uses a computerized assessment measure called ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing) to help determine when full recovery has occurred. ImPACT is a 20 minute computerized neuropsychological assessment of memory, attention, reaction time, processing speed, and post-concussion symptoms that is currently

being used by the NFL, NHL, MLB, as well as numerous colleges, high schools, and organizations. ImPACT provides specific objective information regarding the severity of the injury and can help take the guess work out of return to play decisions as well as prevent the cumulative effects of multiple concussions. These tests are regarded as privileged medical information and results are not shared with anyone besides the medical staff.

Additional Concussion Facts

- *Approximately ten percent of all athletes involved in contact sports suffer a concussion each year
- *It is estimated that up to 20% of football players will sustain a concussion each season
- *Although football has the greatest risk, soccer, wrestling, hockey, lacrosse, basketball, and cheerleading also carry a significant risk
- *"Bell Ringers" or mild concussion account for 75% of all concussive injuries
- *Many concussions go undiagnosed and unreported because signs and symptoms can vary from athlete to athlete
- *Traditional procedures such as CT, MRI, and EEG are not consistently useful in evaluating the effects of a concussion
- *The best way to prevent problems with concussion is to manage them effectively when they occur; recovery time and proper healing following a concussion are essential in preventing worsening of symptoms, repeat concussions, or permanent damage.
- *Many older return to play decisions are based on observation and the athlete's self-report of symptoms which is an incomplete assessment of recovery.
- *Effects of concussion are cumulative in athletes who return to play prior to complete recovery

Hatboro Horsham High School

Concussion Management Policy

Concussions are dangerous and life-threatening injuries and it is imperative that they are handled appropriately. Any athlete that exhibits signs of concussion must be referred to the Certified Athletic Trainer or a physician that is trained in the evaluation and management of concussions. We recommend a physician that specializes in concussion management that follows the Consensus Statement on Concussion in Sport 3rd International Conference on Concussion in Sport Held in Zurich, November

2008. This policy is in full compliance with the Safety in Youth Sports Act passed into law in November 2011.

Concussion Education for Coaches:

Every coach must take and provide proof of completion of the Sport Safety International ConcussionWise Pro for Coaches education course for coaches before coaching in that seasons sport. This course is taken annually. Completion certificate will be submitted to the Athletic office.

Parent and Student Education:

Hatboro Horsham High School will provide education to Students and Parents regarding concussions, the nature and risk of concussion and traumatic brain injury (TBI), including the risks of continuing to play or practice after a concussion or TBI. This information will be accessible from the athletic department website.

In order to participate in athletics, students and a parent or guardian must sign and return to the student's school each year a form acknowledging receipt and review of a concussion and traumatic brain injury information. This is located on the PIAA sports physical.

ImpACT Testing:

All students who participate in the following sports must take the ImpACT neuro-cognitive baseline test before participating:

Baseball, Boys and Girls Basketball, Boys and Girls Lacrosse, Boys and Girls Pole Vault, Boys and Girls Soccer, Cheerleading, Field Hockey, Football, Softball, Volleyball, and Wrestling

All athletes are welcome to take the test.

Baseline Testing Frequency Policy

Baseline testing is done at least every two years.

Every freshman and junior must take the test.

Any sophomore or senior that has not taken it the previous year, must take it.

(This includes transfers and new student athletes)

An athlete does not need to take it again in the same school year.

Athletes will have to take it again if their results are deemed unacceptable by the program. (Usually because it was taken incorrectly)

Immediate removal from play in case of suspected concussion:

Athletes who are determined by a game official, coach, certified athletic trainer, licensed physician, licensed physical therapist or other designated official to be exhibiting signs or symptoms of concussion or TBI must be immediately removed from play by the coach.

No return to play without written medical clearance: Athletes who have been removed may not return to play until evaluated and received written clearance from either a:

licensed physician who is trained in the evaluation and management of concussions or a licensed health care professional with such training designated by such physician; or

a licensed neuropsychologist trained in the evaluation and management of concussions or who has postdoctoral training in neuropsychology and specific training in the evaluation and management of concussions.

Return to Play Protocol

When the athlete is feeling better, he/she needs to be evaluated by a licensed physician who is trained in the evaluation and management of concussions or a licensed psychologist neurophysiologically trained in the evaluation and treatment of concussions or has postdoctoral training in neuropsychology and specific training in the evaluation and management of concussions. Your family physician is generally not the best source for this important evaluation.

The Return to Play Progression:

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Full Participation

Without exception ALL athletes must successfully complete the return to play progression before returning to competition. The return to play progression will be overseen by the school's athletic trainer.

The athlete's teachers will be notified on their status. Students will have academic accommodations depending on symptoms, neurocognitive status, and physician recommendations.

[Concussion Referral Page](#) Concussion Referral Page / Dr. Accommodations form. Click to download.

Safety in Youth Sports Act

[See the law here:](#)

Free online informational course for parents and athletes

Free online informational course for parents (ConcussionWise SPORT for Parents) or athletes (ConcussionWise SPORT for Athletes) can be found here:

<http://concussionwise.com/Pennsylvania>

A great resource of information for parents.

Ahead of the Game

The Parents Guide to Youth Sports Concussion

Rosemarie Moser Ph.D.

Find it here

Concussion Articles:

<http://keepingscore.blogs.time.com/2013/02/21/study-neck-strength-predicts-concussion-risk/>

<http://gizmodo.com/5980540/why-its-impossible-to-build-a-concussion-proof-helmet>

<http://www.prweb.com/releases/2013/1/prweb10371881.htm>

<https://www.stack.com/a/concussions-womens-sports>

Also checkout this video on concussions:

<https://vimeo.com/6089854>