

**Concussion Management  
Plan of the Comsewogue  
School District**

## Foreword

The Concussion Management and Awareness Act, specifically Chapter 496 of the Laws of 2011, requires the Commissioner of Education, in conjunction with the Commissioner of Health, to promulgate rules and regulations related to students who sustain a concussion, also known as a mild traumatic brain injury (MTBI), at school and at any district-sponsored event or related activity. These guidelines for return to school and certain school activities apply to all public school students who have sustained a concussion regardless of where the concussion occurred. The law also requires that school coaches, physical education teachers, nurses, and certified athletic trainers complete a New York State Education Department (NYSED) approved course on concussions and concussion management every two years. Finally, the law requires that students who sustained, or are suspected to have sustained, a concussion during athletic activities are to be removed from such activities. Students may not return to athletic activities until they have been symptom-free for a minimum of 24 hours and have been evaluated by, and receive written and signed authorization to return to activities from our Chief Medical Officer(s).

The purpose of this document is to provide parents and student-athletes with information on concussion management in school settings. It explains the purpose of a concussion management program in our district and provides guidance for identifying symptoms of a concussion, guidelines of how to treat a concussion, post-concussion management tactics, and follow-up protocols. This will assist you in being educated on the topic, and help familiarize you with the protocols and procedures that the Comsewogue School District employs to be sure that a student who has been diagnosed with a concussion receives the appropriate care and attention at school to aid in his/her recovery.

Extra-class periods of physical education (PE) means those sessions organized for instruction and practice in skills, attitudes, and knowledge through participation in individual, group, and team activities organized on an intramural, extramural, or interschool athletic basis to supplement regular physical education class instruction [8NYCRR 135.1(h)]. In extra class activities, the Chief Medical Officer(s) is the final person to clear a student to return to such activities [8NYCRR 135.4(c)(7)(i)].

Every attempt has been made to ensure that the information and resources contained in this document reflect best practice in the fields of medicine and nursing practice. These policies were developed in accordance with guidelines established by the advisory group of The State Education Department of New York.

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## Concussion Overview

Concussions, a type of traumatic brain injury (TBI), are injuries to the brain that occur as the result of a fall, motor vehicle accident, or any other activity that results in an impact to the head or body.

According to the Centers for Disease Control and Prevention (CDC), *Morbidity and Mortality Weekly Report (MMWR)* [October 7, 2011/ 60(39); 1337-1342]:

- An estimated 2,651,581 million people under age 19 sustain a head injury annually.

In New York State for 2009:

- Approximately 50,500 children under the age of 19 visited the emergency room for traumatic brain injury and of those, approximately 3,000 were hospitalized.

A concussion is a reaction by the brain to a jolt or force that can be transmitted to the head by an impact or blow occurring anywhere on the body. Essentially, a concussion results from the brain moving back and forth or twisting rapidly inside the skull. Avoiding re-injury and over-exertion until fully recovered are the cornerstones of proper concussion management. The symptoms of a concussion result from a temporary change in the brain's function. In most cases, the symptoms of a concussion generally resolve over a short period of time; however in some cases symptoms can last for weeks or longer. In a small number of cases, or in cases of re-injury during the recovery phase, permanent brain injury is possible. Children and adolescents are more susceptible to concussions and take longer than adults to fully recover. Therefore, it is imperative that any student who is suspected of having sustained a concussion be immediately removed from athletic activity (e.g., recess, PE class, sports) and remain out of athletic activities until evaluated **and** cleared to return to athletic activity by a physician. In addition, students who need to be cleared for inter-scholastic athletics need to be cleared by our Chief Medical Officer.

## Comsewogue School District Concussion Management Plan

The concussion program consists of five components:

1. Education
2. \*Baseline neurocognitive testing using the ImPACT product (when available)
3. Proper sideline management/guidelines
4. Proper Emergency Room follow-up
5. Proper Return to Play Protocol/Clearance to return to athletics

\*If the student was given the baseline test this information will be utilized to help determine their return to play. The Chief Medical Officer(s) will still need to approve the student to return to play.

## **Concussion Management Team**

The Comsewogue School District has assembled a concussion management team (CMT). The CMT consists of the athletic director, school nurse, athletic trainer, and/or middle school and high school principals, chief medical officer(s), and/or outside consultants as deemed necessary. The District's CMT will coordinate the training for all coaches, parents and students.

## **Education**

The Comsewogue School District will provide a course of instruction relating to the recognition of symptoms of concussions and monitoring and seeking proper medical treatment for students who suffer such injuries. The course includes but is not limited to the following content: the definition of a concussion; signs and symptoms of mild traumatic brain injuries and how such injuries may occur; practices regarding prevention; and guidelines for return to school activities after a pupil has suffered a concussion. The course is required to be completed on a biennial basis and shall be given to all school coaches, nurses, physical education teachers and athletic trainers as per N.Y. Education Law 305(42)(a)(ii).

Each school coach, physical education teacher, nurse and athletic trainer will have to complete an approved course on concussion management on a biennial basis, starting with the 2012-2013 school year.

- School coaches and physical education teachers must complete the CDC course: [www.cdc.gov/concussion/HeadsUp/onlinetraining.html](http://www.cdc.gov/concussion/HeadsUp/onlinetraining.html)
- School nurses and certified athletic trainers must complete the concussion course: <http://preventingconcussions.org>

## **Baseline Neurocognitive Testing (Ex. ImPACT)**

This testing is what allows for OBJECTIVE measurement of severity of injury and extent of return of function after a concussion is sustained. It is an approximately 30 minute computer based test that is administered to athletes who participate in contact/collision sports (Football, Soccer, Wrestling, Competitive Cheerleading, Basketball and Lacrosse) before their athletic season starts. Baseline testing is performed once every two years. It measures several subtle aspects of brain function. The software currently utilized is called ImPACT. This is the same software used by the NFL, NHL, and MLB. It allows for testing of athletes 12-65 years of age. This portion of the program is currently being sponsored by St. Charles Hospital. They will arrange for a block of baseline tests to be purchased from ImPACT. The baseline tests would then be administered in the school district computer labs. District based personnel will be trained on how to proctor the testing. The data is then stored on an internet based server. Access to the data is currently only granted by the school district, St. Charles Hospital, the Chief Medical Officer(s) and the parents/guardians. If a student isn't baseline tested all other return to play procedures will be implemented to ensure a safe return to activity.

## **Proper Sideline Management**

Coaches, athletic trainers, and school physicians will be trained on the proper guidelines for removing a student-athlete from play. As per the NYSPHSAA regulation any student removed from play because of suspected head injury cannot return to play on that day unless cleared by the school's Chief Medical Officer(s).

## **Proper Emergency Room Evaluation**

It is imperative that an athlete who sustains a head injury be seen by a trained medical officer familiar with concussion signs and symptoms. St. Charles Hospital is the only pediatric traumatic brain injury unit on Long Island. As part of the comprehensive concussion plan, all ER personnel at the hospital have in serviced on the most up-to-date information on concussions. Also as part of the program, the ER physicians would have access to the baseline ImPACT data to be used at the emergency room if necessary. Due to this existing partnership, it is suggested that student-athletes be directed to St. Charles Hospital for evaluation if emergency room care is needed.

## **Public Information**

Information relating to concussions will be posted on the school district website. Additionally, information relating to concussion symptoms (Page 8) and return to play protocol (Page 6) will be included with the parent/guardian consent form required for a student's participation in interscholastic sports.

## **Proper Return to Play Protocol and Clearance**

Once a student-athlete is diagnosed with a concussion, they can only be cleared back to athletics by the district Chief Medical Officer(s). In addition, our Chief Medical Officer(s) has been appointed to allow our athletes access to a team of physicians that are certified concussion specialists.

No student should return to full athletics before going through a return-to-play protocol. This is usually a 3-5 day supervised program. Return to play following a concussion involves a stepwise progression once the individual is symptom free. There are many risks to premature return to play including: a greater risk for a second concussion because of a lower concussion threshold, second impact syndrome (abnormal brain blood flow that can result in death), exacerbation of any current symptoms, and possibly increased risk for additional injury due to alteration in balance. No student-athlete should return to play while symptomatic. Students are prohibited from returning to play the day the concussion is suspected. If there is any doubt as to whether a student has sustained a concussion, it should be treated as a concussion! ("When in doubt, sit them out".)

The following criteria will be utilized before any athlete is cleared to return to play:

1. Asymptomatic during rest
2. Asymptomatic during exertion
3. Acceptable signs on IMPACT neurological testing

The athletic trainer and/or nurse will oversee return to play protocol with the Chief Medical Officer or the concussion certified physician. Final return to play decisions will be made by our Chief Medical Officer(s). Please see the attached list on page 14 for a listing of current concussion certified physicians approved by the Comsewogue School District.

## **Prevention and Safety**

Protecting students from head injuries is one of the most important ways to prevent a concussion. Although the risk of a concussion may always be present with certain types of activities, in order to minimize the risk the district insures that (where appropriate) education, proper equipment, and supervision to minimize the risk is provided to district staff, students, and parents/guardians. Instruction includes signs and symptoms of concussions, how such injuries occur, and possible long term effects resulting from such injury. It is imperative that students know the symptoms of a concussion and to inform appropriate personnel, even if they believe they have sustained the mildest of concussions. Emphasis is placed on the need for medical evaluation should such an injury occur to prevent persisting symptoms of a concussion, and following the guidelines for return to school and activities. It is extremely important that all students be made aware of the importance of reporting any symptoms of a concussion **immediately** to their parent/guardian and/or appropriate district staff. District staff members will follow district emergency protocols and procedures for any student reporting signs and symptoms of injury or illness.

The Comsewogue School District places strict emphasis on the rules that interscholastic athletic competition rules are followed, appropriate safety equipment is used, and rules of sportsmanship are enforced. Student athletes are instructed not to initiate contact to another player with their head or to the head of another player. Players are proactively instructed on sport-specific safe body alignment and encouraged to be aware of what is going on around them. These practices will reduce the number of unexpected body hits that may result in a concussion and/or neck injury. In addition, further instruction of our student athletes include the rules of the sport, defining unsportsmanlike like conduct, and enforcing penalties for deliberate violations.

## **Identification and Symptoms**

Any student who is observed to, or is suspected of, suffering a significant blow to the head, has fallen from any height, or collides hard with another person or object, may have sustained a concussion. Symptoms of a concussion may appear immediately, may become evident in a few hours, or evolve and worsen over a few days. Concussions may occur at places other than school. Therefore, district staff members who observe a student displaying signs and/or symptoms of a concussion, or learn of a head injury from the

student, will have the student accompanied to the school nurse or athletic trainer. If there isn't a school nurse or athletic trainer, or he/she is unavailable, the district employee will contact the parent/guardian. In accordance with the Concussion Management and Awareness Act, any student suspected of having a concussion either based on the disclosure of a head injury, observed or reported symptoms, or by sustaining a significant blow to the head or body must be removed from athletic activity and/or physical activities (e.g., PE class, recess), and observed until an evaluation can be completed by the Chief Medical Officer(s). Symptoms of a concussion include, but are not necessarily limited to:

- Amnesia (i.e. decreased or absent memory of events prior to or immediately after the injury, or difficulty retaining new information)
- Confusion or appearing dazed
- Headache or head pressure
- Loss of consciousness
- Balance difficulty or dizziness, or clumsy movements
- Double or blurry vision
- Sensitivity to light and/or sound
- Nausea, vomiting, and/or loss of appetite
- Irritability, sadness or other changes in personality
- Feeling sluggish, foggy, groggy, or lightheaded
- Concentration or focusing problems
- Slowed reaction times, drowsiness
- Fatigue and/or sleep issues (i.e sleeping more or less than usual)

Students who develop any of the following signs, or if the above listed symptoms worsen, must be seen and evaluated immediately at the nearest hospital emergency room:

- Headaches that worsen
- Seizures
- Looks drowsy and/or cannot be awakened
- Repeated vomiting
- Slurred speech
- Unable to recognize people or places
- Weakness or numbing in arms or legs, facial drooping
- Unsteady gait
- Dilated or pinpoint pupils, or change in pupil size in one eye
- Significant irritability
- Any loss of consciousness
- Suspicion of skull fracture blood draining from ear, or clear fluid from nose

Neurocognitive computerized tests and sideline assessments may assist district staff in determining the



severity of a student’s symptoms. They are not a replacement for a medical evaluation to diagnose a concussion. All students with a suspected concussion are to be seen as soon as possible by one of the following medical providers: a physician, nurse practitioner, or physician assistant.

The table below provides some of the areas where people with concussions may experience difficulty.

Problem Area	Problem Description
Expression	Word Retrieval: <ul style="list-style-type: none"> <li>• May have trouble thinking of specific words (word finding problems) or expressing the specifics of their symptoms or functional difficulties</li> </ul>
Comprehension	Spoken: <ul style="list-style-type: none"> <li>• May become confused if too much information is presented at once or too quickly</li> <li>• May need extra time processing information to understand what others are saying</li> <li>• May have trouble following complex multi-step directions</li> <li>• May take longer than expected to respond to a question</li> </ul> Written: <ul style="list-style-type: none"> <li>• May read slowly</li> <li>• May have trouble reading material in complex formats or with small print</li> <li>• May have trouble filling out forms</li> </ul>

## Diagnosis

In New York State, the diagnosis of a concussion remains within the scope of practice of the following medical providers: physicians, nurse practitioners, and physician assistants. As part of their licensure, these medical providers are encouraged to remain current on best practices in their fields.

It cannot be emphasized enough that any student suspected of having a concussion – either based on the disclosure of a head injury, observed or reported symptoms, or by sustaining a significant blow to the head or body – must be removed from athletic activity and/or physical activities (e.g. PE class, recess), and observed until an evaluation can be completed by our Chief Medical Officer(s). In accordance with the Concussion Management and Awareness Act, a student diagnosed with a concussion is not to be returned to athletic activities until at least 24 hours have passed without symptoms and the student has been assessed and cleared by a medical provider to begin a graduated return to activities. Per this statute, students removed from athletic activities at school for a suspected concussion must be evaluated by, and receive written and signed authorization from the district Chief Medical Officer(s) in order to return to athletic activities in school.

Evaluation by a medical provider of a student suspected of having a concussion should include a thorough health history and a detailed account of the injury. The Centers for Disease Control and Prevention (CDC) recommends that physicians, nurse practitioners, and physician assistants use the Acute Concussion Evaluation Form (ACE) to conduct an initial evaluation.

<http://www.cdc.gov/concussion/headsup/pdf/ACE-a.pdf>

The CDC recommends evaluation of three areas:

- Characteristics of the injury
- Type and severity of cognitive and physical symptoms
- Risk factors that may prolong recovery

## **Injury Characteristics**

The student, and/or the parent/guardian or district staff member who observed the injury, should be asked about the following as part of an initial evaluation:

- Description of the injury
- Cause of the injury
- Student's memory before and after the injury
- If any loss of consciousness occurred
- Physical pains and/or soreness directly after injury

## **Risk Factors to Recovery**

According to the CDC's, Heads Up, Facts for Physicians About Mild Traumatic Brain Injury (MTBI), students with these conditions are at a higher risk for prolonged recovery from a concussion: [http://www.cdc.gov/concussion/headsup/pdf/Facts\\_for\\_Physicians\\_booklet-a.pdf](http://www.cdc.gov/concussion/headsup/pdf/Facts_for_Physicians_booklet-a.pdf)

- History of concussion, especially if currently recovering from an earlier concussion
- Personal and/or family history of migraine headaches
- History of learning disabilities or developmental disorders
- History of depression, anxiety, or mood disorders

Students, whose symptoms worsen or generally show no reduction after 7-14 days, or sooner depending on symptom severity, should be considered for referral to a neuropsychologist, neurologist, psychiatrist, or other medical specialist in traumatic brain injury.

## **Post- Concussion Management**

Students who have been diagnosed with a concussion require both physical and cognitive rest. Delay in instituting medical provider orders for such rest may prolong recovery from a concussion. Private medical provider's orders for avoidance of cognitive and physical activity and graduated return to activity should be followed and monitored both at home and at school. Additionally, children and adolescents are at increased risk of protracted recovery and severe, potential permanent disability (e.g. early dementia also known as chronic traumatic encephalopathy), or even death if they sustain another concussion before fully recovering from the first concussion. Therefore, it is imperative that a student is fully recovered before resuming activities that may result in another concussion. Best practice warrants that, whenever there is a question of safety, a medical professional err on the side of caution and hold the athlete out for a game, the remainder of the season, or even a full year.

## **Cognitive Rest**

Cognitive rest requires that the student avoid participation in, or exposure to, activities that require concentration or mental stimulation including, but not limited to:

- Computers and video games
- Television viewing
- Texting
- Reading or writing
- Studying or homework
- Taking a test or completing significant projects
- Loud music
- Bright lights

Attention should be given for signs of concussion symptoms such as fatigue, irritability, headaches, blurred vision, or dizziness; reappearing with any type of mental activity or stimulation. If any of these signs and symptoms occurs the student should cease the activity. The return of symptoms will guide whether the student can participate in an activity. Students may exhibit increased difficulties with focusing, memory, learning new information, and/or an increase in irritability or impulsivity. If the student's symptoms last longer than 7-14 days, a medical provider should consider referring the student for an evaluation by a neuropsychologist, neurologist, physiatrist, or other medical specialist in traumatic brain injury.

Districts should have policies and procedures in place related to transitioning students back to school and for making accommodations for missed tests and assignments. It will be up to the discretion of the building principal in conjunction with the Chief Medical Officer(s) to determine what needs to be made up in regards to assignments and tests.

Please be advised that due to cognitive rest requirements that's student's academic achievement may be impacted and may affect the ability to complete course requirements.

## **Physical Rest**

Physical rest includes getting adequate sleep, taking frequent rest periods or naps, and avoiding physical activity that requires exertion. Some activities that should be avoided include, but are not limited to:

- Ones that result in contact and collision and are high risk for re-injury
- High speed and/or intense exercise and/or sports
- Any activity that results in an increased heart rate or increased head pressure (e.g. straining or strength training)

Students may feel sad or angry about having to limit activities, or having difficulties keeping up in school. Students should be reassured that the situation is temporary, that the goal is to help the student get back to full activity as soon as it is safe, and to avoid activities which will delay their recovery. Students should be informed that the concussion will resolve more quickly when they follow their medical provider's orders as supported by various studies. Students will need encouragement and support at home and school until symptoms fully resolve.

## **What You Can Do to Help**

### **Student**

Students are required to communicate any symptoms promptly to district staff and/or parents/guardians, as a concussion is primarily diagnosed by reported and/or observed signs and symptoms. It is the information provided by the student about their signs and symptoms that guide the other members of the team in transitioning the student back to activities. The amount and type of feedback reported by the student will be dependent on age and other factors. Therefore, it is recommended that students:

- Be educated about the prevention of head injuries.
- Be familiar with signs and symptoms that must be reported to the coach, certified athletic trainer, school nurse, parent/guardian, or other staff.
- Be made aware of the risk of concussion and be encouraged to tell their coach, parent/guardian, certified athletic trainer, school nurse or other staff members about injuries and symptoms they are experiencing.
- Be educated about the risk of severe injury, permanent disability, and even death that can occur with re-injury by resuming normal activities before recovering from a concussion.
- Follow instructions from their private medical provider.
- Be encouraged to ask for help and to inform teachers of difficulties they experience in class and when completing assignments.
- Encourage classmates and teammates to report injuries.
- Promote an environment where reporting signs and symptoms of a concussion are considered acceptable.

### **Parent/Guardian**

Parents/guardians play an integral role in assisting their child and are the primary advocate for their child. If your child is diagnosed with a concussion, it is important that you communicate with both the medical provider and the school. Understandably this can be a stressful time for you as you are concerned about your child's well-being. Therefore, it is recommended that parents/guardians:

- Be familiar with the signs and symptoms of concussions. This may be accomplished by reading pamphlets, Web based resources, and/or attending meetings prior to their child's involvement in interscholastic athletics.
- Be familiar with the Concussion Management and Awareness Act's requirement that any student believed to have suffered a concussion must immediately be removed from athletic activities.
- Be familiar with any concussion policies or protocols implemented by the school district. These policies are in the best interest of your child.
- Be made aware that concussion symptoms that are not addressed can prolong concussion recovery.
- Provide any forms and written orders from the medical provider to the school in a timely manner.
- Monitor your child's physical and mental health as they transition back to full activity after sustaining a concussion.

- Report concerns to your child's private medical provider and the school as necessary. Communicate with the school to assist in transitioning your child back to school after sustaining a concussion.
- Communicate with school staff if your child is experiencing significant fatigue or other symptoms at the end of the school day.
- Follow the private medical provider orders at home for return to activities.

## **Important Contacts**

### **Chief Medical Officers for Concussions for the Comsewogue School District**

#### **Orthopedic Associates of Long Island, LLP**

6 Technology Dr.

East Setauket, NY 11733 (631) 689-6698

Philip L. Schrank, MD

Hayley Queller, MD

Michael Sileo, MD

#### **St. Charles Hospital Concussion Management Center**

(631) 476-4323

Jennifer Gray, DO

Jennifer Semel, DO

Anuja Korlipara, MD

#### **Comsewogue School District Athletic Trainer**

(631) 474-0648

Jillian Sherman, ATC

#### **Comsewogue High School, School Nurse**

(631) 474-8191

Bea Simpson, RN

#### **JFK Middle School, School Nurse**

(631) 474-8156

Maureen Lipshie

## Resources

### **American Association of Neurological Surgeons**

<http://www.aans.org/Patient%20Information/Conditions%20and%20Treatments/Concussion.aspx> accessed 4/25/12

### **Brain Injury Association of New York State**

<http://www.bianys.org>  
accessed 4/25/12

### **Centers for Disease Control and Prevention**

<http://www.cdc.gov/concussion/index.html>  
accessed 4/25/12

### **Child Health Plus**

[http://www.health.ny.gov/health\\_care/managed\\_care/consumer\\_guides/about\\_child\\_health\\_plus.htm](http://www.health.ny.gov/health_care/managed_care/consumer_guides/about_child_health_plus.htm)  
accessed 4/25/12

### **Consensus Statement on Concussion in Sport – The 3rd International Conference on Concussion in Sport, held in Zurich, November 2008**

<http://sportconcussions.com/html/Zurich%20Statement.pdf>  
accessed 4/25/12

### **ESPN Video- *Life Changed by Concussion***

<http://espn.go.com/video/clip?id=7525526&categoryid=5595394>  
accessed 4/25/12

### **Local Departments of Social Services- New York State Department of Health**

[http://www.health.ny.gov/health\\_care/medicaid/ldss.htm](http://www.health.ny.gov/health_care/medicaid/ldss.htm)  
accessed 4/25/12

### **Nationwide Children’s Hospital- *An Educator’s Guide to Concussions in the Classroom***

<http://www.nationwidechildrens.org/concussions-in-the-classroom>  
accessed 4/25/12

### **New York State Department of Health**

[http://www.health.ny.gov/prevention/injury\\_prevention/concussion.htm](http://www.health.ny.gov/prevention/injury_prevention/concussion.htm)  
accessed 4/25/12

### **New York State Public High School Athletic Association, *Safety and Research***

<http://www.nysphsaa.org/safety/>  
accessed 4/25/12

### **SportsConcussions.org**

<http://www.sportsconcussions.org/ibaseline/> accessed 4/25/12

### **Upstate University Hospital- *Concussion in the Classroom***

<http://www.upstate.edu/pmr/healthcare/programs/concussion/classroom.php>  
accessed 4/25/12