

Concussion Management Support Materials

Neurocognitive Testing

As stated in the Zurich Consensus Statement on Concussion in Sport (McCrory et al, 2009), the application of neuropsychological testing in concussion has been shown to be of clinical value and contributes significant information in concussion evaluation. At the same time, NYSPHSAA recognizes that neuropsychological assessment should not be the sole basis of concussion management decisions, nor should it be conducted or used in isolation from appropriate professional consultation and supervision, such as that which can be provided by a neurophysiologist trained and experienced in the neurocognitive assessment of concussion. Moreover, it is also understood that the assessment and management of concussion continues to be an evolving practice and science, and there are currently various approaches to the role and application of neuropsychological testing in concussion. As such, the NYSPHSAA has reviewed a variety of neurocognitive testing tools, some of which are used in the practice of baseline cognitive testing in order to provide potentially useful information by which to compare with post-injury test data. Ultimately, the specific tool or approach which a school district chooses to use would be based, in large part, on the professional resources available to that district by which to ensure proper administration, interpretation, and application of that instrument. The NYSPHSAA, then suggests that school districts consider the use of neurocognitive testing, administered or closely supervised by a medical professional with concussion management expertise, as they develop their District Concussion Management Policies, Procedures and Protocols.

Concussion in the Classroom

Students recovering from concussion can experience significant academic difficulties due to impaired cognitive abilities. Mental exertion and environmental stimulation can aggravate concussion symptoms such as headache and fatigue, which in turn can prolong recovery. Accordingly, academic accommodations should be available to the student recovering from concussion both to ensure academic progress and to set the conditions for optimal medical recovery. Academic stress and a sense that teachers or school staff doesn't understand the student's concussion-related problems can complicate recovery.

Mechanicville City Schools Concussion Management Policy

The Board of Education of the Mechanicville City School District recognizes that concussions and head injuries are commonly reported injuries in children and adolescents who participate in sports and recreational activity and can have serious consequences if not managed carefully. Therefore, the District adopts the following policy to support the proper evaluation and management of head injuries.

Concussion is a traumatic brain injury. Concussion occurs when normal brain functioning is disrupted by a blow or jolt to the head. Recovery from concussion will vary. Avoiding re-injury and over-exertion until fully recovered are the cornerstones of proper concussion management.

While district staffs will exercise reasonable care to protect students, head injuries may still occur. Physical education teachers, coaches, nurses and other appropriate staff will receive training to recognize the signs, symptoms and behaviors consistent with a concussion. Any student exhibiting those signs, symptoms or behaviors while participating in a school sponsored class, extracurricular activity, or interscholastic athletic activity shall be removed from the game or activity and be evaluated as soon as possible by an appropriate health care professional. The District Representative ie Coach/Nurse/Athletic Director will notify the student's parents or guardians and recommend evaluation and monitoring to parents or guardians.

If a student sustains a concussion at a time other than when engaged in a school-sponsored activity, the district expects the parent/legal guardian to report the condition to School Nurse or AD so that the district can support the appropriate management of the condition.

The student shall not return to school or activity until authorized to do so by and appropriate health care professional. The school's chief medical officer will make the final decision on return to activity including physical education class and after-school sports. Any student who continues to have signs or symptoms upon return to activity must be removed from play and reevaluated by their health care provider.

The Superintendent, in consultation with appropriate district staff, including the chief school medical officer, will develop regulations and protocols to guide the return to activity.

Ensuring adequate rest, avoiding overexertion and over stimulation, reducing risk of re-injury and providing academic accommodations are the essential components of a return-to-school plan after concussion. Home tutoring will be needed at first in some cases. As the student recovers, he or she may need to attend school part-time or full-time with rest breaks. Academic demands should be reduced to essential material, as the concussed student will typically take longer and use more mental energy to complete the same amount of work as before injury. Other accommodations that can help limit symptoms, reduce academic stress, and promote recovery include extended time and a quiet location for test, providing the student with copies of class notes, and allowing the student to eat lunch in a quiet room with a few friends instead of in a noisy cafeteria.

Physical education class should be modified to reduce risk of re-injury. After an initial period of rest, the student may be able to participate in physical activities where there is low risk of head injury, such as walking or swimming, as tolerated (see article for more complete list of low-risk-activities). Substituting mental activity for physical activity is NOT recommended, as mental exertion can aggravate symptoms. Increased sensitivity to noise or light is also common after concussion, so the student should not be required to stay in a loud or bright gym.

Depending on the severity and duration of concussion-related symptoms and associated academic difficulties, a 504 plan or IEP may need to be developed and implemented. Collaboration and communication with the medical providers treating the concussed student will foster development of an appropriate plan. Accommodations and activity restrictions will need to be modified according to the student's particular symptoms and the speed of recovery from injury.

For additional information about the academic consequences of concussion and ways to help the student recovering from concussion, see the following resources:

Going Back to School: Guidelines for School Re-entry after Concussion
(brochure available from the BIANYS website:
<http://bianys.org/chilfren.htm>)

CONCUSSION GUIDELINES AND PROCEDURES

Education

Concussion education should be provided for all administrators, teachers, coaches, school nurses, athletic trainers and guidance counselors. Education of parents should be accomplished through preseason meetings for sports and or information sheets provided to parents. Education should include, but not be limited to the definition of concussion, signs and symptoms of concussion, how concussions may occur, why concussions are not detected with CT Scans or MRI's, management of the injury and the protocol for return to school and return to activity or interscholastic athletics. The protocols will cover all students returning to school after suffering a concussion regardless if the accident occurred outside of school or while participating in a school activity. Symptoms may be called to the attention of the team by anyone having student contact.

Concussion Management Team

The District will assemble a concussion management team (CMT). The CMT will consist of the Athletic Director, School Nurse, Student Guidance Counselors, Students Coach and School Physician. The District's CMT should coordinate training for all administrators, teachers, coaches and parents. Training should be mandatory for all coaches, assistant coaches and volunteer coaches that work with these student athletes regularly. In addition, information related to concussions should also be included at parent meeting or in information provided to parents at the beginning of sports seasons. Parents need to be aware of the school district's policy and how these injuries will ultimately be managed by school officials.

Training should include: signs and symptoms of concussions, post concussion and second impact syndromes, return to play and school protocols, and available area resources for concussion management and treatment. Particular emphasis should be placed on the fact that no athlete will be allowed to return to play the day of injury and also that all athletes will obtain appropriate medical clearance prior to returning to play or school.

The CMT will act as a liaison for any student returning to school and or play following a concussion. The CMT will review and or design an appropriate plan for the student while the student is recovering. (See attached Zurich Scale)

*School district CMT's can utilize the NYSPHSAA website as well as www.keepyourheadinthegame.org for information related to the signs and symptoms of concussions and the appropriate return to play protocols. A handout describing the Concussion Management teams is also available on the NYSPHSAA website. A Concussion Management Check List that has been approved and recommended by NYSPHAA is available on this site.

Concussion Management Protocol

Return to play

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. These NYSPHAA current return to play recommendations are based on the most recent international expert opinion. (Zurich Progressive exertional protocol) No student athlete should return to play while symptomatic. Students are prohibited from returning to play the day the concussion is sustained. If there is any doubt as to whether a student has sustained a concussion it should be treated as a concussion. Once the student athlete is symptom free at rest for 24 hours and has a signed release by the treating clinician, she/he may begin the return to play progression below (provided there are no other mitigating circumstances).

2 Packets will be initiated by district representative, (including but not limited to, Coach/Nurse/AD) at time of injury.

Packet #1 (triplicate form) will be filled out, 1 copy to Nurse, 1 copy to AD, 1 copy given to parents with packet #2 (parents packet) or transported with student.

Packet #2 (Parents packet) contains NYSPHSAA information sheet Physician Evaluation/follow up forms, copy of concussion protocol and ACE (Acute Concussion Evaluation Care Plan), and a copy of the Concussion Protocol overview.

Emergency medical attention will be obtained/recommended for any student with the following:

1. Headaches that worsen
2. Seizures
3. Neck Pain
4. One pupil larger than other
5. Looks very drowsy
6. Repeated vomiting
7. Slurred speech
8. Can't recognize people
9. Increasing confusion
10. Weakness/numbness in arms/legs
11. Unusual behavior
12. Increasing irritability
13. Loss of consciousness, even briefly
14. Can't recall event prior to/after hit/fall

However if there is ever any doubt as to a students need for medical assistance or your ability to adequately assess symptoms, emergency medical assistance should be summoned or recommend to parent if present.

All guidelines will be based on the consensus statement on concussion in sports –3rd International conference on concussion in sport, held in Zurich, November 2008 (hereafter referred to as the Zurich Scale, Zurich return to play and Zurich progressive exertion protocol) Entire statement may be read at sportsconcussion.com or is available in the school health office.

RETURN TO PLAY RECOMMENDATIONS

Day 1: Light aerobic activity

Day 2: Sport-specific activity

~~Day 3: Non-contact training drills~~

Day 4: Full contact practice

Day 5: Return to play

Each step should take 24 hours so that an athlete would take approximately one week to proceed through the full rehabilitation protocol once they are asymptomatic at rest and with provocative exercise. If any post concussion symptoms occur while in the stepwise program, then the student should drop back to the previous asymptomatic level and try to progress again after a further 24-hour period of rest has passed.

(These NYSPHAA current return to play recommendations are based on the most recent international expert opinion.*)

CONCUSSION PROTOCOL OVERVIEW

1. We are committed to the Health and well being of our student athletes.
2. Staff will promote an environment in which reporting symptoms of a concussion is considered acceptable.
3. Our physical education teachers, Coaches, Nurses and the athletic director will receive approved/required training in recognizing the signs/symptoms and behaviors consistent with concussion injuries.
4. All students receiving such an injury will be removed from play with no return to play that day.
5. The parents of all students with suspected head injury/concussion will be advised of the injury and evaluation/monitoring will be recommended unless student is deemed in distress then emergency transport will be called.
6. The evaluating physician may choose to allow:
 1. Return to play/school
 2. Initiate return to play per Zurich progressive exertion protocol
 3. Continue evaluation and treatment student athlete is still symptomatic after 7 days
7. Dr Carl Sgambati must release all students to return to play or return to play progression after any head injury.
8. Concussion management team (Medical Director, Athletic Director, School Nurse, Students Coach and students Guidance Counselor) will follow student progress from injury thru return to play with final disposition after 14 days return to play.
9. File may be reactivated at any time due to questions or concern regarding student athlete status.
10. Once per year an in-service for all staff will be given.
11. All members of the concussion management team (CMT) will be available on and on going basis for consultation or clarification.
- ~~12.~~ All protocols/guidelines/care plans will be in accordance with guidelines approved by NYSED, NYSPHAA and CDC, guidelines may be reviewed at their respective web sites see attached resources page.

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
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
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
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