# WHITE PLAINS CITY SCHOOL DISTRICT OFFICE OF MEDICAL AND HEALTH SERVICES

### Information and Guidelines on Head Injury/Concussion

There are over 650,000 reported head injuries every year. Of this number, 20% are caused by a sports related injury. Extensive research has provided evidence that the treatment of these injuries and the re-entry into school and sports must be managed more aggressively than in the past. We now have a better understanding of the symptomatic course and risk of potential long term complications from concussions. Many of the sports offered at the Middle and High School levels are high risk for concussion-football, hockey, cheerleading, soccer, basketball, lacrosse, and softball. Middle and high school students take longer to recover from a concussion than an adult. They are also at increased risk for a second concussion (second impact syndrome) which increases the risk for a severe brain injury.

Concussion may occur from a direct blow to the head, face, neck or elsewhere on the body with an "impulsive" force transmitted to the head. In other words a student may be hit on the back but the concussive force goes to the head. Usually after the blow, there is a rapid onset of short term impairment of neurologic function that resolves on its own. In the past an athlete was often allowed to return to play as soon as the symptoms disappeared. *This is no longer practiced as symptoms may show up later. The adage "when in doubt, sit them out" will be followed.* 

#### Signs and Symptoms of a Concussion

Physical	Cognitive	Emotional	Sleep
Headache	Feeling mentally foggy	Irritability	Drowsiness
Nausea/Vomiting	Feeling slowed down	Sadness	Sleeping more
Balance problems	Difficulty concentrating	More emotional	Sleeping less
Visual Problems	Difficulty remembering	Nervous/ Anxious	Difficulty falling
			asleep
Fatigue	Forgetful of recent information		
Sensitivity to light	Confused about recent events		
Sensitivity to noise	Answers questions slowly		
Dazed	Repeats questions		
Stunned			

<sup>\*\*</sup>Most importantly there may be no physical findings or they may be subtle. The student is "just not him/herself".

The White Plains School district utilizes the ImPact Program (Immediate Post-Concussion Assessment and Cognitive Testing) which is endorsed by the NYS High

<sup>\*\*</sup>Loss of consciousness does not have to occur to suspect a concussion. A CT Scan (Computerized Axial Tomography –A neurological imaging test) does not usually show an abnormality.

School Athletic Association (NYSHSAA). All potential athletes that want to participate in interscholastic sports must take the ImPACT test in order to compete. The test is done while sitting at a computer and looks at the ability of the brain to think and process information. This *baseline* is done before the start of play. If a possible concussion occurs, the student is retested within 1-3 days. The results may show the student's brain needs to rest. Repeat testing is done until the score is close to normal. This in partnership with the student's doctor the school nurse and Athletic Trainer will ensure our students are not returning to work or sports participation too quickly. Final clearance to return to work and play will be overseen by the school Medical Director.

## Management of concussion includes:

- Examination by a physician/health care provider
- Physical rest
- Cognitive rest. Especially important! Concussion makes it difficult to function and learn in the classroom. The brain may need a break from reading, school work, video games and other tasks requiring concentration.
- Written instructions from the examining physician /health care provider
  The school district will provide a form to be completed by the examiner and
  returned to school.
- The high school Athletic Trainer will work with the student on a return to physical education and sports through a program of exercise that increases gradually in response to the presence or absence of symptoms.
- The concussion is noted on the student's medical record to ensure they are followed for symptoms and nursing staff is aware of past injury.

If there is any question regarding the student's return, it will be brought again to the Medical Director to determine clearance. The district retains the right to remove a student from play even if a concussion has not been diagnosed.

#### References

Center for Disease Control (2010, August). Concussion in sports. Retrieved December 8, 2010 from <a href="http://www.cdc.gov/concussion/sports/index.html">http://www.cdc.gov/concussion/sports/index.html</a>.

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