

The Concussion Act of NYS took effect July 1, 2012, and requires schools to:

- Educate parents, athletes, coaches, athletic trainers, physical education teachers, and school nurses on concussion,
- Remove observed or suspected concussed students from play based on signs and symptoms,
- Withhold further participation until evaluated by, and received written and signed authorization to return to activities from a **licensed physician**.
- Obtain physician clearance, and when the athlete has been symptom-free off pain killing medicines for a minimum of 24 hours and allow them to begin a monitored progressive six phase return to play.

Current thinking that optimal recovery of concussed students occurs when there is cognitive, physical, and emotional rest following injury. Additionally, research has shown that 92% of second injuries occur in the first week following the initial injury, and the goal is to allow adequate recovery time before allowing a student to risk re-injury. Pressure to return an athlete before it is safe can be intense from parents and athletes. Primary care physicians are being asked to assist in the process of keeping injured children safe by remaining objective and withholding participating until it is deemed safe with a reasonable degree of medical certainty.

MAKING A CLINICAL DETERMINATION

Information on clinical diagnosis and management is provided by the CDC at:

<http://www.cdc.gov/concussion/clinician.html>.

- **Symptoms:** somatic (e.g., headache, nausea, dizziness), cognitive (e.g. feeling in a fog), and/or emotional (e.g., lability)
- **Physical signs:** history of loss of consciousness, amnesia, poor coordination or imbalance, vomiting, sensitivity to bright light & loud noise
- **Behavioral changes:** irritability, personality changes
- **Cognitive impairment:** Hard time concentrating, trouble remembering, not feeling themselves, being confused, thinking speed slowed down, taking a longer time to react
- **Sleep disturbance:** drowsiness, insomnia

GRADUATED RETURN TO PHYSICAL EXERTION AND ACTIVITY OR RETURN TO PLAY (RTP)

This is a **six step** gradual return to activity. The RTP protocol may not start until an athlete is completely symptom-free for a full 24 hours off pain killing medicines, and must remain symptom-free for 24 hours following each stage before progressing further.

RECOVERY

Average recovery following concussion is about a week to ten days; protracted recovery with post concussion syndrome is after 21 days. Young teenage girls often have protracted recovery more than any other group.

RETURN TO LEARN (RTL)

More information will be forthcoming about RTL (cognitive return to school), but we anticipate a similar slow exertional challenge as we see in RTP. The graduated steps begin after the student has a medical clearance to return to academics, and is symptom free off pain killing medicines for a full 24 hours. RTL should be an individualized steady progression with the parent's checking the child daily for a return of symptoms and alerting you if the student is struggling so you can provide appropriate requests for medical accommodations to the school as needed. Unlike a RTP, the RTL might start at any level and progress at a rate individualized to the student's needs and tolerance. Steps might be skipped as tolerated and might look something like this:

Students with reasonable recovery times typically will get accommodations within the school by the principal. Students with protracted recovery beyond about 10 weeks, a school quarter, are likely eligible for a 504 plan or an IEP, and you might be asked to write a request to support the family at that time.

Resources

1. http://www.cdc.gov/concussion/headsup/physicians_tool_kit.html
2. <http://www.healio.com/pediatrics/journals/PedAnn/%7BAA104351-036F-4CEC-A871-13925D21CD31%7D/Pediatric-Assessment-and-Management-of-Concussions>
3. http://bjsm.bmj.com/content/43/Suppl_1/i76.full.pdf
4. <http://impacttest.com/doctors/id/4>
5. Guidelines for Concussion Management have been published by the NYS Education Department -
<http://www.p12.nysed.gov/sss/schoolhealth/schoolhealthservices/ConcussionManagementGuidelines.pdf>