

Academic Accommodations After a Sports-related Concussion

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Late in the second quarter of a recent Friday night football game, an athlete got up slowly after a play and then – even more slowly – walked to the sideline. By the time he got there, he was complaining of a headache, confusion and feeling sick to his stomach. He couldn't remember the play that was just run or even the hit he took.

Five minutes later in the locker room at halftime, he was complaining that his symptoms were worse. The team physician told the coach that the athlete was done playing for the evening.

The physician went to the stands to talk to the player's mother and explain that her son had suffered a concussion and would most likely be out of school and sports activities for two to three weeks. The physician stressed that this was a brain injury, and he wanted the player to rest his brain as much as possible for the next several days. The "rest" included no studying, texting, computer use, video games, loud music, hanging out with friends or even going to class until his symptoms improved.

The player's mother seemed surprised about the directive to not attend classes, but she was told that any activity that made her son's symptoms worse would cause his concussion to take longer to resolve. The physician outlined the progression he wanted her son to take – first to get back to full class activity, and then to sports. She seemed relieved when he explained the academic accommodation program that was already in place at her son's high school.

This program is a combined effort involving the teachers, counselors, school administrators, school nurse, athletic trainer and team physician. It allows athletes with a concussion to slowly progress back to full academic work without being stressed about missing classes, assignments or tests.

Among sports-related injuries, concussions continue to be the proverbial elephant in the room. In spite of our best efforts, including education, legislation, articles in publications and rules changes in sports, the incidence of concussions in high school sports continues to increase. The National High School Sports Injury Surveillance Study (High School RIOTM) shows a consistent increase in concussion rates from 2005 to 2010.

The problem of how to reduce the incidence of concussions is only

one of the many unresolved issues. We continue to have great difficulty confirming the diagnosis of a concussion at the time of the injury, and currently the only effective treatment is brain rest and avoidance of a repeat injury.

Typically, the concussed athletes have a combination of physical, cognitive, emotional and sleep irregularity symptoms. Athletes should be withheld from all sports activities until their symptoms resolve and they return to baseline on balance and neurocognitive testing.

It is recommended that all high schools implement a comprehensive concussion management program that includes the following key elements:

1. Concussion education for athletes, parents, coaches and school personnel.
2. Baseline balance and neurocognitive testing.
3. Post-injury testing performed by the athletic trainer, school nurse, team physician and/or neuropsychologist.
4. Academic support and accommodations during the recovery period.
5. Return to function and play decisions made by collaboration of all individuals involved in the care of the injured athlete.

It is important to understand that these athletes have suffered a brain injury. Granted, it is considered to be mild, but it is still a brain injury. Therefore, in addition to avoiding all sports activity, they need to refrain from full academic activity until their symptoms and neurocognitive function improves. Much the same as we would not expect a student with a recent knee injury to perform a timed running activity for gym class, we cannot expect a student with a concussion to perform at a high cognitive level, such as participating in class discussions, taking tests or completing papers, until their symptoms improve and they return to normal function.

In general, concussed student-athletes will recover more quickly with rest, not only physical rest from athletic activities but also cognitive rest from academic work. During this recovery period, it is important that there is a balance between rest and the amount of academic work the student is required to perform.

Injured student-athletes need to use the concept of “small bites,” meaning they can attempt small, short-duration activities and continue to perform them as long as they remain asymptomatic. If their symptoms worsen, they need to take a step back and allow the symptoms to improve. If they do well, they can attempt a more challenging activity or a longer duration (a larger “bite”). This approach continues until they are back to full academic activity.

In order to keep this progression moving forward, it is essential to have the student-athlete closely monitored by the athletic trainer and/or school nurse on a daily basis. Excellent communication must be maintained between the treating physician, the athletic trainer, school nurses, guidance counselors, teachers and parents.

There has been a quantum shift in the management of concussions during the past decade. Physicians and neuropsychologists have moved away from concussion grading scales and the “cookbook” approach for return to play. In addition, athletes suspected of suffering a concussion are not allowed to return to play in the same contest and not allowed to return to the activity until they are cleared by an appropriate health-care professional.

A graduated return-to-play program is now used to ensure the athlete is asymptomatic at both rest and exertion prior to allowing full activity. This same approach can be used in returning concussed athletes to full academic activity because this is every bit as important as the return-to-play decision. Too often, student-athletes try to return to class, take tests/quizzes or work on assigned projects before their brain has recovered from their injury. This only delays their healing and their return to function.

Table 1 outlines possible guidelines for returning student-athletes to full classroom and academic work. Depending on the severity of the concussion and the type and amount of symptoms, the athletes would be started at Academic Stage I, II or III. They are allowed to progress to Stage IV as they can tolerate. Every day, they should be re-evaluated by the school nurse and/or athletic trainer to check on

progress. Also during this time, they typically receive another neurocognitive test to monitor their progress. Not until they advance to Academic Stage IV do they return to any sports activity or start a return-to-play protocol.

These are only guidelines. Every school will need to approach concussions and academic accommodations differently. In addition, every concussion is different, so each one needs to be treated individually.

With regard to the concussed football player mentioned earlier, he was able to attend limited class the following Monday. He started classes later than usual, did not attend band class and he had to leave physics class early because his symptoms got worse. Over the next three days, he was able to progress to full class attendance, but required another week before his symptoms cleared enough to start taking tests and quizzes.

Two weeks after his injury, he “passed” his neurocognitive and balance tests and started the progression back to play. He was able to play in the game the following Friday, and has been symptom-free since. Over the next several weeks, he was able to catch up on the assignments and tests he missed while he was concussed. This approach took all the pressure off him and allowed him to recover from his concussion as quickly and safely as possible. ☉

References

1. McGrath N. Supporting the student-athlete's return to the classroom after a sport-related concussion. *J Athl Train.* 2010;45(5):492-498.
2. Guskiewicz KM, et al. National Athletic Trainers' Association Position Statement: Management of sport-related concussion. *J Athl Train.* 2004; 39: 280-297.
3. Previously unpublished data from the National High School Sports-Related Injury Surveillance Study (High School RIO) for 2005/06-2010/11. Annual summary reports available at <http://injuryresearch.net/rioreports.aspx>.

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Stage	Goals/Key Ideas	Expected Duration	Teacher's Actions	Student's Actions
I	Complete rest.	2-6 days	<ul style="list-style-type: none"> • Contacted by school nurse. • Explanation of injury and current plan of care. 	<ul style="list-style-type: none"> • Out of school. • Strict limits for use of computer, cell phone, texting, video games. • No Physical/Sports Activity.
II	Significant deficits in processing and concentration. Cognitive activity as tolerated.	2-14 days	<p>Develop lists of three categories for all assignments:</p> <ol style="list-style-type: none"> 1. Excused: Not to be made up. 2. Accountable: Responsible for content, not process. May be notes or work shared by a classmate, or may be covered in a review sheet. 3. Responsible: Must be completed by student and will be graded. 	<ul style="list-style-type: none"> • In school as tolerated. • When present, observing not participating. Get copies of notes, handouts, etc. • Communicate with teachers about progress/challenges. • Be patient with slow recovery, just do your best. • No Physical/Sports Activity.
III	Gradual increase of time and energy, slowly resuming full workload.	Variable duration. Hopefully 3-7 days, possibly more.	<ul style="list-style-type: none"> • Prioritize assignments with student, both make-up work and new work. • Continue to use lists with the three categories for assignments until all work is completed, and assist with setting a timeline for completion of assignments. 	<ul style="list-style-type: none"> • In class/school full-time. • Communicate with teachers on your progress with assignments. • Communicate with teachers and parents on the pace of resuming a full workload and competing make-up work. • No Physical/Sports Activity (including gym class).
IV	Complete resumption of normal activities.		<ul style="list-style-type: none"> • Monitor completion of assignments. • Communicate with parents and staff as to when student is caught up with assignments and working at the same pace as their classmates. • Communicate with Guidance Office as grades are updated. 	<ul style="list-style-type: none"> • Resume all normal activities. • Progress with athletic trainer – supervision resumption of participation in athletics.