

CONCUSSIONS

in the Classroom

Communication and education about concussion recovery is essential for student health

Brian Reeder, MD



Bumps and bruises are a part of life, especially for kids. As parents, coaches, teachers, school leaders and healthcare professionals, we do our best to minimize risks, but sometimes those bumps can lead to more serious injuries like concussions. When concussions happen, it is up to us to ensure that the recovery stays on track. As I have come to learn, sometimes that is easier said than done.

Several years ago, I was working with a high school athlete who sustained a concussion one Friday night during a football game. When I saw him, he had many of the tell-tale concussion symptoms like balance issues and a splitting headache. It typically takes 7-10 days for a concussion to heal, sometimes longer, so I broke the news to him that it may

be a while before he could get back on the field.

After several days at home resting and working towards his benchmarks, I cleared the student to return to school on a part-time basis. When a student I'm treating returns to school while still recovering from a concussion, I generally ask their teachers to make special accommodations to help make the environment more conducive to healing. In the case of our football player, I instructed his parents to keep him out of band class until fully healed because he was sensitive to loud noises, which could lead to concussion-related headaches.

About a week after the injury, the student was feeling better and wanted to play in his school's pep band despite having orders to forgo

band class until medically cleared.

The child's teacher was aware that the student was supposed to be held out of band class but didn't know why, and pep band was never mentioned. The teacher agreed to let him play and the student's concussion symptoms flared up. The parents became upset and the teacher became frustrated because he was not made aware of the student's health situation or why he couldn't participate.

■ Road to Recovery

A concussion is a head trauma that affects children in four different ways; physically, cognitively, emotionally, and in sleep. A concussion

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The Road to Recovery

	ACTIVITY	OBJECTIVE
STAGE 1: No activity	Complete cognitive rest — no school, no homework, no reading, no texting, no videogames, no computer work, and no “glowing screens.”	Recovery
STAGE 2: Gradual reintroduction to cognitive activity	Relax previous restrictions on activities; add back for short periods of time (5-15 minutes).	Gradual, controlled increase in cognitive activities. If symptoms increase, return to rest.
STAGE 3: Homework at home	Homework in longer increments (20-30 minutes).	Increase cognitive stamina by repetition of short periods of self-paced cognitive activity. If symptoms increase, return to previous step.
STAGE 4: School re-entry	Part day of school after tolerating one to two cumulative hours of homework at home.	Re-entry into school with accommodations to permit controlled increase in cognitive load
STAGE 5: Gradual reintegration into school	Increase to full day of school	Accommodations decrease as cognitive stamina improves.
STAGE 6: Resume full cognitive workload	Introduce testing , catch up with essential work	Full return to school



can distress a student's school life because it disrupts how the brain normally works by affecting mental

stamina, so the brain must work longer and harder to complete simple tasks.

Concussions also affect reaction time, short-term memory, working memory and cognitive processing speed, making the learning process more difficult than usual. On the flip-side, schoolwork can also potentially slow the concussion recovery process because high-level cognitive functions (like school work) require a great deal of focus and energy. We have learned that the brain needs to conserve its energy during recovery for healing, not Monday's math homework.

After a student sustains a concussion, a step-by-step or "graduated" approach to managing it is best and

is recommended by the American Academy of Pediatrics and the Centers for Disease Control. The step-by-step approach begins with 24 to 48 hours of stimulus-free rest immediately after a concussion. As symptoms improve, cognitive activities like reading and homework are reintroduced. As healing continues, the cognitive load is gradually increased until back to normal (see table).

■ Eliminating the Grey Area

Since concussions affect everyone differently, each child should have their own concussion management plan created by their physician. During the recovery we want to do everything we can to not aggravate the symptoms, so a one-size-fits-all plan simply won't cut it.

When a concussed child returns to school, I generally ask teachers to make special accommodations for the student to help create an envi-

ronment that is conducive to healing. The intention of these recovery guidelines is to allow the student to participate and learn without exacerbating symptoms, which may delay healing. Ensuring that everyone is on the same page with the recovery plan can be difficult, especially during the school year when the child often spends their days with numerous teachers and coaches. This is where communication plays a critical role.

After the incident with the football player, I began writing letters to the teachers of concussed adolescents to inform them of the situation, the symptoms the child is experiencing, and special accommodations that need to be made for the child. I sign each letter with my direct phone number and email address so they can reach out to me directly to clarify or ask questions. I then ask the parent to have the school distribute the letter among

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CONCUSSION SYMPTOMS in the Classroom

Based on the identification of symptoms and an analysis of how the student responds to various activities, interventions that are tailored to the specific needs of the student can be identified and implemented.

To start, identify the types of symptoms the student is experiencing. Next, try to identify specific factors that may worsen the student's symptoms so steps can be taken to modify those factors. For example:

- Do some classes, subjects, or tasks appear to pose greater difficulty than others? (compared to pre-concussion performance)
- For each class, is there a specific time frame after which the student begins to appear unfocused or fatigued? (e.g., headaches worsen after 20 minutes)
- Is the student's ability to concentrate, read or work at

normal speed related to the time of day? (e.g., the student has increasing difficulty concentrating as the day progresses)

- Are there specific things in the school or classroom environment that seem to distract the student?
- Are any behavioral problems linked to a specific event, setting (bright lights in the cafeteria or loud noises in the hallway), task, or other activity?

Importantly, if a student has a history of concussions, medical condition at the time of the current concussion (such as a history of migraines), or developmental disorders (such as learning disabilities and ADHD), it may take longer to recover from the concussion. Anxiety and depression may also prolong recovery and make it harder for the student to adjust to the symptoms of a concussion. □

the student's teachers. While some teachers may not be happy about making the special arrangement, I have found most are grateful for being kept in the loop.

I also have a separate letter I use to inform the student's coaches and athletic trainers of the situation and recovery plan. I also try to offer instructions on when the student can resume activities like lifting weights and contact with others. Again, I offer my direct contact information. Grey areas (like pep band) can naturally arise, that's why teachers, coaches and other supervising adults need to be able to get a clear picture of a child's health in a timely manner. That said, parents must first allow the communication. Guardians also must always be a part of the conversation and in general, should take the lead in disseminating the instructions to their child's teachers and coaches.

I also believe teachers and coaches should come to expect guidance from healthcare professionals when one of their kids is recovering from a concussion. If they did not receive a recovery plan, they should ask for one. As parents, teachers, coaches, leaders and medical professionals, it is up to us to ensure that the children

in our lives reach adulthood as healthy and educated as possible. With every passing school year, our response to concussions is improving. As we enter the 2014-2015 school year, let's make it even better. ■

Brian Reeder, MD is a sports medicine clinician with Dean Clinic in Madison, Wisconsin. He volunteers as a team physician for a several high school teams and serves as Medical Director of the HEAD SMART — a comprehensive concussion education program.

For More Information

For more information on the HEAD SMART program or to download the template letters mentioned in this article, visit:
beheadsmart.com

Department of Public Instruction
Resources: sped.dpi.wi.gov/sped_tbi-conc-resources

Wisconsin Interscholastic Athletic Association: wiaawi.org/Health/Concussions.aspx

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