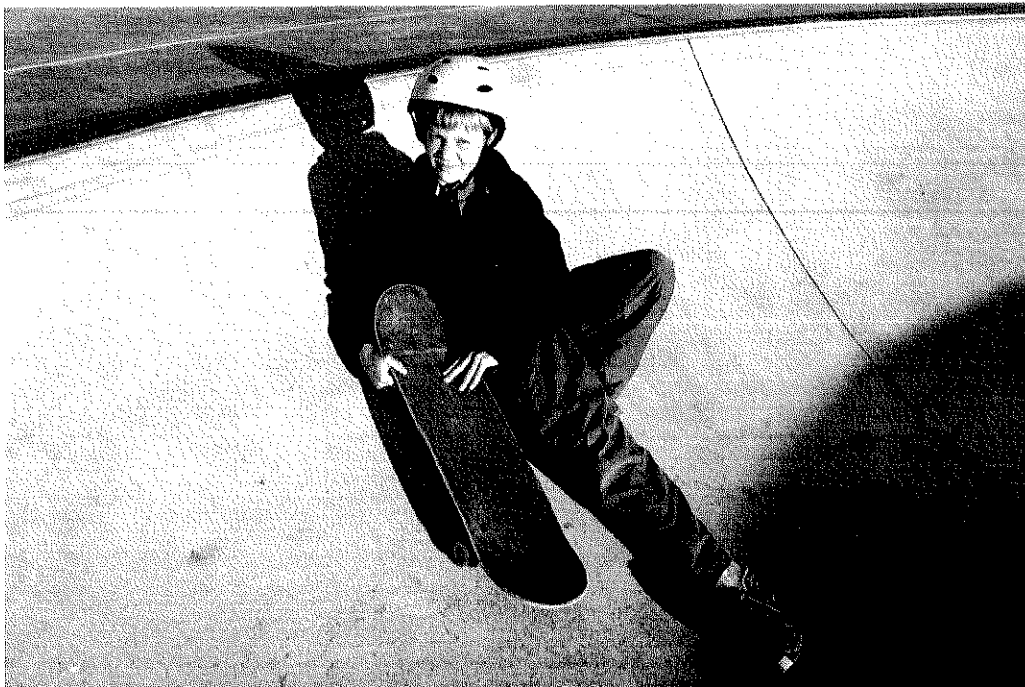


Concussion In Children *It's more than just a bump on the head!*

Concussions in children can cause temporary changes in how they act, think, and feel. If your child has had a concussion, he or she might act differently and probably will be more tired for awhile. It's a good idea to let your child have a few days off from school, take more rest and have fewer expectations to meet for the next week or two. Over the next several weeks, watch for these possible changes:

Changes in Behavior and Energy	Changes in Thinking	Changes at School	Changes in Feelings
<ul style="list-style-type: none"> » Has lots of headaches » Is very tired; sleeps too much or too little » Tantrums; impulsive or aggressive at times; "short fuse" » Quiet, shy, or talking less than usual » Doesn't seem "motivated"; not concerned about performance » Doesn't listen when corrected; doesn't seem to care when in trouble » Not interested in usual activities » Has trouble getting started on work or activities 	<ul style="list-style-type: none"> » Not organized; doesn't complete tasks » Forgets or can't remember things » Is upset by noises, lights, crowds, or busy places 	<ul style="list-style-type: none"> » Forgets assignments or does not hand in work » Does well one day and poorly the next; grades are worse » Messy, incomplete, or disorganized work » Doesn't pay attention in class 	<ul style="list-style-type: none"> » Big emotional reactions » Gets upset easily; more worried or moody » Quiet or sad » Seems easily overwhelmed



Keep in mind that new problems in acting, thinking, or feeling can be due to your child's concussion. Remember that you can get help for these problems. Tell your child's doctor, your school nurse, school psychologist, and a teacher about the concussion. Ask your school personnel to reduce the demands on your child for the next few weeks. The Colorado Department of Education (CDE), Brain Injury Association of Colorado (BIAC) and COkidswithbraininjury.com have helpful information on mTBI management on their websites.

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Most Common Cognitive Problems Post-Concussion and suggested accommodations

School Team Educators

Areas of concern	Suggested Accommodations
Fatigue, specifically Mental Fatigue	“Strategic rest” – strategic rest is scheduled. Do not wait until the student is so over-tired that he/she has a “meltdown”. Adjust the schedule to incorporate a 15-20 rest period mid-morning and a rest period mid-afternoon. Missing recess or reading quietly does not constitute a rest period.
Difficulty concentrating <i>Feels like being in a “fog”</i>	Reduce the cognitive load. Smaller amounts of learning will take place during the recovery. Since learning during recovery is compromised, you must decide: What is the most important concept for the student to learn? Do not tax them cognitively.
Slowed processing speed <i>Feels like being converted from high speed internet to dial up internet</i>	Extra time on tests and projects. Assess whether the student has large tests or projects due during the 3 week recovery period. Remove or adjust due dates. Provide copies of teacher’s notes or a peer note taker.
Difficulty with working memory <i>The ability to temporarily store and manage information during complex cognitive processes such as learning and reasoning</i>	Initially exempt from routine work/tests. During recovery, the student has limited working memory; What is the most important concept(s) you want them to know? Work toward comprehension of a smaller amount of material versus rote memorization.
Difficulty converting new learning into memory	Allow student to “audit” the material during this time. Remove “busy” work that is not essential for comprehension. Making the student accountable for all of the work missed during the recovery period (3 weeks) places undue cognitive and emotional strain on them and may hamper recovery. Ease student back into full load.
Emotional symptoms	Be mindful of emotional symptoms throughout! Students are often scared, overloaded, frustrated, irritable, angry and depressed as a result of mTBI. They respond well to education and support during recovery.

When an athlete is injured, the coaches keep the athlete “engaged” with the team (by attending practices, traveling with the team) even when the athlete cannot play. This concept of keeping the student involved and engaged in academics, in spite of the concussion, is very important. While cutting back on the cognitive load, the school team must devise a plan to keep the student “academically conditioned and engaged in learning” throughout the entire three week recovery period.

Interesting research note: The CDC/Grandview Study demonstrated that concussed students were minimally absent from school during their recovery and yet recovered well. This finding is reinforced by a 2008 study showing that concussed students who maintained moderate levels of activity (not 100% bed rest and not 100% on-the-go) had the most positive recovery!⁶

More in-depth information and recommendations can be found in the BrainSTARS Manual (see RESOURCES)

Medical Box

The newest research shows that neuropsychological testing has significant clinical value in concussion management, especially with children and especially when baseline scores are available. The addition of neuropsychological tests is emerging best practice. However, limited resources and training are a reality for school districts. An extensive list of paper and pencil neurocognitive tests known to be sensitive to mTBI can be found at COKidswithbraininjury.com. Whether or not a school district chooses to

include any type of neurocognitive testing, REAP is still the foundation of the Concussion Management program. Data gathered from serial post-concussion testing (by Day 2/3, by Day 7, by Day 14 and by Day 21, until asymptomatic) can only serve to provide additional information. No test score should ever be used in isolation. All ethical guidelines of test administration and interpretation must be adhered to.