

If you are viewing this course as a recorded course after the live webinar, you can use the scroll bar at the bottom of the player window to pause and navigate the course.

This handout is for reference only. It may not include content identical to the powerpoint. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.

**CONCUSSION
RETURN TO LEARN
For School Staff
August 2017**



Brenda Eagan Brown, MEd, CBIS
brenda.eagan.brown@gmail.com

www.getschooledonconcussions.com

©Get Schooled on Concussions 2016. All Legal Rights Reserved

Objectives

- Identify concussion deficits and symptom-based strategies to alleviate cognitive over-exertion following student concussion.
- Describe important facts about concussions in students that school teams must know.
- Describe the differences between academic adjustments, accommodations, and modifications.



Role of the SLP

You are one of the only professional in the school building who have had training in the brain!

There are 3 key professionals who should serve on school Return to Learn Concussion Management Teams:

1. SLP
2. School Nurse
3. School Psychologist

The word “concussion”
is Latin = “To shake violently”

Concussion Symptoms - CDC, 2017

Symptoms of concussion usually fall into four categories:

Thinking/ Remembering	Physical	Emotional/ Mood	Sleep
Difficulty thinking clearly	Headache Fuzzy or blurry vision	Irritability	Sleeping more than usual
Feeling slowed down	Nausea or vomiting (early on) Dizziness	Sadness	Sleep less than usual
Difficulty concentrating	Sensitivity to noise or light Balance problems	More emotional	Trouble falling asleep
Difficulty remembering new information	Feeling tired, having no energy	Nervousness or anxiety	

Some of these symptoms may appear right away. Others may not be noticed for days or months after the injury, or until the person resumes their everyday life. Sometimes, people do not recognize or admit that they are having problems. Others may not understand their problems and how the symptoms they are experiencing impact their daily activities.

Concussion = Traumatic Brain Injury

Recovery of Concussion

The majority (70%) of concussions resolve in a 4 week period, although the recovery time frame may be longer in children and adolescents.

Zemek et al., 2016

Concussion Modifiers

- History of Past Concussions
- Migraines/Family Hx of Migraines
- History of ADHD
- History of Learning Disabilities
- History of Depression
- History of other Mental Health Disorders
- History of Sleep Disorders
- Lazy eye

The following may be observed

- Confused about instructions, time or places
- Gets lost in once familiar buildings
- Thinking/processing speed may be slowed
- Word-finding problems
- Frustrated at things they typically would not find frustrating
- Memory and retrieval issues
- Problems paying attention
- Problems learning new information
- Difficulty shifting between tasks
- Light or noise sensitivity
- Physical symptoms (sometimes mid-day after thinking all morning)
- More tired than usual
- Longer time required to complete classwork

Concussion = Traumatic Brain Injury

5th Consensus Statement on Concussion in Sport: 2016



“A concussion is a traumatic brain injury induced by biomechanics forces.”

Concussion = Traumatic Brain Injury

Concussion:

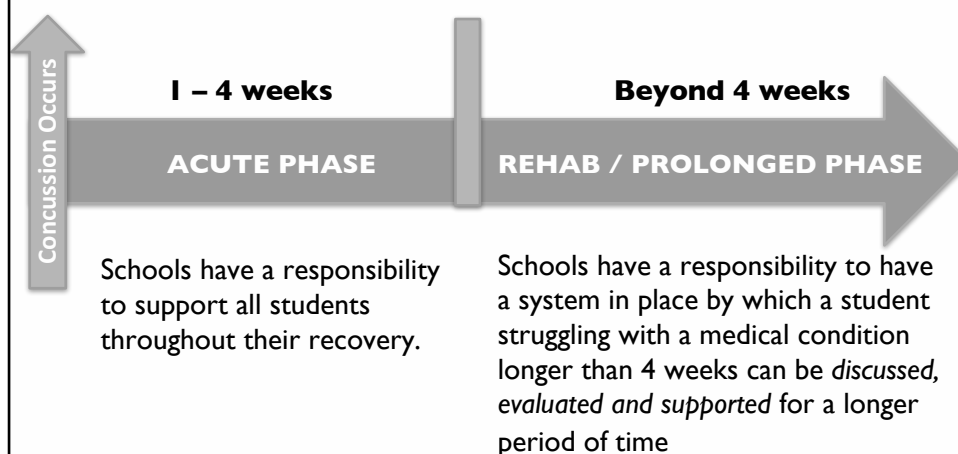
is a type of traumatic brain injury—or TBI—caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth. This sudden movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells.

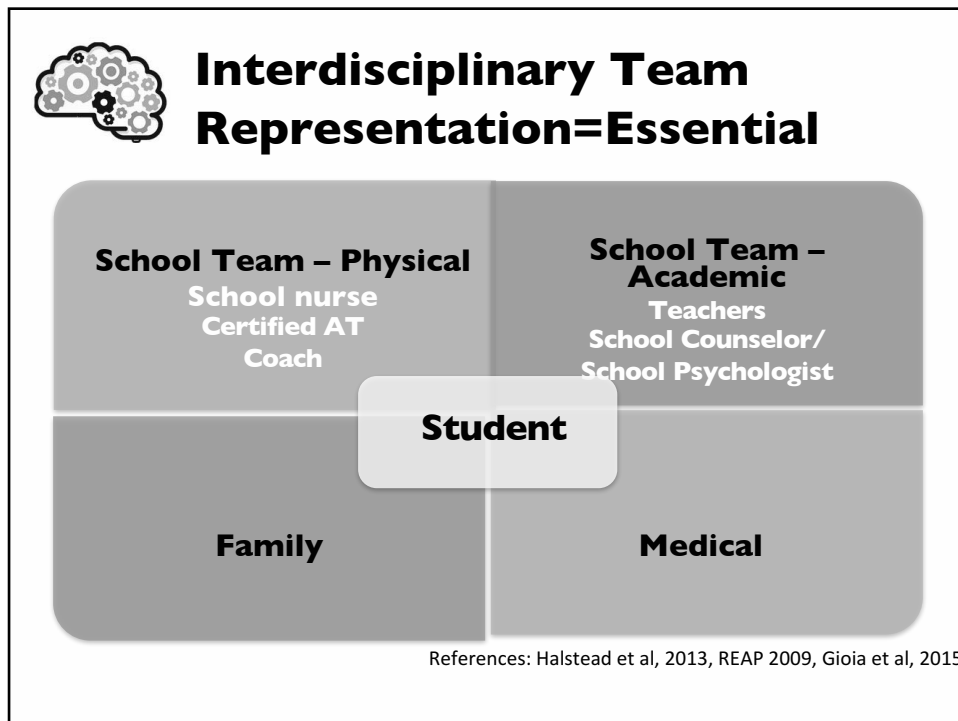
-CDC, 2017

Second Impact Syndrome

Phenomenon of still being symptomatic from a concussion, receiving another blow to the head (while symptomatic, this is not about multiple sequential concussions) and having a cascade of catastrophic metabolic events resulting in serious brain damage or death.

Acute vs. Protracted Recovery





For students who linger,
striking a balance
 between the *need for rest*
 and *keeping up with academic content*
 is the biggest struggle.



Too little rest:
= prolonged recovery



Too much rest:
= prolonged recovery

Benefits of Strict Rest After Acute Concussion: A Randomized Controlled Trial

Sunny George Thomas, MD, MPH, Jennifer K. Apps, PhD, Raymond S. Hoffman, PhD, Michael McCrea, PhD,
Thomas Hammke, PhD

OBJECTIVE: To determine if recommending strict rest improved concussion recovery and outcome after discharge from the pediatric emergency department (ED).

abstract

**Prolonged rest slows recovery and
exacerbates symptom severity**

There was no clinically significant difference in neurocognitive or balance outcomes. However, the intervention group reported more daily postconcussive symptoms (total symptom score over 10 days, 187.9 vs 131.9, $P < .03$) and slower symptom resolution.

Thomas D., Apps J., Hoffman R., McCrea M., Hammke T. Benefits of strict rest after acute concussion: A randomized controlled trial. (2015). *Pediatrics*. 135(2). DOI:10.1542/peds2014-0966

HOMEBOUND?

*** Sometimes medically justified due to severe symptom presentation but truly RARE following a concussion.**

Return to School:




While it is True that Concussed Students Must be
100% Symptom-Free before Return to Play, Students
Do NOT and Should NOT Need to be 100%
Symptom-Free to
Return to School/Return to Learn.

Returning Back to School

Research/Best Practice = It is important for a student to be back to school:

- As soon as symptoms are “tolerable, intermittent and amenable to rest”
 - Halstead et al., 2013

**Once back at school,
school staff may
think the student is:**

- | | |
|---|----------------------------------|
| • Lazy  | • Not trying hard enough |
| • Daydreaming  | • Not studying hard enough |
| • Spacy  | • Taking too much time to answer |
| • Misbehaving | • Intentionally disobeying |
| • Rude | |

Those teens who engaged in the **lowest & highest levels of cognitive activity** after concussion recovered **more slowly** than those who engaged in **moderate levels of cognitive activity.**

Those teens who engaged in the **highest levels of cognitive activity** (thinking) after concussion took approximately **100 days** to recover from their symptoms compared to approx. 20 to 50 days for those who **limited** thinking activities.

Ist: ACUTELY - Initially Upon Return to School – Across the Board (length of time needed varies)

1. Reduce note taking ✓
2. Reduce all in class work to ESSENTIAL CONTENT ✓
3. No tests, quizzes, standardized tests, or homework ✓
4. Scheduled rest breaks ✓
5. Excuse from all classes/activities that may be over-stimulating (light/noise) ✓
6. Excuse from PE, recess, all physical activity ✓

**2nd: Additional SYMPTOM-SPECIFIC
Academic Adjustments may be required**

Depending on the what symptoms the student is experiencing, ***symptom-based academic adjustments*** should also be implemented

Medical Clearance for “Thinking?”

Clearance for returning to
“Cognitive Activity”
NOT part of the
concussion in youth sports laws.

You do NOT need a medical clearance for
a student to return to school following a
concussion.

Words Matter



1. **Academic Adjustments:**

- Initial, informal, fast, flexible
- 100% of students receive academic adjustments following a concussion

2. **Academic Accommodations:**

- Individualized Health Plan or 504 Plan
- For the small % of students who demonstrate a need for more formalized accommodations
- More targeted to the medically presenting issue

3. **Academic Modifications:**

- Special Education
- Rarely needed after a concussion

www.getschooledonconcussions.com, 2015

The brain needs to rest for a few days **INITIALLY** from **mental processing** to **reserve** its energy to balance its systems after the concussion.

Concussion = Traumatic Brain Injury

5th Consensus Statement on Concussion in Sport: 2016



Concussion = Traumatic Brain Injury



Consensus statement

Table 2 Graduated return-to-school strategy

Stage	Aim	Activity	Goal of each step
1	Daily activities at home that do not give the child symptoms	Typical activities of the child during the day as long as they do not increase symptoms (eg, reading, texting, screen time). Start with 5–15 min at a time and gradually build up	Gradual return to typical activities
2	School activities	Homework, reading or other cognitive activities outside of the classroom	Increase tolerance to cognitive work
3	Return to school part-time	Gradual introduction of schoolwork. May need to start with a partial school day or with increased breaks during the day	Increase academic activities
4	Return to school full time	Gradually progress school activities until a full day can be tolerated	Return to full academic activities and catch up on missed work

National Collaborative on Children's Brain Injury

1st Consensus Statement on Concussion Return to Learn: 2017



Lead Authors:

Karen McAvoy, PsyD
Brenda Eagan Brown, MEd, CBIS

Co-Authors

Rose Dymacek
Gerard Gioia, PhD
Stephen Hooper, PhD
Melissa McCart, DEd
Janet Tyler, PhD, CBIST

The Problem:

There was a lack of **consensus** among professionals – especially those in the schools- who were working with students who experienced concussions around what to do for *Return to School* and *Return to Learn* management.

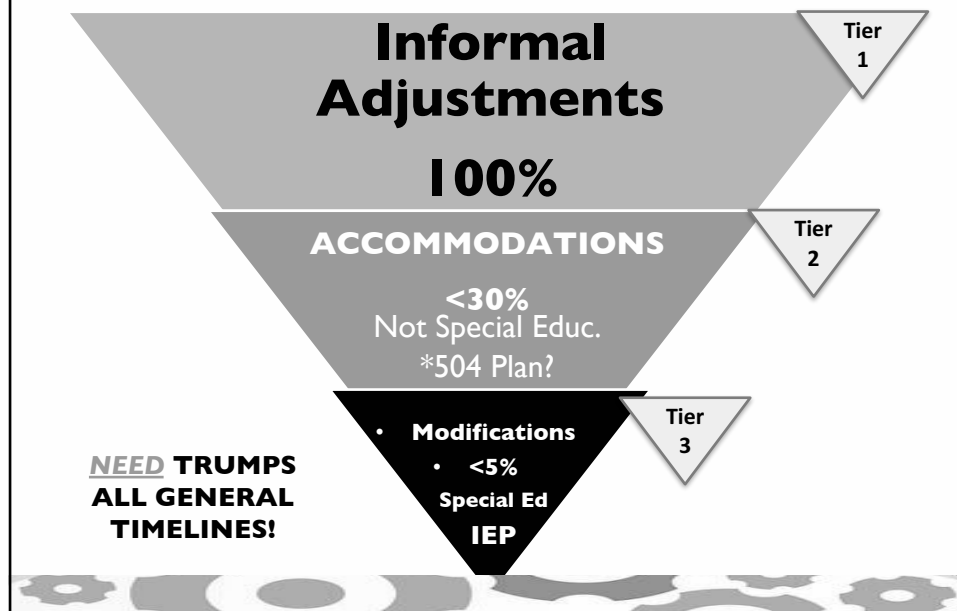
1st National Concussion Return to Learn Consensus

National Collaborative on Children's Brain Injuries,
Lead Authors: McAvoy & Eagan Brown
Co-Authors: Dymacek, Gioia, Hooper, McCart, & Tyler
Summer 2017 -Manuscript in Preparation

National Organization Participation in Consensus

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. American Association of School Administrators 2. National Association of School Psychologists 3. National Association of Athletic Trainers 4. National Federation of High School Associations 5. American Physical Therapy Association 6. RIOS 7. National Collaborative on Children's Brain Injuries 8. National Association of State Head Injury Administrators | <ol style="list-style-type: none"> 9. American Medical Society for Sports Medicine 10. National Association of School Nurses 11. North American Brain Injury Society 12. American Academy of Pediatric Neuropsychology 13. Zurich Sports Concussion Consensus authors 14. American Academy of Pediatrics 15. DVBIC/DOD <p>Consultants on the Concussion Consensus:</p> <ul style="list-style-type: none"> ▪ <i>Centers for Disease Control</i> ▪ <i>National Association of State Special Education Directors</i> ▪ <i>United States Department of Education</i> |
|---|---|

School After Concussion



Common Physician Recommended Concussion Supports

Returning to School (Continued)

Until you (or your child) have fully recovered, the following supports are recommended: (check all that apply)

- ☒ No return to school. Return on (date) _____
- ☒ Return to school with following supports. Review on (date) _____
- ☒ Shortened day. Recommend ____ hours per day until (date) _____
- ☒ Shortened classes (i.e., rest breaks during classes). Maximum class length: ____ minutes.
- ☒ Allow extra time to complete coursework/assignments and tests.
- ☒ Lessen homework load by ____%. Maximum length of nightly homework: ____ minutes.
- ☒ No significant classroom or standardized testing at this time.
- ☒ Check for the return of symptoms (use symptom table on front page of this form) when doing activities that require a lot of attention or concentration.
- ☒ Take rest breaks during the day as needed.
- ☒ Request meeting of 504 or School Management Team to discuss this plan and needed supports.

39

Academic Supports

- Are the **responsibility** of the School Team
- Medical academic interventions are **only suggestions/recommendations**

You do NOT need medical clearance to add OR adjust OR remove academic adjustments/accommodations. These are a school team decision.

Clearances?

- Clearance for “**return to cognitive activity**” and Return to School is NOT part of the Concussion in Youth Sports laws.
- You do NOT need medical clearance for a student to “**return to school**” following a concussion

Energy Crisis = Challenges

3 challenging areas to manage at school following concussion during initial weeks (1-4 wks):

1. **Mental Fatigue**
2. **Slowed Processing Speed**
3. **Problems with Short-Term Memory**



I. Mental Fatigue: Most commonly experienced as tiredness
and most commonly flares headache

- Student may be out of school if needed – but only for a limited time, only for a few days (evidence-based).
- Student may be on shortened day if needed – but only for a limited time, only for a few days and missed class periods should be alternated.

Missing *too much instruction* has significant downstream consequences.

I. Mental Fatigue: Most commonly experienced as tiredness
and most commonly flares headache

“Pacing”

Frequent eye/brain rest breaks to “refuel”

- Eyes closed/head down for 5 to 10 minutes per hour in classroom, every 20 - 30 minutes
- “Strategic scheduled rest breaks” in clinic for 15 - 20 minutes (mid-morning and/or mid-afternoon)
- Sunglasses or earphones to reduce stimuli
- Emotional reactions: “melt downs” in younger children; anger/irritability/frustration in adolescents are often signs of mental fatigue

2. Slowed Processing Speed

“Audit” – listen/learn; less output

- **Remove** NON-essential in-class & homework load
- **Reduce** SEMI-essential in-class & homework load
 - Cut down # of problems
 - Cut repetition
 - Utilize cueing
 - Just listen to lecture material – little to no output
 - Oral vs. written output
 - Focus on mastery of material – little to no output

2. Slowed Processing Speed

- **If material is deemed essential, consider:**
 - Extra time on projects and tests.
 - Adjust (some, not all) Due Dates.
 - Do not carry over ALL work.



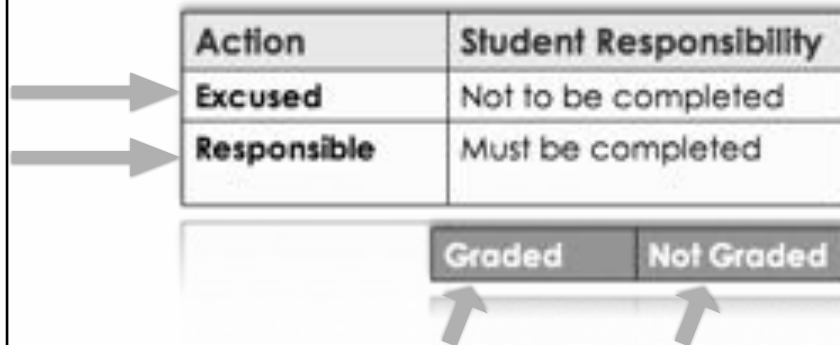
Focus on Quality, not Quantity

Focus on Comprehension, not Memorization

**It is usually NOT possible to keep up on or
make-up ALL missed work.
Prioritize current learning instead of make-up work**

Missed Work is a Common Concussion Issue

Each teacher should develop this list:



Action	Student Responsibility
Excused	Not to be completed
Responsible	Must be completed

Graded	Not Graded
--------	------------

3. Difficulty Learning New Material

- Scaffold new learning into meaningful past learning
- Focus on conceptualization of material rather than memorization
- Allow more time for digestion of learning without pressure of work output (ie. audit/removal/reduction of work)
- Allow multiple modes of exposure to learning - books on tape, watching the movie, discussion, group projects
- Be creative with alternative ways to embed the learning and to assess mastery
- Be creative about grades

3. Difficulty Learning New Material

- **If a Final Exam is a must:**
 - No more than one final per day, with one day of rest between finals.
- **Little to No** carry over make-up work into school vacations; we need that time for cognitive rest and healing
 - Caveat: A small amount of “practice” work may be OK during vacations from school, just for reinforcement of skills, if/as student feels better.

School –Medical –Family Partnership

- **Medical Providers and Parents Need to Know:**
 - Schools and teachers are ready to receive students with a concussion back to school.
 - Medical providers are essential in confirming, detailing and helping school/teachers to understand the “contributing medical factors” involved with each concussion...
 - But, it is the teacher/concussion team who picks, applies, adjusts and removes the academic adjustments as needed

Post Concussion Syndrome (PCS)

Concussion symptoms that last (weeks to months):

- Decreased processing speed
- Short-term memory
- Concentration deficits
- Irritability/depression
- Fatigue/sleep disturbance
- General feeling of “fogginess”
- Academic difficulties

These disturbances can be
chronic, permanent, or late emerging.

Common Mistakes

It is not a “gift” to:

- Postpone a final exam until after winter or summer break for a student with a concussion
- Carry over in-class work or homework until after winter or summer break for a student with a concussion

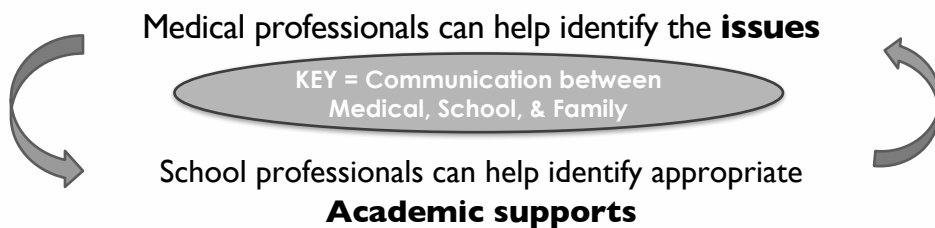
These interventions actually raise the level of anxiety and give the concussed student the message that they should be studying during winter/summer break when classmates are resting and relaxing. This can potentially hamper treatment and delay recovery.

What can be done to close down grades prior to going on winter/summer break so the concussed student can truly rest and rehab with no stress hanging over their heads?

School –Medical –Family Partnership

Crucial for students who are slow to recover

- **Is something impeding recovery?**
 - Ocular issues?
 - Vestibular issues?
 - Mental health?
 - Expectations for recovery? Compliant with management?
 - Does the student have a history of any concussion modifiers?



"Our local concussion clinic is clearing some students for full contact sports while they are still on academic accommodations for concussion. As a district, we feel liable because some students are still extremely symptomatic during the school day and continue to need academic accommodations."

-School Nurse



Rehab Phase:

- Physical Therapy
- Speech Therapy (cognitive rehab)
- Vestibular Therapy
- Pediatric neuro-opthamologist
- Medications:
 - Melatonin: sleep
 - Amitriptyline: chronic headaches
 - Amantadine: improved concentration
 - Clonazepam, Zoloft: anxiety/headaches
- Therapist/Counseling



It is important to emphasize to the student, parents, and teachers that small increases in symptoms are not counterproductive to recovery but large increases may be....

Emphasize that tolerating a mild increase in symptoms is OK, but too much increase is not.



J Head Trauma Rehabil
Vol. 30, No. 5, pp. 302-310
Copyright © 2015 Wolters Kluwer Health, Inc. All rights reserved.

Symptoms of Persistent Behavior Problems in Children With Mild Traumatic Brain Injury

H. Gerry Taylor, PhD; Leah J. Orchinik, MA; Nori Minich, BS; Ann Dietrich, MD; Kathryn Nuss, MD; Martha Wright, MD; Barbara Bangert, MD; Jerome Rasin, MD; Keith Owen Yeates, PhD

Conclusions: School-aged children with mTBI are at risk for persistent symptoms of behavior problems, especially if mTBI is more severe or occurs at a younger age. The findings justify monitoring of behavior long after injury and further research to identify risk factors for these symptoms and their association with clinical disorders.

EPIDEMIOLOGICAL SURVEYS indicate that (PCS) are prevalent soon after injury and include re-
about half a million US children from birth to sons of headaches, dizziness, fatigue, depressed or an-

Protracted Recovery

If a student with a concussion does not recover within the typical 1 to 4 week timeframe, SLPs are **essential** in helping the school team with the medical provider determine the underlying learning issues and problem solve supports for a longer period of time.

Using the philosophy of MTSS, refer to your internal school-based problem-solving team for ongoing academic supports!



The UNTOLD Foundation
...sometimes the story remains UNTOLD...

ZANDER FEST 2017 - Pictures

ZANDER FEST 2017 - Race Results

Donate






www.theuntoldfoundation.org

The UNTOLD Foundation is a leader in elevating the understanding of concussions and their impact on mental health.

We do this by: promoting awareness through concussion education, advancing the use of standardized protocols, and providing resources for victims and their families.





continuedTM

www.getschooledonconcussions.com

HOME ABOUT US 1 PAGERS PUBLICATIONS PROJECTS TRAININGS CONTACT

Get Schooled On Concussions

Return to Learn (RTL)

The majority of Return to Learn recommendations following a concussion are made by healthcare professionals and athletic trainers, because most teachers and related school professionals have not received education regarding concussions and resulting classroom impacts.

At GetSchooledOnConcussions.com we focus on one page concussion fact sheets for teachers, administrators, school nurses, school mental health, counselors and parents. Former educators ourselves, we know what can and cannot be provided in classrooms during the recovery from a concussion. We empower teachers to understand the underlying causes of concussion symptoms so that they can provide appropriate, swift and generous supports in their own classrooms. Are you ready to get schooled?



GET SCHOOLED ON CONCUSSIONS

We make concussions treatable in your classroom

www.getschooledonconcussions.com

HOME ABOUT US 1 PAGERS PUBLICATIONS PROJECTS TRAININGS CONTACT

Get Schooled on Concussions 1 Pagers

Issue #1 Mental Fatigue	Issue #8 Processing Speed	Issue #15 School Nurses	Issue #22 Inefficient Brain Cells = Tree Analogy
Issue #2 Here is How a Concussion Might Feel	Issue #9 What a 504 Plan is NOT	Issue #16 What to Do About Work Output	Issue #23 Inefficient Brain Cells = Car Analogy
Issue #3 When to Write a 504 Plan: Part #1	Issue #10 Return to School Progression - Coming Soon!	Issue #17 What to Do About Tests	
Issue #4 When to Write a 504 Plan: Part 2	Issue #11 Elementary Versus High School	Issue #18 What to Do About Missed Instruction	
Issue #5 How to Write a 504 Plan	Issue #12 Extra Curricular Activities	Issue #19 What to Do About Finals & End of Semester Grades	
Issue #6 Symptom Wheel	Issue #13 Teenage Drivers	Issue #20 Academic Monitoring &	

continued™

Follow me on Twitter:



b_eaganbrown

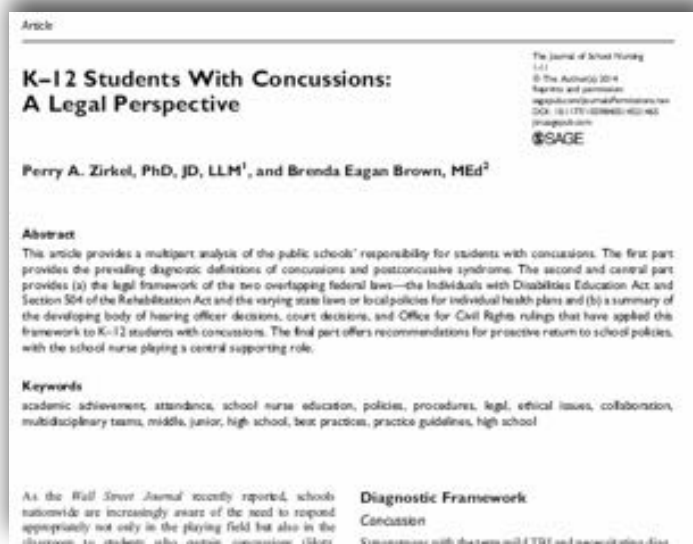
Follow us on Twitter



Twitter

Journal of School Nursing Article

(Legal issues of 504 Plans, IEPs, IHPs after Concussion)



J Head Trauma Rehabil
Copyright © 2015 Wolters Kluwer Health, Inc. All rights reserved.

Building Statewide Infrastructure for the Academic Support of Students With Mild Traumatic Brain Injury

Gerard A. Gioia, PhD; Ann E. Glang, PhD; Stephen R. Hooper, PhD;
Brenda Eagan Brown, MEd, CBIS

Objectives: To focus attention on building statewide capacity to support students with mild traumatic brain injury (mTBI)/concussion. **Method:** Consensus-building process with a multidisciplinary group of clinicians, researchers, policy makers, and state Department of Education personnel. **Results:** The white paper presents the group's consensus on the essential components of a statewide educational infrastructure to support the management of students with mTBI. The nature and recovery process of mTBI are briefly described specifically with respect to its effects on school learning and performance. State and local policy considerations are then emphasized to promote implementation of a consensus process. Five key components to building a statewide infrastructure for students with mTBI are described including (1) definition and training of the interdisciplinary school team, (2) professional development of the school and medical communities, (3) identification, assessment, and progress monitoring protocols, (4) a flexible set of intervention strategies to accommodate students' recovery needs, and (5) systematized protocols for active communication among medical, school, and family team members. The need for a research to guide effective program implementation is stressed. **Conclusion:** This guiding framework strives to assist the development of support structures for recovering students with mTBI to optimize academic outcomes. Until more evidence is available on academic accommodations and other school-based supports, educational systems should follow current best practice guidelines. **Key words:** academic outcomes, intervention strategies, mild TBI, school management, statewide infrastructure

IN AUGUST 2011, the Children's Summit on Brain Injury convened in State College, Pennsylvania. The impetus for the summit came from collaborative efforts across the country to build statewide capacity to support students with brain injury. This meeting was supported by the following criteria: representative of a state Department of Education (DOE) who provides statewide leadership and coordination of services for students with brain injury (*n* = 3); HRSA Traumatic Brain Injury (TBI) grant recipient

THANK YOU!

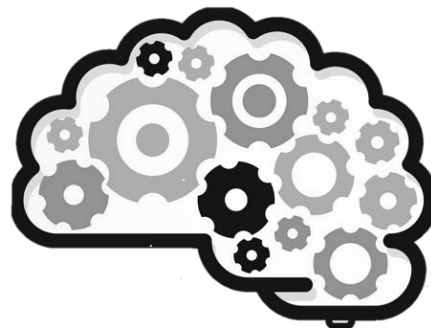
www.getschooledonconcussions.com

Brenda Eagan Brown, MEd, CBIS

brenda.eagan.brown@gmail.com

724-944-7744

#RTL4RTP



continued™