

# Parent Training Centers: School Planning & Educational Strategies Following Traumatic Brain Injury

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Sponsored by the Brain Injury Association of  
America (BIAA) & the Department of Education,  
Office of Special Education

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# Brain<sup>STEP</sup>STEPS

Strategies Teaching Educators, Parents, & Students  
A BRAIN INJURY SCHOOL RE-ENTRY CONSULTING PROGRAM





## What we will cover:

- Impact of traumatic brain injury (TBI) on children & families
- School re-entry after TBI
- Strategies to facilitate student learning after sustaining a TBI

# Nationwide:

Students who sustain TBIs of all severities are often under-identified and misidentified in schools.

Most students do not return to school like this.

A graphic of a human brain silhouette filled with numerous colorful gears of various sizes and colors, including yellow, orange, red, green, blue, and teal. The gears are arranged to form the shape of the brain, with a white rectangular box in the center containing the title text.

# Traumatic Brain Injury Statistics

**Brain injury is a leading cause of death and disability in children & young adults.**

# CDC Statistics in U.S.

Average **ANNUAL** number of Traumatic Brain Injuries:

- Emergency Department Visits
- Hospitalizations

**Half a million**

Children ages 0-14





The majority  
of these children will return  
to school with at least  
one impact.....  
*cognitive, physical, emotional,  
social, behavioral*

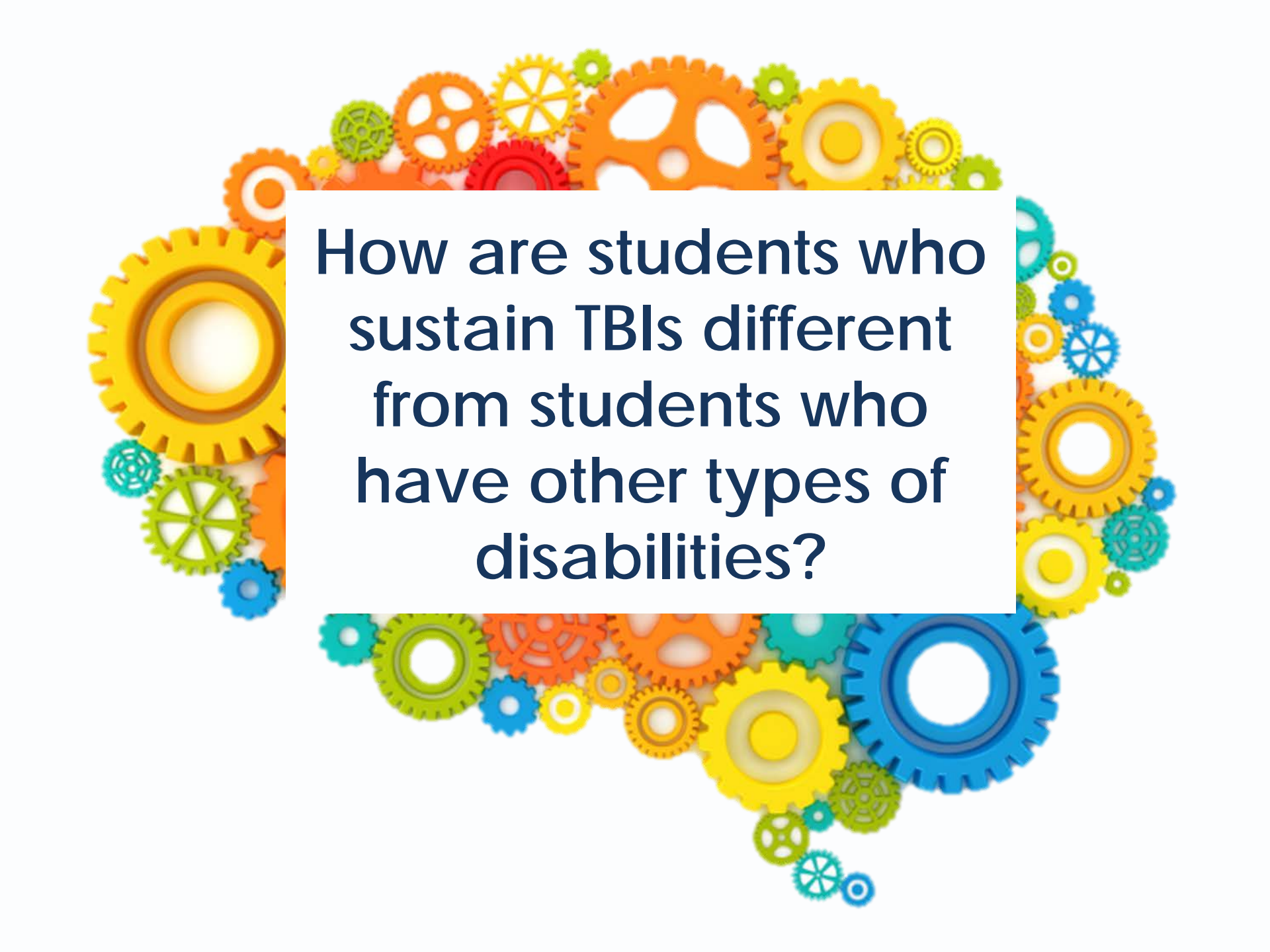
There are 3 medical  
severities of  
Traumatic Brain Injury:

- 1. Mild TBI***
- 2. Moderate TBI***
- 3. Severe TBI***



A child's brain is not fully developed until the early to mid-20s.





**How are students who sustain TBIs different from students who have other types of disabilities?**

# TBI is different:

1. Sudden onset of disability
2. Sudden ongoing medical needs
3. Sudden disruption of prior normal brain development & potential manifestation of new issues over the years



# TBI is different:

4. Sudden loss of peer relationships
5. Potential lack self-awareness of new injury imposed deficits
6. Prior memory tends to remain intact but future learning is impacted



# TBI is different:

7. More extreme discrepancies among abilities and uneven & unpredictable progress
8. After TBI, many students return to school and don't "look like they've had a brain injury"

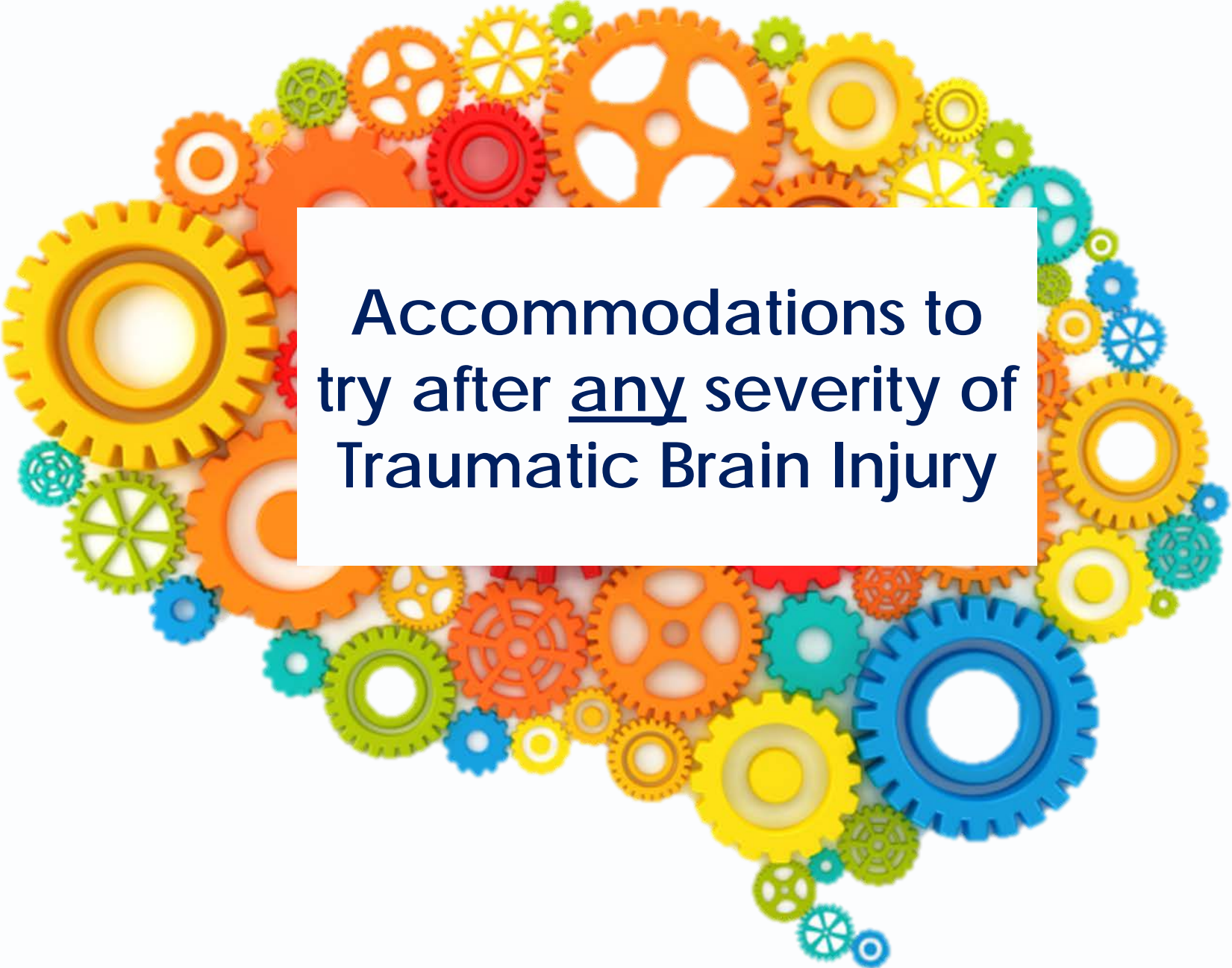


# TBI is a different:

9. Reconciliation of “old” self with “new” self
10. Rapid gains tend to occur during the first 1-2 years. Initial goals/objectives will quickly become obsolete.





A brain-shaped graphic composed of numerous colorful gears in shades of orange, yellow, green, blue, and red. The gears are of various sizes and are arranged to form the outline and internal structure of a brain. A white rectangular box is centered within the brain shape, containing the text.

**Accommodations to  
try after any severity of  
Traumatic Brain Injury**

# Cognitive fatigue and headaches

Cued Recall is better than Random Retrieval.

- Multiple-choice
- Word banks
- Open notes/open book tests
- Close ended vs. open ended
- Index cards with some key points for essay responses



# Cognitive Fatigue & headaches

- Provide space for ALL math computations
- Give page # in book where answer can be found next to questions (less taxing)
- Allow student to circle final answer at the end



# Cognitive fatigue and headaches

- Student may need to take brief in-class or out of class **SCHEDULED** rest breaks(nurse's office) every hour for 10-15 minutes while symptomatic initially.
- Lunch in a separate room with friends



# Testing

- **Acutely** tests and quizzes should be delayed (especially standardized tests) initially
- Gradually re-introduce testing, 1 test/quiz per day, as tolerated
- Testing in a separate, quiet room



# Vision

- Use a filter (pastel colored report covers)
- Use dark paper along with the colored filter above to block parts of pages when reading
- Increase font size/fewer words on a page



# Dizziness (Vestibular problems)

- Allow extra time to get to class
- Walk with a peer/carry books
- Teacher notes to prevent up and down shifting of student's eyes. Have student follow along with highlighter for key concept recognition



# Sensitivity to light & noise

- Sunglasses, hat
- Dark corner to work in
- No cafeteria/ assemblies/ shop class/band/chorus/etc.
- Move away from windows, pull blinds
- Early dismissal to change classes
- Warn before tornado drills or fire drills
- Ear plugs





# Effective Instructional Practices

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Classroom rules are clearly displayed

**For the student with TBI:**

**Classroom rules are posted –**

- On desk
- In binder
- and reviewed, reviewed, reviewed

# Effective Instructional Practices

Routines/Schedules are clearly defined and posted in classroom

**For the student with TBI:**

**Routines/Schedules can also be posted on:**

1. Desk
2. In Planner
3. Reviewed, reviewed, reviewed

# Effective Instructional Practices

- Classroom organization and structure allow for smooth transitions between groups and activities and all day learning

## **For the student with TBI:**

What is the best type of classroom environment?

# Effective Instructional Strategies

- Prerequisite skills are mastered before continuing
- Predictability & transitional warnings
- 1 to 1, small & large group instruction
- Pacing of instruction maintains student attention
- Instructional materials designed to meet varying student performance levels

## For the student with TBI:

**Direct Instruction** – Instructional Strategy

- i.e., SRA Reading/SRA Math

# Effective Instructional Strategies

- Time provided for corrective feedback and error correction

## **For the student with TBI:**

- Errorless Learning Instructional Strategy

# Cue Cards, Task Analysis, Scripts

- Cue cards assist with teaching children what TO DO or steps TO LEARN:
- Expectations
  - ✓ Steps to solving problems
  - ✓ Concepts
  - ✓ Assignments...

***In the beginning, students will need cues to takeout and USE the cue cards***

# SCRIPTS DELIVERY

- Massed and distributed practice
  - (repeat hundreds of times!)
- Embedded in meaningful activity
- Across **ALL** everyday partners





# How do we get students to Self-Regulate?

*Self-regulation is internalized self-talk.*

*-Dr. Mark Ylvisaker*

# General Executive Function Script

**1. Goal**

**2. Plan**

**3. Do**

**4. Review**

*What worked? What didn't work?*

# Self-Regulation Scripts for Students

1. Hard - Easy
2. Big Deal - Little Deal
3. Ready - Not Ready
4. Scary - Not Scary
5. Like - Don't Like
6. Choice - No Choice

# Parent Roles:

- If your child only relies on YOUR external supports, s/he will never have a chance to develop and internalize skills for life.

# SUPPORTS =

## Fade them, Rotate them

- Generalizing to different environments is EXTREMELY DIFFICULT after TBI.
- **Fading and Rotating works**
  - Leave, come back, leave, come back.



# BrainSTEPS

Strategies Teaching Educators, Parents, & Students

A BRAIN INJURY SCHOOL RE-ENTRY CONSULTING PROGRAM

Funded by:

PA Department of Health

PA Department of Education

Implemented by:

Brain Injury Association of Pennsylvania

since 2007



# PA's BrainSTEPS Program

- Brain injury consulting teams available to families and schools throughout Pennsylvania.
- Teams are extensively trained in the educational needs of students returning to school following brain injury.
- Teams consult with & train local school staff to develop educational programs.



# BrainSTEPS Assists Students with All Acquired Brain Injuries

- Traumatic Brain Injury  
*(includes Concussions)*
- Non-Traumatic Brain Injury

*\* Any child who has a brain injury that occurs AFTER the birth process can be referred to BrainSTEPS*





# BrainSTEPS

[www.brainsteps.net](http://www.brainsteps.net)

## TBI flyers, videos, resources



[About](#) | [Login](#) | [System Requirements](#) | [BIAPA](#) | [PDE](#)

The Brain Injury Association of Pennsylvania, funded by a grant from the PA Department of Education, Bureau of Special Education, and the PA Department of Health has created the Child & Adolescent Brain Injury School Re-entry Program called BrainSTEPS (*Strategies Teaching Educators, Parents, and Students*).

BrainSTEPS is working to make sure that those who must provide educational support to children with TBI have a good understanding of brain injury, the resulting challenges, and supports

### About BrainSTEPS

#### BrainSTEPS Concussion Resources:

1. Concussion Webinar
2. Concussion Return to School Protocol
3. Protocol Flow Chart
4. Why every school should have a Concussion Management Team
5. How to register your Concussion Management Team
6. Teacher's Desk Reference: Concussion

For those districts setting up many CMTs (*i.e.*, 7th grade CMT, 8th gr. CMT, 9th gr CMT, etc.) who find it impossible to have all professionals away from the building during the same time period for the Jan. 15 Concussion Management Team training, we are offering the following:



The sign up to form a Concussion Management Team has ended. We are at full capacity for the January training. If you are interested in signing up a CMT for the next training, please contact Brenda Eagan Brown at [eaganbrown@biapa.org](mailto:eaganbrown@biapa.org).

#### Make a Student Referral to BrainSTEPS

- Online
- Phone/e-mail

#### Resources

**Note:** These resources are in Portable Document Format (PDF), requiring the free

Adobe Reader or similar to view.

- BrainSTEPS flyer
- Best Practices for Implementing BrainSTEPS Program
- Concussion: Teachers' Desk Reference
- BrainSTEPS

Available at:

[www.brainsteps.net](http://www.brainsteps.net)



# Traumatic Brain Injury

Each year, over 4,000 of Pennsylvania's children/adolescents survive severe traumatic brain injuries significant enough to require hospitalization. Many are left with life-altering difficulties in physical, cognitive, or behavioral functioning.

## If you see any of these:

- Seizure: eyes fluttering, body going stiff, staring into space
- Forgets everything, amnesia
- Hands shake, tremors, muscles get weak, loss of muscle tone
- Nausea or vomiting that returns

Consult a doctor immediately!

## When You Suspect a Head Injury:

Possible Causes:

- Falls
- Motor vehicle crash
- Sports injury
- Physical violence

Many adolescents with mild brain injury may never see a health care professional or have any long-term difficulties. Some adolescents have problems that may not be noticed right away. You may see changes in your teenager over several months that concern you. This fact sheet lists some of the more prevalent signs of a mild brain injury. Your teen may also be exhibiting symptoms that are not included on this list. If your teen has any of the following problems – **and they persist** – see the “What to Do” box at the end of this publication.

- Thinks about the same thing over and over
- Has trouble learning new things
- Has trouble putting things in order (desk, room, papers)
- Has trouble making decisions
- Has trouble planning, starting, doing and finishing a task
- Has trouble remembering to do things on time
- Makes poor choices (loss of common sense)

## Trouble Communicating

- Changes the subject, has trouble staying on topic
- Has trouble thinking of the right word
- Has trouble listening
- Has trouble paying attention, can't have long conversations
- Does not say things clearly
- Has trouble reading
- Talks too much

## Changes in Personality, Mood, or Behavior

- Is irritable, anxious, restless
- Gets upset or frustrated easily
- Overreacts, cries or laughs too easily
- Has mood swings
- Wants to be alone or away from people

Available at:

[www.brainsteps.net](http://www.brainsteps.net)



# BrainSTEPS

(Strategies Teaching  
Educators, Parents, and Students)

## **A School Re-Entry Program for Children with Brain Injuries**

Each year, approximately 4,000 of Pennsylvania's children survive severe traumatic brain injuries significant enough to require hospitalization. Many are left with life-altering difficulties in physical, cognitive, or behavioral functioning.

BrainSTEPS is working to make sure that the individuals who provide educational support to children with brain injury have an understanding of brain injury, the resulting challenges, and the supports and interventions that will help these students achieve educational success through graduation.

BrainSTEPS Consulting Teams are comprised

Available at:

[www.brainsteps.net](http://www.brainsteps.net)



## Teachers' Desk Reference: Practical Information for Pennsylvania's Teachers

### Concussion (Mild Traumatic Brain Injury)

This *Teachers' Desk Reference* provides information about traumatic brain injury (TBI), specifically concussion, and the potential effects of TBI on a student's behavior and academic performance. According to the Centers for Disease Control and Prevention (CDC), during the last decade, emergency department visits for sports- and recreation-related TBIs, including concussions, among children and adolescents increased by 60 percent. Children and adolescents are among those at greatest risk for concussion, and they take longer to recover from brain injury than adults. At some point during your teaching career, it is likely that you will teach at least one student who has sustained this type of mild traumatic brain injury (mTBI).

that almost 4 million sports- and recreation-related concussions occur every year. Concussions can occur during contact and noncontact activities, such as organized sports, play time, recess, or physical education class. Concussions can also occur if there is enough external force to jolt the body, without directly hitting the head, causing the brain to move rapidly inside the skull. An example of this is the jolting caused by seatbelt restraint as a result of a car accident. Even an apparent mild hit to the head can be very serious.

Concussions can occur during contact and non-contact activities, such as organized sports, play time, recess, or physical education class.

Signs and symptoms of concussion can show up immediately or may not appear until hours or days after the injury. Many students report experiencing diminished mental energy, becoming cognitively fatigued more easily. This is because the concussed brain has to work hard to recover.

Available at:

[www.brainsteps.net](http://www.brainsteps.net)



## Returning to School After Concussion: Recommended Protocol

# CDC

CENTERS FOR DISEASE  
CONTROL AND PREVENTION

## The Centers for Disease Control (CDC) & Prevention document:

Authors: S. Davies, B. Eagan Brown,  
A. Glang , K. McAvoy



### Heads Up to Schools: KNOW YOUR CONCUSSION ABCs

Assess  
the  
situation

Be alert for  
signs and  
symptoms

Contact a  
health care  
professional

### Helping Students Recover from a Concussion: Classroom Tips for Teachers

#### How can I help students who are recovering from a concussion?

As a teacher, you play an important role in helping students recover from a concussion as they return to school. Making short-term



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