Project BRAIN
A Resource and Training Network for Educators, Families and Healthcare Professionals who Support Tennessee Students with Traumatic Brain Injury (TBI)
The contents are the sole responsibility of the authors and do not necessarily represent the views of DHHS. This is in the public domain. Please duplicate and distribute widely.

Project BRAIN is a program of the Tennessee Disability Coalition
www.tndisability.org
WORKING TOGETHER TO IMPROVE EDUCATIONAL OUTCOMES FOR STUDENTS WITH TBI
TOGETHER

Identify students who may experience a variety of changes after sustaining a head injury.

Provide appropriate & timely education, follow-up & intervention throughout the transition from hospital to home to school...into the future.
Concussion is TBI

TBI is under-identified and often goes unreported

We need more education and awareness, prevention and follow up
REALITY

- Family may hear the term “TBI” for the first time from the State TBI Program’s Registry Letter

- Educators are often the last to learn that an injury occurred

- Academic & behavior changes may not immediately be linked to the injury
WHO IS MORE AT RISK?

Males or Females?

What about...

Previous head injury?

Individuals who have already sustained one or more concussions?
Let’s Talk About It...

What sport is most susceptible to brain injury?

What sport is the second leading cause of brain injury?
TN Concussion Law (2014)

- Requires administrators, coaches, parents and youth athletes to be educated about concussion.
- Any athlete who displays the symptoms of a concussion required to be removed from competition.
- Athlete with a concussion can not return to play or practice until cleared by a doctor.
- Concussion is an epidemic that is often under-identified and under-managed
- Every concussion must be treated individually
- Recovery time varies from days to weeks, months, or for some, even longer
Concussions Can Happen During Everyday Activities.

All Concussions Are Serious!
What Is A Concussion

http://www.cdc.gov/headsup/basics/concussion_whatis.html
Predicting the Unpredictable

Amnesia is a more important symptom than loss of consciousness.

Duration of concussion symptoms is more important to a person’s outcome than the initial severity of symptoms.

An early return to play puts students at greater risk for developing Post Concussion or Second Impact syndromes.

In more severe cases, students may need to be put on bed rest.

adapted from cbirt.org/tbi-education/concussion/concussion-and-sports-know-your-game/
Any injury to the head has the potential to affect a student’s educational performance.

Physical recovery can happen faster, giving a false sense that the brain is healed.

CT Scans are often normal.

Second Impact Syndrome can be devastating.
Elementary/Middle School Student’s Story

Injured in school bus crash

Treated and released

Headaches, memory, organization, behavior

School saw changes as intentional poor choices

IEP, training for staff

Service Coordinator working with family/school
TRAININGS

Brain Injury 101: Supporting Students with TBI in the Classroom
A 2-hour training created for educators, families, healthcare professionals and others interested in TBI.

Partners In Communication: Supporting Student Transitions, Hospital to Home to School
Designed specifically for healthcare professionals.

Concussion Within Our Sports Community
This workshop is specially geared for school & community coaches, athletic trainers, athletes, parents and others.

All Project BRAIN trainings & resources are provided at no charge!
http://www.tndisabiity.org/brain
Tennessee TBI Program

Statewide Service Coordination Program

8 TBI Service Coordinators serving all Counties at no charge

Toll-Free Hotline: 1-800-882-0611

TBI Registry

Resource Services Directory

[tn.gov/health/topic/tbi]
Tennessee TBI Registry

Hospital medical records databases retrieve all TBI data sorted by injury codes.

The code classifications are determined by the Centers for Disease Control and Prevention.

Admitted & stay in hospital longer than 24 hours
Since 1996, the Tennessee Brain Injury registry sends a letter to everyone who has been hospitalized (admitted) for treatment of a brain injury.
Traumatic Brain Injury/Concussion Information for Families: A compilation of 4 brief videos to help families learn what they need to know before leaving the hospital.

When Your Child's Head Has Been Hurt:

A head injury can happen to anyone in everyday life: at home, at school or in sports. Many children who hurt their heads get well and have no long-term problems.

- You can't see a concussion. Signs and symptoms of concussion can show up right after the injury or may not appear or be noticed until days or weeks after the injury.
- "Concussions are caused by a bump or blow to the head. Even a 'ding,' 'shock to your head,' or what seems to be a mild bump or blow to the head can be serious.
- If your child reports any symptoms of concussion, or if you notice the symptoms yourself, seek medical attention right away.

(Adapted from the Centers for Disease Control, Heads up www.cdc.gov/concussion)

HEALTH PROBLEMS

**Headaches**
- headache that keeps coming back
- pain in head/neck
- pain below the ear
- pain in the jaw
- pain in or around the eyes

**Balance Problems**
- dizziness
- trouble with balance

**Sensory Changes**
- feels too hot
- feels too cold
- doesn't feel temperature at all
- ringing in the ears
- hearing loss
- bothered by noises
- can't handle background noise

**Pain Problems**
- neck and shoulder pain that happens a lot
- other unexplained body pain

A concussion is a type of traumatic brain injury (TBI). All concussions are serious.

For infants and toddlers:
- if any of the problems, see a doctor right away.
  - disoriented: loss of memory/loss of awareness
  - nausea or vomiting that returns
  - one pupil larger than the other
  - headache that does not go away or get better
  - seizures, eye fluttering, body going stiff, staring into space
  - hands shake, tremors, muscles get weak, loss of muscle tone

(For complete health concerns, please see the back of this sheet)

When Your Head Has Been Hurt

Many people who hurt their heads get well and have no long-term changes. Some individuals have changes that might not be noticed right away. You may see differences over the next several months that concern you. This card lists some common signs that you or someone you know - may have a mild brain injury. If you notice any of the problems on this list - AND THEY DO NOT GO AWAY - see the "What to Do" box on the back of this sheet.

HEALTH CONCERNS

**Headaches**
- Headache that keeps coming back
- Pain in head/neck
- Pain in head bone (skull)
- Pain below the eye
- Pain in the jaw
- Pain in or around the eyes

**Balance Difficulties**
- Dizziness
- Trouble with balance

**Sleep Problems**
- Can't sleep through the night
- Sleeps too much
- Days and nights get mixed up

**Pain Problems**
- Ringing in the ears
- Hearing loss
- Bothers other by noises
- Can't handle normal background noise

**Sensory Changes**
- Blurry vision
- Seeing double
- Hard to see clearly (hard to focus)
- Bothers other by light

These changes don't happen often. If you or someone you know notice any of the difficulties on this list and they don't go away, contact your doctor as soon as possible.

- Severe headache that does not go away or get better
- Seizures: eyes fluttering, body going stiff, staring into space
- You seem to forget everything, amnesia
- Hands shake, tremors, muscles get weak, loss of muscle tone
- Nausea or vomiting that returns

(For complete health concerns, please see the back of this sheet)

Sleep Changes
- Can't sleep through the night
- Sleeps too much
- Days and nights get mixed up

Pain Concerns
- Frequent neck and shoulder pain
- Other unexplained body pain

Continued on Back
A New Tennessee Resource

Brain Injury in Young Children

Prevention is the Only Cure

Signs & Symptoms

Multiple Injuries

For More Information

Falls are the leading cause of traumatic brain injury in children between 0 and 4 years.

Play safely: Make sure playground equipment is properly designed and maintained, and have a safe, soft landing surface in case a child falls.

Make home safety improvements: Install stair gates, guard rails, and guards on windows above ground level.

Keep sports safe: Make sure your child wears a helmet when bike riding, skating, or playing active sports.

Supervision is key: Always supervise a young child around stairs and playground equipment.

Brain injury looks different in every child. Have a doctor examine your child if any of the following changes persist after a blow to the head:

- decreased strength or coordination
- changes in sucking or swallowing
- decreased appetite
- decreased smiling, vocalizing or talking
- frequent rubbing at the eyes or head
- decreased ability to focus the eyes
- unequal pupil size
- increased sensitivity to light or sound
- extreme irritability

Sustaining multiple concussions is particularly dangerous to young children.

Even when a blow to the head seems minor, a second equally-minor injury can have devastating results. One injury is bad enough; a second can be catastrophic.

Keep a record of any injuries to the head that your child sustains. Symptoms of an early brain injury may not appear until a child reaches late elementary or middle school years.

Knowing how to prevent brain injuries helps keep children safe.

Brain Injury lasts a lifetime.

For more Information:

TN Traumatic Brain Injury Program
http://www.tn.gov/health/topic/tbi

Brain Injury Association of America
http://www.biausa.org

Project BRAIN
http://www.modsability.org/brain

Project BRAIN is supported in part through the Federal TBI Program/IS441 to the TOOE, Division of Special Populations and the TN Department of Health, TBI Program.

Project BRAIN adapted this resource with permission from the Nebraska Brain Injury Advisory Council’s Task Force on Children and Youth.

 Adapted with permission from the Nebraska Brain Injury Advisory Council’s Task Force on Children and Youth.
Simplified Brain Behavior Relationships

**Frontal Lobe**
- Initiation
- Problem solving
- Judgment
- Inhibition of behavior
- Planning/anticipation
- Self-monitoring
- Motor planning
- Personality/emotions
- Awareness of abilities/limitations
- Organization
- Attention/concentration
- Mental flexibility
- Speaking (expressive language)

**Temporal Lobe**
- Memory
- Hearing
- Understanding language (receptive language)
- Organization and sequencing

**Parietal Lobe**
- Sense of touch
- Differentiation: size, shape, color
- Spatial perception
- Visual perception

**Occipital Lobe**
- Vision

**Cerebellum**
- Balance
- Coordination
- Skilled motor activity

**Brain Stem**
- Breathing
- Heart rate
- Arousal/consciousness
- Sleep/wake functions
- Attention/concentration
Brain Injury Transition Liaison

At partnering children’s hospitals, when a student receives a diagnosis of TBI:

At discharge, the family is presented with our consent form

If given consent, the Liaison works with the Department of Education to notify the school of the injury

The Liaison provides support to the family through follow up calls
Partnering across Tennessee!

Vanderbilt Children’s Hospital
Le Bonheur Children’s Hospital
Children’s Hospital at Erlanger

Since May 24, 2011 - December 2015
Over 4400 Families Have Been Supported From this Outreach!

# of Schools Contacted: 3171
Department of Education contacts child’s school Principal.

Awareness: not all students with a TBI need any special services.

Large percentage of people fully recover.

Share this information with School Nurse, Educators, Counselor, School Psychologist and Athletic Personnel.

School receives Signs & Symptoms Tool.

---

May 27, 2015
Happy Camper, Principal
Hometown School
1021 Happy Lane
Nashville, TN 37206

Dear Mr. Camper,

The Tennessee Department of Education has been authorized to make you aware that a student at your school, (name of student), has been diagnosed with a traumatic brain injury (TBI) from Monroe Carell Jr. Children’s Hospital at Vanderbilt. This type of injury can be mild, moderate or severe, may not always be visibly apparent but may adversely affect this student’s academic performance.

The important factor in this communication is for everyone to be aware that an injury occurred, that not all students who have a TBI will need specialized services and that a large percentage recover fully. Having this “Signs & Symptoms” tool and knowing where the school can go to for help will increase opportunities for this student’s overall success.

We need your help in this effort. Please make sure that the classroom teacher, school nurse, school counselor/psychologist and, if applicable, any athletic personnel are aware of this correspondence. The school environment is often first to realize differences in a student after an injury has occurred. Sharing this “Signs & Symptoms” tool with school staff will help them recognize these potential differences.

Additional resources to assist your school with this student’s return are available through Project BRAIN, a federally funded TBI Grant Program that is supported by the Tennessee Department of Education, Division of College and Career Readiness. Project BRAIN was created to improve education outcomes for students through their partnership with the Department of Health’s statewide Traumatic Brain Injury Program.

Project BRAIN’s regional TBI Resource Specialists provide trainings for school personnel on educating students with brain injuries. A training can be scheduled to meet the needs of your particular school. Resources and trainings provided by Project BRAIN are offered free of charge.

Please contact Paula Demlow at paula.d@tnability.org or (615) 383-9442 Ext. 8616, and visit Project BRAIN’s website at www.tnability.org/brain for more information. Also visit the TN TBI Program online at http://health.state.tn.us/thi/index.htm to learn more.

Sincerely,

Aisleen Gauld
Behavior and Low Incidence Coordinator
Special Populations
Tennessee Department of Education
Aisleen.Gauld@tn.gov

Attachment: Signs & Symptoms Handouts
If unable to view attachment, click reply all and put “unable to view attachment” in the body of the email.

<Click “reply all” to confirm receipt of this email>
TEAMWORK

Healthcare Providers communicate to families

✓ the importance of careful attention to identify possible changes the student may experience
✓ to share information with the school.
TEAMWORK

Home

Family Members communicate to the school
✓ that an injury occurred.

Facilitating a **successful transition** is possible only when maintaining open dialogue between the family & school, documenting any observed changes within the student.
School & Educators

✓ Communicate regularly with the family & student.

Establish Effective Educational Supports when Appropriate
AND
Communicate from the Hospital to Home to School
www.getschooledonconcussions.com
School-Wide Concussion Management
Oregon Center for Applied Science

SCHOOL-WIDE CONCUSSION MANAGEMENT

When a concussion happens to a student, it's critical that the entire school community—staff, students, and their parents—knows how to respond in ways that ensure the student’s best chance of recovery.

The RESOURCE LIST provides all of the materials a school needs for effective concussion management.

USE THE TRAINING PROGRAMS BELOW TO ENSURE THE SAFETY OF YOUR STUDENTS.

COACHES
In 20 minutes, athletic staff can learn how to spot a possible concussion and respond effectively.

EDUCATORS
Staff can learn concussion basics and how to support students when they return to the classroom.

PARENTS
Use this short training to make sure parents know what to do if a concussion happens to their child.

TEEN ATHLETES
Teach students about concussions with this fun 15-minute program.

brain101.orcasinc.com
HEADS Up To Schools

http://www.cdc.gov/headsup/schools/index.html

What is a concussion?
A concussion is a type of brain injury that changes the way the brain normally works. A concussion is caused by a bump, blow, or jolt to the head. Concussions can also occur from a fall or blow to the body that causes the head and brain to move rapidly back and forth. Even what seems to be a mild bump to the head can be serious.

How can I recognize a concussion?
To help you recognize a concussion, ask the injured student or witnesses of the incident about:

1. Any kind of forceful blow to the head or to the body that resulted in rapid movement of the head.
2. Any change in the student’s behavior, thinking, or physical functioning. (See the signs and symptoms of concussion.)

THE FACTS:
* All concussions are serious.
* Most concussions occur without loss of consciousness.
* Recognition and proper response to concussions when they first occur can help aid recovery and prevent further injury, or even death.
New from Colorado Department of Education
www.cokidswithbraininjury.com

Brain Injury in Children and Youth
A Manual for Educators

http://cde.state.co.us/cdesped/SD-TBI.asp
Center on Brain Injury Research & Training

Did you know ... this resource offers evidence-based information for people working with students who have a traumatic brain injury?

http://www.cbirt.org/tbi-education

About TBI
Early Childhood TBI
School Reentry
Assessment & Eligibility
504/IEP (Formalized Support)
Instruction Strategies
Assistive Technology
Concussion
Behavior
Executive Functions
Transition to Adult Life

cbirt.org/tbi-education
Resources

Get Schooled On Concussion: Written BY Educators FOR Educators focusing on one page fact sheets for teachers, administrators, school nurses, school mental health, counselors and parents:
www.getschooledonconcussions.com

Centers for Disease Control and Prevention

Brainline
http://www.brainline.org/index.html

Brainline Kids
http://www.brainline.org/landing_pages/features/blkids.html
Wanda Keath, MSW, SSW, CBIS
Resource Specialist / Trainer
wanda_b@tndisability.org
901.813.8595

Jennifer Rayman  Ed.S., CRC, CBIS
Curriculum Coordinator/Trainer
jennifer_j@tndisability.org
865-951-2282

Paula Denslow, CBIS
Program Director/Trainer
paula_d@tndisability.org
615-383-9442, ext 8616

http://tndisability.org/