



TBI of TBI

"TBI's are much like fingerprints in that no two are alike."

Kevin Pearce, Professional snowboarder and TBI survivor.

TRAUMA (T)

The American Psychological Association (APA) defines trauma as an emotional response that individuals have after experiencing a terrible event

TRAUMATIC BRAIN INJURY (TBI)

A prevailing diagnostic definition of TBI is an injury that, "disrupts the normal function of the brain, and can be caused by a bump, blow, or jolt to the head, or a penetrating head injury" (CDC, 2018; p. 5).

The human brain develops over the first two decades of life with cerebral maturation understood to be achieved into the post-adolescent years or approximately within the mid-twenties. TBI for children and adolescents is particularly heterogeneous as their young minds are especially vulnerable due to the maximal period of development their brains are in.

Potential Outcomes of Trauma and TBI

- **School Difficulties**
 - **Cognitive (i.e., memory, attention, executive functioning, processing speed)**
 - **Academic (i.e., drop in grades, missing assignments, developmental delays)**
 - **Social (i.e., withdrawal from friends, social awkwardness, poor judgement)**
 - **Emotional (i.e., poor behavioral control, hyperarousal, withdrawal, isolation, outbursts)**
- **Mental Health Challenges**
 - **Anxiety**
 - **Depression**
 - **Post Traumatic Stress Disorder**
 - **Suicidality**
 - **Oppositional Defiant Disorder**



1 in 4 children and/or adolescents have a diagnosable mental illness that can result in lifetime impairments



80% of students experience some form of childhood trauma



TBI is a leading cause of death and disability in the United States (CDC, 2018).

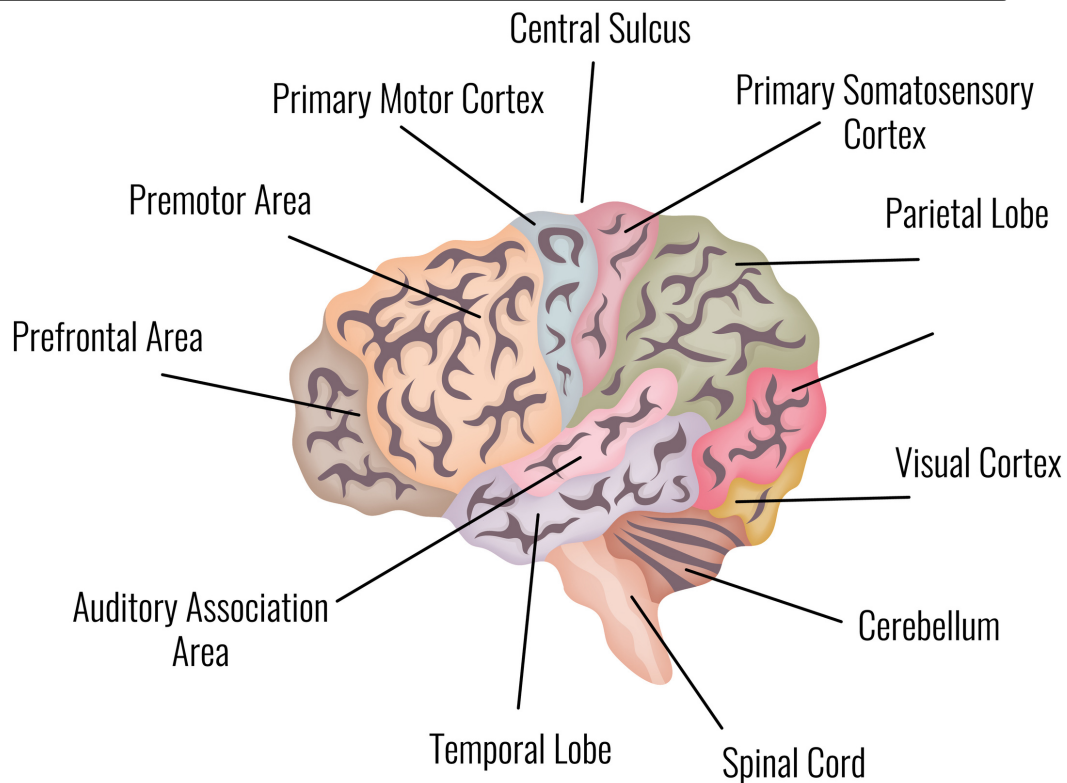


By the age of 16, an estimated one in five children will sustain a TBI (Barlow, 2016).

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Human Brain Anatomy



- **Prefrontal Cortex** - essential in shifting attention and forming associations, both which are fundamental in cognitive processing.
- **Temporal Lobe** - assists in helping the senses understand and respond to the world around.
- **Parietal Lobe** - assists in sensory perception and integration, including the management of taste, hearing, sight, touch, and smell
- **Occipital Lobe** - responsible for visual perception, including color, form, and motion.
- **Hippocampus** - essential in learning and memory formation and is engaged when encoding and retrieving information.
- **Amygdala** - assists in controlling emotions, survival instincts, memory, and the “fight or flight” response.

School Supports



Individualized Education Plan (IEP):

- **Collaborate with special education professionals, parents, and the student to develop an IEP tailored to the student's specific needs if student meets services.**

Communication Strategies:

- **Maintain open lines of communication with the student's parents or caregivers to stay informed about their progress and any changes in their needs.**
- **Use clear and concise language when giving instructions or explanations with the student.**
- **Collaborate with healthcare professionals, such as neurologists and neuropsychologists, to understand the student's medical and cognitive status.**

Academic Support:

- **Provide individualized instruction and support based on the student's cognitive abilities and needs.**
- **Consider assistive technology and software that can aid in reading, writing, organization, and communication.**

Structured Environment:

- **Create a structured and predictable classroom environment to reduce anxiety and support organization.**
- **Use visual schedules, routines, and visual aids to reinforce instruction.**
- **Provide a structured and predictable routine to help reduce anxiety and confusion.**

Emotional and Behavioral Support:

- **Be aware of emotional and behavioral changes and provide a safe and supportive atmosphere.**
- **Implement positive behavior support strategies and techniques.**
- **Offer counseling or access to a school psychologist if needed.**

Physical Accommodations:

- **Ensure physical accessibility in the school environment for students with mobility challenges.**
- **Collaborate with physical and occupational therapists to address motor and coordination issues if appropriate.**

School Supports Continued



Sensory-Friendly Environment

- Offer sensory breaks when necessary or a designated sensory space for relaxation
- Allowing the student to decompress and self-regulate.

Classroom Accommodations:

- Allow for extended time on assignments and tests if needed.
- Use visual aids, such as charts, schedules, and diagrams, to reinforce instruction.
- Provide written or typed instructions in addition to verbal instructions.
- Allow for breaks during the school day to prevent mental fatigue.

Peer and Social Support:

- Foster a supportive classroom culture where peers understand and accept differences.

Advocacy:

- Advocate for the student within the school system to ensure they receive the appropriate services and accommodations.

Professional Development:

- Stay informed about TBI and its effects on learning through ongoing professional development and training.

Family Support:

- Provide resources and support for the student's family to help them understand and cope with the challenges of long-term TBI.

Regular Monitoring and Assessment:

- Continuously assess the student's progress and adjust teaching strategies and accommodations accordingly.
- Recognize that the student's needs may change over time, and be flexible in adapting your teaching methods and accommodations accordingly.

Assistive Technology:

- Integrate assistive technology tools and software that can help the student with reading, writing, and organization.
- Teach the student how to use these tools effectively.

TBI EDUCATION RESOURCES

BRAINLINE

[HTTPS://WWW.BRAINLINE.ORG/](https://www.brainline.org/)

BRAINLINE FOR KIDS

[HTTPS://WWW.BRAINLINE.ORG/CHILDREN-TBI](https://www.brainline.org/children-tbi)

CDC – HEADS UP

[HTTPS://WWW.CDC.GOV/HEADSUP/](https://www.cdc.gov/headsup/)

CENTRE FOR NEURO SKILLS

[HTTPS://WWW.NEUROSKILLS.COM/](https://www.neuroskills.com/)

COLORADO DEPARTMENT OF EDUCATION

[HTTP://WWW.CDE.STATE.CO.US/](http://www.cde.state.co.us/)

GET SCHOOLED ON CONCUSSIONS

[HTTPS://WWW.GETSCHOOLEDONCOVID.COM/](https://www.getschooledoncovid.com/)

LASH AND ASSOCIATES

[HTTPS://LAPUBLISHING.COM/](https://lapublishing.com/)

NATIONAL ASSOCIATION OF STATE HEAD INJURY ADMINISTRATORS

[HTTPS://WWW.NASHIA.ORG/RESOURCE-LIBRARY](https://www.nashia.org/resource-library)

PROJECT LEARNET

[HTTP://WWW.PROJECTLEARNET.ORG/INDEX.HTML](http://www.projectlearnnet.org/index.html)

TBI CENTER ON BRAIN INJURY RESEARCH AND TRAINING

[HTTPS://CBIRT.ORG/](https://cbirt.org/)

TBI OF TBI

[WWW.TBIOFTBI.COM](http://www.tbioftbi.com)

THE BRAIN INJURY IN CHILDREN AND YOUTH: A MANUAL FOR EDUCATORS (PDF)

[HTTPS://WWW.CDE.STATE.CO.US/CDESPED/TBI_MANUAL_BRAININJURY](https://www.cde.state.co.us/cdesped/tbi_manual_braininjury)



References

The information presented is a culmination of our dissertation projects.

- **EXAMINING STUDENT TRAUMA IN SCHOOLS: PREPARING TEACHERS TO RECOGNIZE AND WORK WITH TRAUMATIZED STUDENTS**
- **THE TRAUMA IMPLICATIONS, BEHAVIORAL MANIFESTATIONS, AND INTELLECTUAL CHALLENGES OF TRAUMATIC BRAIN INJURY (TBI) IN SCHOOLS – TBI of TBI**

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