WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

FREQUENTLY ASKED QUESTIONS

1. **What is a Traumatic Brain Injury (TBI)?**

   TBI, also called "acquired brain injury" or simply "head injury," occurs when a sudden trauma causes damage to the brain. The damage can be focal - confined to one area of the brain - or diffuse - involving more than one area of the brain. TBI can result from a *closed head injury** or a *penetrating head injury*. A closed injury occurs when the head suddenly and violently hits an object but the object does not break through the skull. A penetrating injury occurs when an object pierces the skull and enters brain tissue.

2. **What is the difference between a traumatic brain injury (TBI) and an acquired brain injury (ABI)?**

   Acquired brain injury (ABI) is an injury to the brain that occurs after a period of normal development. An acquired brain injury can result from internal occurrences (strokes, tumors, infections), or from external causes (falls, sports injuries, car accidents).

3. **What are the leading causes of brain injury in children?**

   Infants: Abuse; neglect (i.e.: shaken baby syndrome)
   Toddlers: Abuse; falls
   Early Elementary: Falls; pedestrian-motor vehicle accidents
   Late elementary/Middle school: Pedestrian-bicycle accidents, pedestrian-motor vehicle accidents, sports
   High school: Motor vehicle accidents

4. **Is there ever full recovery from a brain injury?**

   It is difficult to predict how well a student will recover from a brain injury. Some injuries that appear milder may lead to more significant long-term disability than other injuries that appear more severe initially. Factors that can be predictors of recovery are duration of coma, post-traumatic amnesia (failure to remember events leading up to injury or failure to accumulate new memories after injury), age, location of injury, pre-injury functioning, and availability of support systems.

5. **What is a coma?**

   A coma is a state of unconsciousness in which the person cannot be aroused or does not respond, even to painful stimuli.

6. What is a concussion?

A concussion is a temporary loss of awareness or consciousness caused by a blow to the head. Severe blows may result in bleeding in the head or permanent damage to nerves. Some concussions can have serious, lasting effects.

Your brain floats within your skull surrounded by cerebrospinal fluid (CSF). One of the functions of CSF is to cushion the brain from light bounces of everyday movement. However, the fluid may not be able to absorb the force of a sudden hard blow or a quick stop.

Most concussions are mild and most people with mild brain injuries recovery fully, but the healing process takes time. Rest is the best recovery technique.

Signs and Symptoms:
The signs and symptoms of a concussion can be subtle and may not appear immediately. Symptoms can last for days, weeks or longer. Your behavior, mental ability and physical skills all are linked to specific areas of your brain. The severity and side effects of a head injury depend greatly on which area of your brain was most affected.

Immediate signs and symptoms of a concussion may include:

- Confusion
- Headache
- Ringing in the ear (tinnitus)
- Nausea
- Unequal pupil size
- Unusual eye movement
- Amnesia
- Loss of consciousness
- Drowsiness
- Vomiting
- Convulsions
- Slurred speech

Delayed signs and symptoms may include:

- Irritability
- Sleep disturbances, including insomnia or difficulty waking
- Loss of sense of taste or smell
- Trouble with memory
- Increased sensitivity to sounds, lights and distractions
- Difficulty with gait or in coordinating use of limbs
- Headaches
- Getting lost or becoming easily confused
- Poor concentration
- Depression
- Fatigue

From: mayoclinic.com

7. Can brain cells be repaired after an injury?

Once neurons are severed they cannot yet be repaired. The brain generates new brain cells, but we do not yet know how to direct these cells to become neurons. Over time the secondary effects of brain injury subside, new information pathways may develop, and functioning generally improves. However, the extent of injury to neurons in the brain and

the location of injuries determine to a great extent the level of recovery an individual will experience.

8. **Why is swelling in the brain so damaging?**

   Swelling of the brain (or cerebral edema) is an accumulation of excessive fluid in the substance of the brain. The brain is especially susceptible to injury from edema, because it is located within a confined space and cannot expand. Diffuse cerebral edema may develop soon after head injury.

9. **Are schools required to help students with brain injuries?**

   Both federal and state law require school districts to provide each student with a disability a free, appropriate public education (FAPE). Traumatic brain injury (TBI) is one of the recognized categories of impairment under both federal and state law. Therefore, a school district has an obligation to provide each student who meets the eligibility criteria for TBI and who requires special education the specially designed instruction and related services he/she needs to receive FAPE.

10. **Does a student have to have a prior medical diagnosis of a brain injury before the IEP team is able to identify the student as having a traumatic brain injury?**

    The IEP team is required to review any existing medical information from a licensed physician before identifying a student with traumatic brain injury (TBI). This does <u>not</u> mean that a student must have medical documentation to be identified with TBI. The IEP team may identify a student with TBI without medical documentation as long as all other parts of the eligibility criteria are met. If, however, the IEP team believes that medical evaluation by a licensed physician is needed as part of the evaluation to determine whether or not a student meets the eligibility criteria of TBI, the school district must ensure that this evaluation is provided at no cost to the parents. (OSEP letter to Michael Williams, March 14, 1994, 21 IDELR, 73)

11. **What assessment guidelines/procedures should the IEP team keep in mind when evaluating a student with traumatic brain injury?**

    There are two purposes for evaluation of a student with TBI: identification of a student as a student with a disability (a student with an impairment and a need for special education); and program planning. The areas of information educators need to examine to begin planning to meet the needs of a student with TBI include cognition and memory, speech/language (communication), sensory and perceptual abilities, motor abilities, psychosocial impairments, physical functions/safety, academic skills. Factors that make evaluation challenging include rapidly changing skills (especially during the first 6-12 months); communication, physical, sensory, motor, emotional, and behavioral difficulties may interfere with assessment; uneven skill profile (some higher skills preserved with

lower skills lost); performance influences by state and situation; and problems may emerge later after the assessment is completed.

**Note: Standardized and norm-referenced testing instruments used to evaluate and identify a child with traumatic brain injury may not be valid or reliable. Alternative means of evaluation should be considered such as achievement assessments, observation, work samples, and criterion-referenced assessment.*

12. Should the IEP team identify a student as having traumatic brain injury when the student meets the criteria for another area of impairment - such as cognitive disabilities or learning disabilities?

Students with a traumatic brain injury (TBI) may have difficulty with learning, memory, and/or behavior that stems directly from their brain injuries. Often the needs of these students differ from the needs of students with other impairments. Consequently, it is important for students with TBI to be identified as such so that their unique patterns of injury, recovery, learning, and behavior will be recognized and appropriately addressed.

13. How would an educational program for a child with traumatic brain injury differ from that of other disabilities (e.g. cognitive disabilities, learning disabilities)?

The special education and related services provided to each student with a disability are based upon information obtained by an IEP team through a thorough and comprehensive educational evaluation. Educational needs are then outlined in an Individualized Education Plan (IEP) which is tailor-made to meet the specific needs of each individual student. Therefore, the child's unique educational needs, not the label, determine the special education and related services that the child will receive.

14. What general guidelines should the teacher keep in mind when selecting classroom interventions for a student with traumatic brain injury?

Students with brain injuries often have trouble remembering, especially new information. It is important to know that helping students remember better is not just having them do the same thing over and over again. (How many of us remember what the Lincoln head side of a penny looks like even though we have seen hundreds of pennies in our lives?).

To help a student remember better, try these "Top 10" cognitive strategies:

1. Make sure the student is paying attention. Make direct eye contact with the student whenever you are teaching new information.
2. Couple and connect new information with previously learned information.
3. Try to make the information to be learned meaningful and functional.
4. Match the student's learning style (e.g., visual learner) with the teaching method.
5. Frequently summarize information as it is being taught, using overlapping techniques such as repetition and rehearsal.
6. Use pictures, diagrams, and charts to reinforce what is being learned.

7. Control the amount of new information that is being presented.
8. Give multisensory presentations of new information.
9. Teach the student how to organize new information for better memory retention.
10. Teach the student to use a databook for notes, assignments, and appointments.

From: www.neuro.pmr.vcu.edu/FAQ/FAQ.ASP?FAQ=22

15. What classroom strategies might a teacher use to help a student with traumatic brain injury who has memory problems?

Students with a TBI may have difficulty with memory in two (2) different ways:

1. *Memory Encoding* (difficulty retaining information). A student with memory encoding problems will have difficulty remembering names, locations, his/her schedule and assignments.
   Try to help:
   - Highlighting important information
   - Practice/rehearse all new information and skills
   - Link new information to previously learned information
   - Find out what helps the student (written directions, oral directions, role playing, visual cues)
   - Provide assignment notebook
   - Use color or number codes
   - Use mnemonic strategies (imagery, chunking, acronyms).
2. *Memory retrieval* (can't consistently retrieve information when needed).
   Try to help:
   - Give prompts or cues to help retrieval (it starts with a question or describe the object)
   - Provide the student with choices (is it red or blue?)
   - Reformat essay, short answer and fill in the blank tests to tests that use multiple choice, matching or true and false.
   - Consistent routines and schedules help to reinforce memory
   - Teach relaxation strategies when student is frustrated
   - Teach compensatory strategies such as describing the object or talking about the topic to help activate memory of specific information.

16. What is a visual field cut? What can be done to help a student with a visual field cut?

A visual field cut is when a student doesn't see well in a certain area of the visual field. This loss can be partial or complete. It is often located in the peripheral range of vision i.e., upper right quadrant cut. To help a student with a visual field cut, a teacher may consider:

- Positioning materials for best visibility
- Positioning student in classroom for best visibility
- Adapt materials by highlighting margins

- Use a "reading window" to assist the student in following along when reading a passage.
- Provide student copies of material written on the blackboard or overhead
- Unclutter overcrowded worksheets
- Audio-record materials
- Teach student to position materials to see all of the page
- Teach student to scan materials

17. Why do students with TBI often have behavior problems?

Behavioral control requires multiple brain systems work together to process, interpret and act on information. Many students with TBI have difficulty remembering what they are supposed to do and controlling their emotions and behavior. Deficits in the area of attention and memory; physical and emotional regulation; executive functions; speed of processing and communication skills work together to produce challenging behaviors. Often, challenging behavior can be directly linked to the student's TBI.

18. How can parents and educators obtain information about local resources?

- Contact your local county Department of Human Services to request information about services to families who have children who have had special needs as a result of a TBI.
- Contact the local state chapter of the Brain Injury Association of America (see www.biausa.org to find your state chapter).
- Contact the "Children and Youth with Special Health Care Needs" regional center (see www.dhfs.wisconsin.gov/DPH_BFCH/cshcn/index.htm to find the regional center near you).