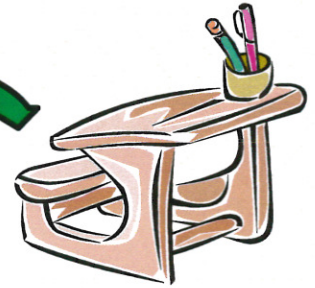




BRIDGING THE GAP FROM CONCUSSION TO THE CLASSROOM: RETURN TO LEARN



What is a Brain Injury?

Acquired Brain Injury (ABI)

- An acquired brain injury is an injury to the brain, which is not hereditary, congenital or degenerative that has occurred after birth. (Includes anoxia, aneurysms, infections to the brain and stroke.)

Traumatic Brain Injury (TBI)

- A TBI is caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain. Not all blows or jolts to the head result in a TBI. The severity of a TBI may range from "mild," i.e., a brief change in mental status or consciousness to "severe," i.e., an extended period of unconsciousness or amnesia after the injury. The majority of TBIs that occur each year are concussions or other forms of mild TBI.

Concussions

- A concussion is a type of **traumatic brain injury**, or TBI, caused by a bump, blow, or jolt to the head. A concussion is **any head trauma that causes an altered mental state that may or may not involve a loss of consciousness. Only 10 percent of concussions involve a loss of consciousness!**
- Concussions can also occur following a fall or a blow to the body that causes the head and brain to move back and forth quickly.
- This sudden movement can cause the brain to bounce around in the skull, stretching and damaging the brain cells and creating chemical changes in the brain.
- Health care professionals may describe a concussion as a "mild" brain injury because concussions are usually not life-threatening. Even so, their effects can be serious. (Centers for Disease Control & Prevention)



**A CONCUSSION
IS
A BRAIN INJURY!**

Why are Concussions Such a Big Deal?

- **A CONCUSSION IS A BRAIN INJURY!**
- A concussion can occur from an impact to the head. The most common cause of a concussion is a whiplash type injury, a rapid acceleration of the head.
- Most concussions (90%) occur without loss of consciousness!
- A “ding,” “getting your bell rung,” or what seems to be a mild bump, blow or jolt to the head can be serious and can change the way the brain normally works! (Center for Disease Control 2013).
- Because of changes in the neurophysiology of the brain, symptoms may continue to develop over the next few hours following an injury.
- After a concussion, among other effects, connections within the brain become stressed, resulting in the breaking of some connections between different brain areas and limiting the ability of the brain to process information efficiently and quickly. (Molfese 2013)
- These changes can lead to a set of symptoms affecting the student’s cognitive, physical, emotional and sleep functions, which may result in reduced ability to do tasks at home, at school, or work.
- During this time, returning to play or full-time academics before symptoms have cleared can result in **prolonged recovery time or risk of further injury**.
- Ignoring the symptoms and trying to “tough it out” often makes symptoms worse!
- “Second Impact Syndrome” may occur when a brain already injured takes another blow or hit before the brain recovers from the first –usually within a short period of time (hours, days, or weeks). A repeat concussion can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in edema (brain swelling), permanent brain damage and even death. (Center for Disease Control 2013)
- As the chemistry of the brain returns to normal, the symptoms begin to subside and for most people, they resolve within 1 to 6 weeks.
- **During the recovery period, it is very important that individuals are monitored for full resolution of symptoms and referred if further evaluation or treatment is needed.** (Terryberry-Spohr 2013)



Symptoms of TBI/Concussion

School professionals can best support a student's return to school by understanding the effects of concussion and providing the needed academic adjustments and supports. Knowledge of concussion symptoms can help the student and the school team identify the specific needs of the student, monitor changes and provide appropriate accommodations to facilitate the student's recovery and minimize the pressure to return to activities too soon. (CDC 2013)

Symptoms of TBI/Concussion that may affect school performance fall into four categories:

- Thinking/Cognitive/Remembering
- Sleep
- Physical Symptoms
- Emotional/Mood Symptoms



Thinking/Cognitive Red Flags

Look for increased difficulty with:

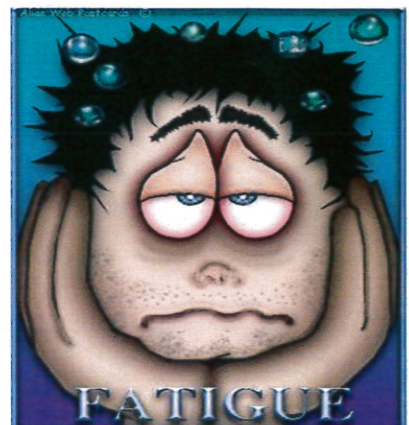
- Thinking clearly
- Concentrating, Staying on task
- Remembering new information
- Slowed response or processing of information (Feeling slowed down)
- Reduced academic performance



Sleep Red Flags

Sleep symptoms tend to last longer than other symptoms. Look for increased:

- Drowsiness
- Sleeps more than usual
- Sleeps less than usual
- Difficulty falling asleep
- Fatigue – tired, having no energy

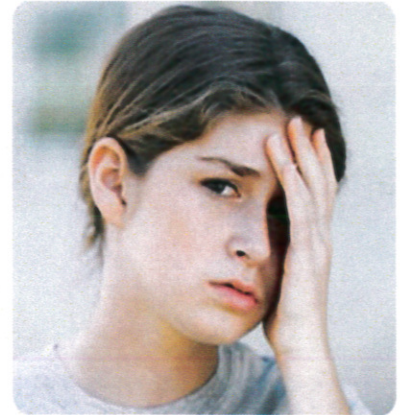




Physical Red Flags

Look for increased difficulty with:

- Headaches
- Fuzzy or Blurred Vision (visual problems)
- Balance problems
- Dizziness
- Nausea, vomiting
- Sensitivity to light
- Sensitivity to noise
- Disorientation



Social Emotional Red Flags

Look for increased difficulty with:

- Irritability
- Sadness
- More emotional
- Changes in mood
- Nervousness
- Anxiety



Return to Activity = Return to Learn + Return to Play



Tips for Parents

- Parents play a key role in maximizing the child's recovery from a concussion.
- Parents take student to ER or contact the child's healthcare provider immediately after the concussion.
- After the diagnosis of a concussion by the healthcare professional, parents monitor symptoms and activities at home.
- Parents enforce rest, both physical and cognitive, and ensure that the child receives sufficient sleep and engages in quiet, restful activities immediately after a concussion.
- Parents take student to follow-up appointments with the healthcare provider.
- For the first few days, the student/athlete may have symptoms that interfere with concentration and may need to stay home from school to rest for a day or two and refrain from:

- Watching TV
- Playing video games
- Texting
- Working/playing on computer
- Driving
- Use of Cell phone
- Blowing on a musical instrument
- Piano lessons



- Light mental activities can resume as long as symptoms do not worsen. When the student/athlete can tolerate 30-45 minutes of light mental activity, a gradual return to school can commence.
- Parents monitor and track symptoms at home and communicate regularly with the school Concussion Management Team (CMT) Coordinator and/or health care provider.
- Parents sign Permission for two-way Release Information between the medical provider and the school district.
- Parents may request information from the school CMT on concussions.
- Parents are aware of academic adjustments in the school setting.
- Deliver medical clearance from the healthcare provider to the CMT when appropriate.