

**ValleyCare Charitable Foundation**  
**Opinion Piece**

***Stay Current on Traumatic Brain Injury for Children and Teens***

By Dr. Alice Cha



A lot of parents and coaches are familiar with that sudden “thump” when their child or player hit their head. Whether it occurs when a child falls on the playground unexpectedly or when the ball inadvertently hits a player’s head, the injury can be significant. Unlike medical professionals, athletic trainers and parents are really the first responders in this situation. While severe head injury becomes readily apparent, mild traumatic brain injury -- or concussion -- can be difficult to identify and treat. Becoming familiar with this topic becomes crucial to working with medical professionals for the care of the injury and to making joint decisions on returning the child or player back to activity.

Traumatic brain injury is defined as a blunt-force injury that disrupts the normal function of the brain or any injury that causes the head and brain to move quickly back and forth. In 2014, Center for Disease Control and Prevention (CDC) found that there are approximately 2.87 million traumatic brain-injury-related Emergency Room visits and 56,800 deaths related to traumatic brain injury, including 2529 cases that were children. Unlike adults, children and adolescents up to 18 years old are particularly vulnerable because of their incompletely developed brain. Female athletes are 1.4 times more susceptible to mild traumatic brain injury than male athletes.

In addition to the well-known consequences of impairments in thinking, memory, movement, and sensation, head injury may even lead to personality changes or depression. Some cases have increased risk for degenerative brain diseases, such as Parkinson’s disease or Alzheimer’s disease. Most daunting may be the unpredictable onset of these effects, which may occur weeks or months later. This speaks to the importance of close and persistent monitoring at home and school by parents and coaches alike.

When head injury happens, the child or adolescent should be immediately removed from sports or play until cleared by a medical professional. “Removal From Play” for at least 7 days for youths in youth sport organizations has been a California state law since January 2017. (see note below\*\*) It’s based on the fact that any repeat concussion while the brain is healing from the first injury may be fatal.

When medical professionals evaluate an injured child, they use a symptom scale that is stratified by their age group. They look for symptoms that are largely divided into four categories, including physical, emotional, cognitive, and sleep abnormalities. They will refer the patient to specialists if further neurocognitive testing is indicated. Unlike years ago, when “resting” was the foundation of treatment, long recovery time in a dark room is discouraged in CDC’s first published pediatric guideline on mild traumatic brain injury, in 2018. It advises a gradual return to low-impact activities after two to three days of rest. Then, with tolerance, the child should gradually start light aerobic activity, continuing to moderate activity, and, finally, regular activity.

It should be pointed out that the CDC identifies children with lower cognitive ability, neurological or psychological disorders, learning disability, and even social stressors to be at greater risk for delayed recovery. Parents and coaches should pay special attention to these groups and enroll them in active rehabilitation as needed.

The bottom line is that traumatic brain injury not only requires medical professional evaluation and removal from play, but symptom-monitoring and a return-to-play plan should be an intimate collaboration between parents, coaches, and healthcare providers. CDC’s HEADS UP campaign provides great resources on how to approach this.

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**\*\*California's new law requires an athlete who is suspected of sustaining a concussion or other head injury in an athletic activity to be immediately removed from the athletic activity for the remainder of the day, and the athlete shall not be permitted to return to any athletic activity until he or she is evaluated by a licensed healthcare provider. The athlete shall not be permitted to return to athletic activity until he or she receives written clearance to do so from a licensed health-care provider. If the licensed healthcare provider determines that the athlete sustained a concussion or other head injury, the athlete shall also complete a graduated return-to-play protocol of no less than 7 days in duration under the supervision of a licensed healthcare provider.**