

Sporting head injuries in children

[Family](#), [Children](#)



A sports concussion is a complex process that affects the brain and is induced by a traumatic outside force, such as a rapid acceleration or deceleration, falls, and collisions, more common in high contact sports such as football and hockey (LaBond, Barber, & Golden, 2014 , p. 197). The result is a change in the brain's normal processes of physical, cognitive, emotional, and sleep systems, and may or may not present with a loss of consciousness. The most commonly known symptom is a loss of consciousness, but because it does not present with every case of a mild traumatic brain injury. Other symptoms that should be assessed for are headache, trouble concentrating, unequal pupil size, drowsiness, weakness or decreased coordination, vomiting or nausea, slurred speech, convulsions or seizures, disorientation to people/place/time/event, unusual behavior, or agitation (CDC, 2013, p. 4). Symptoms vary greatly depending on the severity of the concussion as well as the individual, and can last from minutes to days, weeks, or even months. The potential for a concussion is greatest during activities where collisions can occur, such as during physical education class, playground time, or school-based sports activities (CDC, 2013, p. 2).

Every time a child gets a concussion more and more damage is done to their brain. Because this can cause lead to more serious health issues down the line, concussion prevention is extremely important. One of the best ways to prevent a concussion is to make sure protective equipment, such as helmets, is worn at all time, including practice. This includes making sure that the equipment fits properly (Brain Injury Safety and Prevention, 2017). Adding neck-strengthening exercises into training and practice can also prevent

injury. This allows for the neck muscles to be more resilient and allow more protection to the head. Discouraging aggression during sports can also be helpful. This can prevent unnecessary hits that have the potential to be dangerous. Another very important preventative measure that is focused more on the contact sports is the teaching of the proper tackling techniques. This includes keeping their heads up and using their shoulders and chest to take down their opponent (Brain Injury Safety and Prevention, 2017).

Education for athletes, coaches/officials, and parents is essential. Physicians trained in concussion assessment such as emergency department physicians and neurologists could be invited to give a program to parents on the importance of prevention, identification, and proper management of concussions. (LaBond, Barber, & Golden, 2014 , p. 197).

There should also be a concussion action plan in place in case a concussion does occur. This includes removing the athlete from play as soon as a concussion is suspected. School nurses or other health professionals should assess the student immediately after the injury, note their findings, and provide information to emergency medical services (EMS) if an ambulance is summoned, or to parents prior to them transporting the student for definitive care. School nurses can strongly encourage that ALL students, not solely athletes, who have sustained an injury that could cause a concussion be evaluated by a health care provider skilled in assessment and treatment of such injuries (CDC, 2007). Education should be given to the parents and an emphasis should be put on complying to guidelines when the student is recovering at home. This includes advocating for a gradual return to classroom learning if concussion symptoms persist. Structured “ Return to

Learn Protocol After Concussion/Mild TBI” guidelines include restricting all screen items (television, computer and tablet screens, video games, texting, mobile phones) and homework and keeping the student in a darkened, quiet room to aid in the student’s recovery

The school nurse can recommend a “ concussion recovery journal app” found in the “ app store” for Apple cell phones, iPOD touch, and iPad; it is a mobile journal that can track symptoms. Designed by members of the University of Michigan Pediatric Trauma Program and Michigan Neurosport, the app is a journal and reminder for appointments. Information entered in the journal section can be emailed to the health care provider and symptoms can be collected and analyzed. The app also provides the student and family with information on concussion and head trauma (University of Michigan Neurosciences, 2013). Proper recovery and prevention of secondary impact are of utmost importance (CDC, 2013). 6. Lastly, the school nurse can promote the concept that prevention is key. Persuading coaches to train football players to block with their bodies instead of their heads and advocating removal of “ heading the ball” in soccer are recommendations to minimize head injuries. (LaBond, Barber, & Golden, 2014 , p. 198)