



Concussion Awareness in Soccer

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The topic of concussions in athletes can be found in the news and online on a daily basis.

The devastating effects of this injury combined with a lack of understanding of how to assess, address, and prevent concussions have made it a major source of concern for coaches and parents in all sports. The bottom line is that the negative effects of concussions can take athletes away from the sports they love, and more importantly, impact the quality of our athletes' lives in the long-term. Concussion prevention is a misnomer because we can't prevent someone from slamming their head during a car accident, a fall from a skateboard, or a hard tackle in a sport like football. We can empower our athletes, parents, and coaches with the knowledge of how to identify a concussion, what steps to take, and how to decrease the length and severity of the concussion.

Concussion Research:

Generally, we think of impact sports like football, boxing, and hockey when we think of at risk athletes for concussions. The nature of a number of other sports increases their rates of incidence. For instance, **soccer players banging their heads on a contested header**, throwing sports getting hit by the ball in the head, and basketball where elbows connect with the head during rebounding and legs can be taken out on lay-ups and dunks slamming the athlete's head into the hard court. A 2012 study (1) of 20 high school sports reported that concussions accounted for 13.2% of all injuries in the sports studied, two thirds (66.6%) of which occurred during competition and one-third (33.4%) during practice. Nearly a third of patients at two leading sports concussion clinics reported having previously suffered a concussion which went undiagnosed (2). The rate of previously undiagnosed concussions was slightly lower than the nearly 50% reported in a 2004 study (3). This study and others indicate that concussion incidence may be much higher, as many go unreported because of lack of education by the coaches and athletes. For children seen in the ER and discharged, the sports most commonly associated with traumatic brain injury (TBI) were:

- Football (29.1%)
- **Soccer (16.5%)**



- Basketball (15.4%)

The following link from a clinic I recently organized at the Worldgate Sport & Health (sportandhealth.com/herndon) shows some of the key individuals involved in concussion research and education:

<http://www.connectionnewspapers.com/news/2013/sep/18/sport-and-health-hosts-concussion-forum/>

This clinic provided coaches/parents with a free Smart phone app that helps anyone to recognize and respond when a concussion occurs. Every parent and coach should have this amazing application:

http://www4.parinc.com/products/Product.aspx?ProductID=CRR_APP

Reducing the impact:

The most important things we can do to reduce the immediate and long-term effects of concussions is to recognize them when they happen, stop activity (“when in doubt, sit them out”), and get medical professionals involved. Though completely preventing concussions is not possible, research suggests that athletes with stronger neck muscles have decreased incidence of TBI, and that they may have shorter recovery periods as well (4). This tells us that neck stability and strengthening should be part of every athlete’s strength and conditioning program. Here is a link to some videos on equipment and techniques used to strengthen the muscles of the neck and shoulders to support and stabilize the head:

<http://www.smarterteamtraining.com/explosive-performance>

For further questions on this topic and how it relates to the sport of soccer, please contact me directly at kboyle@sportandhealth.com.

References:



- 1) Marar M, McIlvain NM, Fields SK, Comstock RD. Epidemiology of Concussions Among United States High School Athletes in 20 Sports. *Am J Sports Med* 2012;40(4):747-755.
- 2) Meehan WP, Mannix RC, O'Brien MJ, Collins MW. The Prevalence of Undiagnosed Concussions in Athletes. *Clin J Sports Med* 2013;0:1-4 (epub ahead of print)
- 3) McCrea M, Hammeke T, Olsen G, Leo P, Guskiewicz K. Unreported concussion in high school football players - Implications for prevention. *Clin J of Sport Med* 2004;14:13-17.
- 4) Halstead M, Walter K. Clinical Report - Sport-Related Concussion in Children and Adolescents. *Pediatrics* 2010; 126(3): 597-615 at n. 31, 32 (citing studies)