

Concussion

More Than Just Seeing Stars

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For the past few years, concussion has become a major focus for medical professionals, athletic directors and parents alike. This awareness has come about as a result of a dramatic increase in our knowledge regarding concussion acquired over the past five to ten years. As medical knowledge has increased, so too has media coverage. Recent coverage regarding prominent professional athletes devastated by the long-term complications of concussion such as former New York Jets receiver Wayne Chrebet and current Miami Dolphins quarterback Trent Green, has greatly increased general interest in the topic. In fact, you may be visiting the ImPACT™ website (www.impacttest.com) as a result of a special TV program or article in the local paper. Regardless of your interest, there is a lot to be learned about this disorder.

A lot has changed in concussion management. When I was growing up (or even during most of my children's youth, for that matter) concussion was defined loosely as a blow to the head which caused a short loss of consciousness. Now, however, in-depth studies have shown that a concussion can be much more subtle, often resulting without a loss of consciousness. The new definition of concussion is a bit broader, defined as "a trauma induced alteration in mental status with or without a loss of consciousness." Given this definition, many more impacts in an athletic event ought to be considered concussions.

Remember those encouraging phrases your coach or father used to tell you after a hard hit or fall: "That's okay, son – you just got your bell rung. Get your head right and get in the game." Or, "You're just seein' stars, girl. Shake it off, and you'll be fine." Though well-intentioned, we now know that those phrases may be more menacing than encouraging. Often it seems that a "bell rung" after impact is the toll of concussion and not something to "shake off." Further, flashing stars may be the result of a short circuiting visual cortex. These familiar euphemisms actually arise from physical changes in the brain following impact and making light of these changes is dangerous as serious concussion symptoms may be ignored. It is imperative that we change our perspective on this disorder and ask athletes of all ages not to "shake it off" but to "take a knee" before considering return to play. Umps will often ask players to "take a knee" when a player is hurt on the field. Once off the field, a similar time of rest for examination by an athletic trainer should also be taken.

Clearly all bumps to the head are not concussions; football, hockey or soccer players may have numerous collisions during a game without incident. Also, the severity of the hit may not be the sole determinant of concussion. Thus, it seems concussions are rather loosely defined in terms of mechanism of injury (i.e. force

of impact, type of hit or fall, etc), but more closely defined according to outcome (i.e. changes in awareness). The best discloser of concussion is a change in the athlete's mental status including: confusion, dizziness, blurred vision, headache, nausea or imbalance. Memory loss is also commonly seen.

Following an impact, the player should be assessed for the above symptoms and should be considered concussed if complaining of any combination of these symptoms. Athletic trainers who follow these guidelines are specialized in recognizing and managing concussion on the sideline. Inevitably, some cases are difficult to call; in these cases the adage is "if in doubt, set 'em out." Formal recommendations for this adage were recently cited in the new guidelines from the International Symposium on Concussion in Prague (2008) which recommended no player should return to play if concussed and that a concussed athlete must be examined by a medical specialist before they return to play.

Current statistics vary, but concussion is prevalent across the board in all athletics in both women's and men's divisions. The CDC estimates that there are 3.8 million concussions per year in the United States alone. As most concussions go unreported, these statistics may be a gross underestimation. Thus, experts have described concussion as the silent epidemic. The amount of unreported cases is alarming and what's more, dangerous. A concussed athlete does not present with obvious symptoms, such as distortion or swelling that comes with a broken leg or arm. The changes due to concussion are subtle. If one is not observant and does not ask the appropriate questions, subtle changes in the athlete's character, personality or behavior may be overlooked. Missing these changes may mean missing diagnosis of concussion.