

# Concussion: A Growing Concern

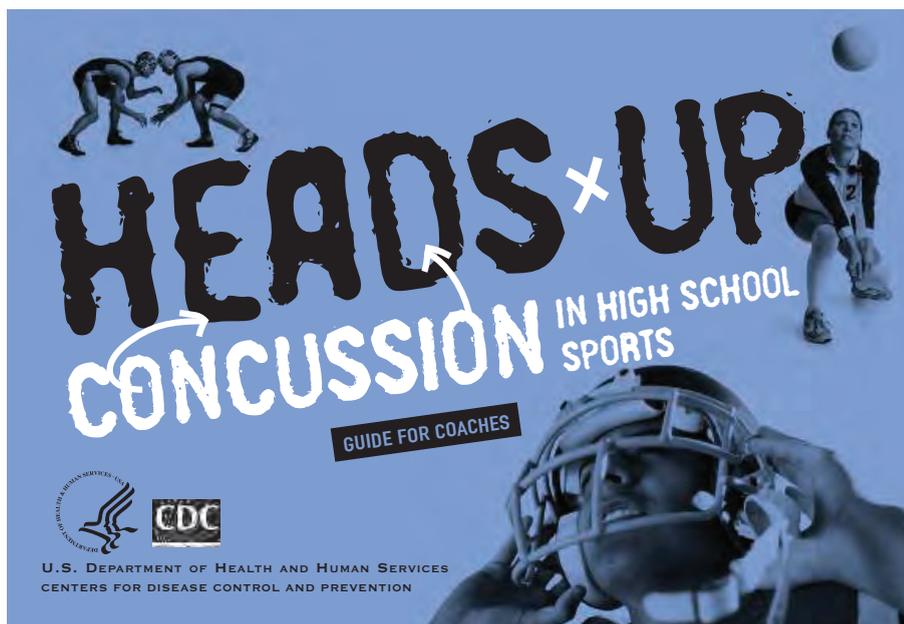
Taking action against this serious brain injury

Approximately 1.2 million young men in the US play football in high school, and nearly three times that many are involved in youth football leagues. Football is here to stay, but that doesn't mean we can ignore the growing health crisis of concussion.

Just how bad is the problem? In high school alone the number of young men each year who suffer a concussion may be around 67,000, according to one recent study. However, an estimated 50 percent of concussions are not reported, so we may be looking at a number exceeding 100,000.

A concussion is a traumatic brain injury (TBI), which results in 52,000 deaths each year and 275,000 hospitalizations in the US alone. What is especially disturbing is that the numbers are getting worse: From 2002 to 2006 the number of TBI-related emergency room visits increased 144 percent and the number of hospitalizations increased 19.5 percent.

The Centers for Disease Control has developed many useful tools in helping spread the word about concussions – booklets, flyers, posters and other free, downloadable products can be acquired through their website, *cdc.gov*. A fact sheet published by the CDC includes information that a concussion may have occurred to an athlete if a



The Center for Disease Control offers many educational products about concussions for coaches, athletes and parents. (Source of image and signs of concussion below: [http://www.cdc.gov/concussion/pdf/Coach\\_Guide-a.pdf](http://www.cdc.gov/concussion/pdf/Coach_Guide-a.pdf))

coach observes the following signs:

- Appears dazed or stunned
- Is confused about assignment or position
- Forgets an instruction
- Is unsure of game, score or opponent
- Moves clumsily
- Answers questions slowly
- Loses consciousness (*even briefly*)
- Shows mood behavior or personality changes
- Can't recall events *prior* to hit or fall
- Can't recall events *after* hit or fall

From an athlete's perspective, these are the symptoms often reported by the athlete:

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light
- Sensitivity to noise
- Feeling sluggish, hazy, foggy or groggy
- Concentration or memory problems
- Confusion
- Just not "feeling right" or "feeling down"

## The Danger Zone: Second Impact Syndrome

One reason for the concern is the danger of athletes not only not getting treatment but also returning to play too soon. Notes the CDC, “A repeat concussion that occurs before the brain recovers from the first – usually within a short period

Using guidelines established by the American Academy of Neurology, researchers concluded that 41 percent of those athletes returned to sports too quickly. In fact, one study found that 16 percent of high school football players who lost consciousness from a concussion returned to practice the same day!

motion. With a simple, 30-second march-in-place test, OptoJump can measure the contact time of each foot, the flight time of each foot, and the athlete’s ability to hold his or her center of mass constant. An athlete’s biomechanical baseline, or “gait print,” can then be tracked over time. A concussion can alter the athlete’s

*Because of the serious potential consequences of returning to the game too soon after a concussion, many health care professionals are looking at better ways to evaluate the condition of these athletes.*

of time (hours, days or weeks) – can slow recovery or increase the likelihood of having long-term problems.” Medically, a repeat concussion is known as *second impact syndrome*, and among the potential consequences are permanent brain damage and death. Just how big a problem is second impact syndrome?

A study was performed of 1,038 high school athletes who suffered a concussion between 2005 and 2008.

Because of the serious potential consequences of returning to the game too soon after a concussion, many health care professionals are looking at better ways to evaluate the condition of these athletes. There is one promising solution that has the advantages of being accurate and very easy to administer.

OptoJump™ is a device that quickly and easily assesses body mechanics while the athlete is in

gait print, and as such a history of OptoJump readings will provide objective data about the athlete’s preparedness to return to play.

Because of the seriousness of concussion, Bigger Faster Stronger, Inc., has teamed with OptoJump. We are committed not only to helping young athletes fulfill their physical potential but also to ensuring that athletes who suffer concussions receive immediate and appropriate care. 



A concussion can alter the athlete’s gait print, and as such a history of OptoJump readings will provide objective data about the athlete’s readiness to return to play.

