

# Concussions in Sports

A concussion is an injury that is trauma to the brain after receiving a heavy blow, shaking, or spinning. This usually results in temporary impairment of the brain's thinking ability, vision, or even keeping an equilibrium, and consciousness. When a person gets pushed down and hits a hard surface with their head, the skull stops on the hard surface, but the brain, which is suspended in a liquid, has the ability to shake, even after the skull has been stopped. Concussions are on the rise in sports and even though they are becoming a common occurrence, they are very serious conditions that need to be prevented before stepping onto the court. (1)

There are many telltale symptoms of concussions. According to the American Medical Association, some of the objective symptoms (what the person treating the injury will see) are: the player will seem dazed, the player will have a vacant looking face with no expression, the player is forgetful of things such as plays, and the player loses consciousness. Some of the subjective symptoms (what the person who has the concussion feels) are: a headache, double vision or blurry vision, concentration problems, and being dizzy. You do not have to lose consciousness to have had a concussion. In fact, many concussions happen without the person losing consciousness. (1)

There are three grades of brain concussions. The first grade is a mild concussion. A mild concussion happens when the person looks as though he or she is dazed and the person does not lose consciousness. A second grade concussion is slightly more severe. The person does not lose consciousness from it, but they become confused for a period of time and they do not have the memory of the event. A grade three concussion is the most

severe of all the concussion grades. A grade three concussion occurs when the person loses consciousness for a short time and they do not remember any of the event. When a grade three concussion occurs, the person needs to see a physician immediately because if they don't, they can end up causing even more trauma to the brain. (2)

Recovery for a concussion is usually a process that takes a few hours to days. Sometimes though, when the concussion is severe, the person can take up to several weeks to recover completely. When someone treats a concussion, it is important to watch them closely, and to check if they are phasing in and out of consciousness. Sometimes a person may have to stay in the hospital for a while under close observation. Many physicians say to have players, if they get hit in the head directly or indirectly, to sit down and see if symptoms start showing. (2) The doctor will perform a neurological examination to check and see if anything is severely wrong in the brain due to the concussion. The doctor will also check the person's pupil size.(3)

If a person goes back to playing sports too quickly, they can receive a concussion again a lot easier, and if they receive a second concussion, it is called Second Impact Syndrome. Second Impact Syndrome is when you receive a second concussion before the first has recovered. It causes massive brain swelling which results in the loss of blood to the brain, which causes irreversible brain damage and possibly even death.(1)

There are many statistics related to concussions in sports. There are approximately 300,000 concussions related to high school sports each year in the United States alone. When you receive a concussion, you are four times as likely to receive another concussion.

Concussions are on the rise in teens. One in ten high school students who play a

sport will have a concussion. Concussions are the second leading cause of brain trauma in teens aging 15 to 24; only behind motor vehicle accidents. During a 2007 study by *The Journal of Athletic Training*, it was stated that 8.9% of injuries of high school students are related to concussions. This is up from ten years before the study when it only accounted for 5.5%. Football accounts for the most concussions among teenagers of any sport at 47 in 100,000 players in games and practices, followed by girls soccer at 36 in 100,000. (4)

The American Academy of Neurology is an organization that puts out guidelines for many different neurological issues, including concussions. They released a set of guidelines for concussions for people and physicians to follow by. One important guideline is that any athlete who is suspected to have had a concussion should be taken out of play immediately and to be evaluated. Also, there should be education efforts to improve the understanding and the warning signs for someone who may a concussion. (5)

There are many long term effects of concussions including Post-Concussion Syndrome. Post-Concussion Syndrome is a disease that some experts believe is caused by structural damage in the brain and damage to the neurotransmitters in the brain. Post-Concussion Syndrome shows up from seven days to up to three months after receiving a concussion. Symptoms include fatigue, irritability, and loss of concentration. (7) Other long term side effects of a concussion include insomnia and memory loss. Receiving a concussion can cause symptoms that reappear for the rest of your life.(6)

Concussions are becoming more and more common in sports. I feel that more and more athletes are receiving concussions due to the fact that over time, sports have become more and more intense. A soccer game 50 years ago was not as fast paced as

games today. This has become a “hot topic” over the past few months in professional sports. The National Hockey League Created a rule to stop blindside hits to the head. This newly implemented rule will reduce concussions in Hockey greatly. In Hockey, 69 percent of concussions are reportedly caused by hits to the head.(8)

Through playing soccer, I have seen many concussions and I know how bad they can be. Through this, I will use better judgment and I will use the proper equipment while playing. Concussions are a very serious injury that is on the rise and if people don't start finding ways to prevent concussions in sports, it will be a devastating future for sports.

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