

Sports Concussion Clinic
J. Greg Zoltani, M.D.
Pacific Northwest Neurology
(253) 581-8151



What Athletes Need to Know About Concussion Get your Baseline Test before the season!

Concussion is the most common form of head injury for athletes and is associated with any number of symptoms, such as disorientation, confusion, amnesia, visual disturbance, headache, dizziness, and sometimes loss of consciousness (LOC), as well as other symptoms. It is not necessary to lose consciousness to sustain a concussion, nor to actually hit one's head. A very mild concussion can last less than 15 minutes. It is important for athletes to report concussions because the cumulative effects of repeated concussion can result in permanent intellectual and cognitive changes. We also know that youth appear to be more vulnerable to the effects of concussion.

It is now known that REST is the best treatment after a concussion and helps the brain heal faster. If the athlete is still symptomatic, forcing him or her to exert either physically or mentally will likely lengthen the recovery period. And no athlete should return to play if concussion symptoms re-surface with exertion. Management of concussion in youth is very important to prevent a rare but often fatal brain injury called **Second Impact Syndrome**. This Syndrome may occur when an athlete suffers a mild concussion and then within a short period of time (usually within one week) receives a second blow to the head. Rapid brain swelling can occur as the brain has not yet healed from the first hit. Increased intracranial pressure, if uncontrolled, can lead to death or severe neurological damage.

When concussion symptoms persist, especially after repeated or successive concussions, a condition called **Post Concussion Syndrome (PCS)** is identified. PCS occurs when any of a variety of symptoms, such as headache, attention/concentration difficulties, problems with memory, slow mental processing, fatigue, and emotionality or irritability is experienced for weeks or months after recovery would have been expected. In such cases, individuals with PCS are usually referred to a neuropsychologist for a comprehensive evaluation to assess for any cognitive deficits and significant emotional difficulties. Recommendations may be made to address the symptoms, such as cognitive rehabilitation to improve memory and compensatory strategies, or biofeedback to treat persistent headaches. Additional medical, neurological, or psychiatric consultations may also be made if warranted.

We know that cognitive/neuropsychological testing is more sensitive in identifying concussion than neurological, radiological, or medical examination. ImPACT, a premier, user-friendly computer based tool was designed to assist in the proper diagnosis and treatment of concussion. The ImPACT program evaluates and documents multiple aspects of neurocognitive functioning including memory, brain processing speed, reaction time, and post-concussive symptoms. This program allows for preseason baseline test results, obtained when the athlete is healthy, to be compared to post-concussion test results, to assist in return to play and treatment decisions.

CALL 253 – 581-8151