Concussions

Concussions have been recognized as a clinical condition for more than 1,000 years, and during the 20th century concussion was studied extensively in boxers. However, interest in concussion didn't peak in the general population until 2002 when it was determined that repetitive concussion could lead to chronic brain damage, and potentially to progressive neurologic disorders, including punch drunk syndrome, traumatic encephalopathy, chronic traumatic encephalopathy (CTE), dementia pugilistic, and chronic progressive traumatic encephalopathy, based on the postmortem findings of retired National Football League (NFL) players. Since these finding were revealed, concussion has gained even more interest, becoming a topic of conversation in schools, homes, and on television, and has become a major concern for sports programs at all levels.


The Centers for Disease Control and Prevention (CDC) estimate that 1.7 million people in the United States are seen in hospital with a traumatic brain injury each year, with 1.365 million being treated and released with mild to moderate cases.

In the adult population, the leading causes of head injury include falls and motor vehicle accidents, while in the 15 to 24 year old age group the leading causes include motor vehicle accidents and team sports.

In fact, estimates have suggested that 1.6 to 3.8 million sport-related mild traumatic brain injuries occur in athletes each year, however, the exact number remains unknown.

While the National Collegiate Athletic Association has implemented a mandatory concussion education program for all student athletes in the United States, 43% of athletes that had suffered a concussion had deliberately hidden their symptoms based on an anonymous survey. It is therefore essential that concussion be efficiently and accurately diagnosed, especially in athletes, and that players receive effective treatment and learn strategies to prevent recurrent concussion injuries.

Symptoms of concussion usually appear within the first 24 hours and may last for days to weeks, and in some cases even longer. The most common symptoms of concussion include headache, memory loss, and confusion. However, there are a variety of other symptoms that an individual may experience including dizziness, nausea and vomiting, ringing in the ears, fatigue, slurred speech, delayed response times, and a dazed appearance. Delayed symptoms may include concentration difficulties, irritability or other personality changes, taste and sleep disorders, sleep issues, and sensitivity to noise and light. In children, especially infants and toddlers, the signs and symptoms of concussion may present differently, and include a dazed appearance, tiring easily, crankiness, decreased balanced, excessive crying, changes in sleep pattern, and a lack of interest in activities/toys.

Diagnosis of concussion is based on a medical history and physical examination including neurological and cognitive testing. Additionally, observation and imaging studies such as a CT or MRI may be utilized to evaluate the extent of the injury in more severe cases.

Guidelines for concussion recommend a 24 to 48 hour period of cognitive and physical rest, followed by a gradual and progressive return to activity. A 2018 study found that early aerobic activity after concussion was found to be safe and protective for improving recovery time after concussion. Physiotherapists are

qualified to diagnosis, treat, and educate individuals with concussive symptoms to safely return to normal functioning following a concussion injury. Initially treatment may focus on reducing neck pain and headache, restoring symptom-free range of motion, and restoring cardiovascular conditioning tolerance. Rehabilitation will also need to include balance, proprioception, visual and auditory retraining, dynamic neuromuscular neck strengthening, and sport-specific training before returning to full sports participation. If you have suffered a concussion you may benefit from physiotherapy, which will involve an individualized treatment plan that is tailored specifically to your symptoms. You will work with your physiotherapist to set goals and track your progress as you work through your treatment plan.

Undergoing a comprehensive evaluation by a physiotherapist at Advantage Physiotherapy is one of the best ways to properly rehabilitate a concussion. After the assessment, our physiotherapists will create a program that is specific to your needs, and set you on the right path toward optimal functioning.

You can find more extensive information on concussions here.

References

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