## Concussions, Education is Key



By Amanda Nguyen, PT, DPT

Concussion can be a very alarming diagnosis for anyone to hear. There has been a lot of media coverage about concussions and the long-term effects of head injury. Within the past few years, Chronic Traumatic Encephalopathy, or CTE, which is a progressive degenerative disease of the brain, has been found in deceased athletes and others with a history of repetitive brain trauma.

CTE can present with many symptoms including memory loss, confusion, impaired judgement, impulse control, aggressive behavior, depression, Parkinson's disease, and dementia. This information heightened awareness among parents, educators, athletes, and coaches and leads to better choices about identifying concussion and returning to play, but to some degree it also fosters a fear of the unknown long-term effects of concussion.

Concussions are caused by a blow to the head or a whiplash injury that affects the head and neck. It is a brain injury that interferes with regular brain functioning. Currently, concussion cannot be seen on imaging, although it can affect the other body systems. This includes altered regulation of cerebral blood flow, impairments in balance, diminished coordination of eye movements, and changes to mood control and higher-level processing.

Concussion injuries can occur with many sports such as football, ice hockey, soccer, rugby, gymnastics, and cheerleading. Concussions also occur at home, school, or work or just by accident. Doctors and parents are much more aware that we need to hold our kids from school and play if they have concussion symptoms and that cognitive and physical rest is an important part of proper recovery. For those who don't recover in a couple weeks of rest, rehabilitation of concussion with Vestibular Therapy is a vital tool for recovery.

At WWS Physical Therapy, we are experts in vestibular and concussion rehabilitation. Rehabilitation includes exercises with visual tracking, head and eye movements to stimulate recovery of hand-eye coordination, and highlevel balance which is necessary in most sports. It is also important to evaluate cardiovascular endurance and exertion, especially in athletes looking to return to play. Vestibular rehabilitation should occur within 2 to 3 weeks of the initial injury to address symptoms and allow the recovery to start. It would be misleading to give patients the impression that they will have no symptoms during their recovery. The key is to keep their symptoms from exceeding a certain threshold, which we educate them about during the course of their recovery. Our goal is to give patients the tools to manage their symptoms and to learn how to pace themselves as they

increase their participation in activities of daily living including work, school, exercise, and social activities.

For students, summer can be an especially tricky time to recover from concussion. It comes as a relief to many patients and their parents because it provides a reprieve from waking up early, stressful assignments, and tests. Often times they can experience minimal to no symptoms during the summer. However, once September comes around and the students are back to school, it can be a rude awakening.

Students may begin to experience their symptoms again because they are back in a school environment. Kids who are not reading or doing work during the summer may have difficulty when they return to school and their workload significantly increases. Waking up to get ready for school may also be an issue since they are waking up earlier than they were over the summer and getting less rest.

We suggest reading and doing schoolwork during the summer as a way to exercise the brain and stimulate the oculomotor system. We encourage our patients to continue with some form of cognitive stimulation that is appropriate for their age and skill level through the summer months, so return to school is not a complete shock to their brain. Even keeping a regular sleep schedule can help when they have to start to get up early in the morning.

Due to increased awareness of concussions, employers, schools, and teachers are more accommodating to those experiencing persistent symptoms. They are allowing return to work or school part time and breaks as needed to settle symptoms. Teachers should

provide notes for students so they can just focus and listen in class rather than be stressed about taking all the information down or continuously moving their head up and down to look at the board and what they are writing. They should also get extra time for exams or be provided a quieter room to help them focus.

Concussions can greatly interfere with normal daily activities and can cause significant limitations. When an individual suffers a concussion with prolonged symptoms, it is important that they receive the right strategies and information to help them heal and to cope with the day-to-day symptoms. If you are someone who feels like you have hit a plateau in your recovery or are concerned about your prognosis, please consider visiting the therapists at WWS Physical Therapy for an evaluation to get you back to your normal life.

## Have you ever had your "bell rung," been "dinged," or "knocked for a loop?"

Having Headaches?

Dizziness?

Trouble with academic performance?

Difficulty concentrating in school or at work?

Difficulty remembering?





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