

Navigating Concussion Recovery



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personal factors present prior to the injury. The literature has shown that certain variables can predict a prolonged recovery after concussion; these include a history of migraine, being female, being older than 13 years old, having sensitivity to noise, and diagnosis of a prior concussion with recovery longer than one week.

Concussion can cause altered brain function, something that currently cannot be seen on imaging. It has repercussions on many body systems including dysregulation of cerebral blood flow, impairments in balance, diminished coordination of eye movements, altered mood control, and impairments in memory and higher-level processing.

At our clinic, we listen to patients' histories and reports of symptoms and then assess their physical status to determine which systems may be contributing to their set of complaints. For example, headaches can be occurring because of exercise intolerance, but they can also occur because of impairment in the vestibular system or tightness in the cervical spine. All three variables could be contributing to headaches, and, if only one variable has been addressed, patients may feel like they are stuck in their recovery.

Many years ago, rest was the primary recommendation after concussion. However, now evidence has shown us that too much rest can prolong recovery. After the first 24-48 hours, it is important for patients to begin increasing their activity levels to what is tolerable. The goal is to begin a daily exercise program with minimal symptom provocation, gradually increasing the time and intensity as they move through the recovery process.

It is important we encourage patients to begin physical

exercise because it helps with improving cerebral blood flow, improves autonomic nervous system regulation, and helps with neuroplasticity—all of which are important in the healing process. It also provides the added benefit of improving mood and the quality of sleep, both of which can be altered from injury.

As a part of the evaluation, we perform a treadmill test known by many as the modified Balke or Buffalo concussion treadmill test. During this test, we monitor vital signs and symptoms and gradually increase the intensity until patients reach their symptom threshold or their point of maximal exertion. We use this information to help determine what their exercise heart rate goal should be for their rehab training and how we can help them progress without exacerbating their symptoms to a debilitating point.

It is misleading to give patients the impression that

they will have no symptoms with their recovery. The key is to keep their symptoms from exceeding a certain threshold about which we educate them during the course of their recovery. The 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.

Summer can be an especially tricky time for a student recovering from concussion. To many patients and their parents, it comes as a relief because it provides a reprieve from waking up early, stressful assignments, and tests. However, from a cognitive perspective, schoolwork is a great way to rehabilitate the brain and stimulate the oculomotor system. It also keeps kids on a fairly regular sleep schedule as compared to the sleeping in and staying up late that often occur with summer. When the lazy days of summer come to an end,

it can be a shock to students in recovery to resume the demands of school.

At our clinic, we try to educate our patients on this fact and encourage them to continue with some form of cognitive stimulation that is appropriate for their age and skill set—to engage them beyond the basic TV and video games that so often fill the summer months. We also stress the importance of sticking with a regular sleep schedule as much as possible.

Ultimately, what is important in the recovery process is educating our patients. Teaching them the tools they need to help them heal and cope with the day-to-day symptom stressors in their life. If you are someone who feels like you have hit a plateau in your recovery process, or who has recently sustained a concussion and are concerned about your recovery, please consider visiting us at WWS Physical Therapy for an evaluation to get you on the path to healing.

Concussion can be a very scary diagnosis for anyone to hear, especially a parent. In recent years, there has been a lot of media coverage about concussion and the long-term effects of head injury. This information has created heightened awareness among parents, educators, athletes, and coaches. This has been great in helping make better choices about return to play and identifying concussion, but to some degree it has helped foster a fear of the unknown long-term effects.

Many patients come to us asking "How long it will take to get better? Will I develop what the NFL guys have (chronic traumatic encephalopathy)? Should I have an MRI?" Unfortunately for patients, these questions can be difficult to answer because it really does vary based on a number of factors including the type of injury, predisposing factors before the injury, and the current management of the symptoms.

The first thing we should consider is that many concussions spontaneously recover within the first few days to weeks after the injury. Only, a small percentage result in prolonged symptoms, and it is those patients who often end up at our door for rehab.

We then need to look at factors identified during the initial exam. Factors include patient presentation and

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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