WHAT YOU NEED TO KNOW ABOUT POST-CONCUSSION SYNDROME

Learn More About This Common Condition

If you previously had a concussion and are experiencing lingering systems such as headaches, vision disturbances, irritability, or balance problems, you should be evaluated for post-concussion syndrome (PCS).

We've prepared this fact sheet to help you better understand PCS – its symptoms, factors that may make symptoms worse, and our approach to treatment.

What PCS Looks Like

Sometimes, people who have PCS don't realize it until a friend, relative, or teammate makes a comment about a change in behavior or function. Other times, people just don't feel like themselves, can't focus, lose motivation, and feel "off," with a multitude of symptoms. If

DID YOU KNOW?



PCS doesn't cause any observable changes in the brain, which is why a CT scan or MRI can't detect it.

you're experiencing these symptoms, or if people in your life have said you seem not like yourself, easily agitated, or forgetful, PCS may be to blame.

The changes that occur in the brain with PCS are along neural pathways, so a thorough neurological exam is the only way to evaluate someone for PCS.



Many of the symptoms that patients report after a concussion relate directly to the area of the brain that was injured. These are the five distinct networks in the brain that generally are affected by brain injury, along with common symptoms:

- **1. Prefrontal Cortex** Poor motivation, fatigue, inability to "multitask," lack of mental clarity (brain fog), moodiness, hypersexuality, poor executive function, and inability to concentrate
- **2. Temporal Lobe** Stress, anger, paranoia, hearing impairment, seizures, memory lapses, and hallucinations
- **3. Brain Stem** Sensitivity to light and sound, sleep disturbances, startling easily, pain, dizziness, headaches or migraines, anxiety, uncontrollable movements, digestive symptoms, and difficulty looking at computer screens
- **4. Vestibular System** Dizziness, vertigo, balance problems, motion sickness, sudden surges of anxiety, feeling "off" or not yourself, and symptoms that worsen when driving
- **5. Cerebellum** Balance problems, poor coordination, tremor, slurred speech, blurred vision, headaches, and neck and back pain

Fast Facts

These are some facts that people may not know about PCS:

- Most concussions "heal" on their own. If symptoms persist weeks or months after a concussion, you may have PCS. Underlying neurologic functional changes can affect eye movement, balance systems, or the balance between your "fight-or-flight" nervous system.
- Symptoms may be worse under certain conditions (in a noisey environment, or when you're hungry, for example).
- PCS can make it difficult to read for more than 15 minutes at a time.
- Pushing the limits of what you can do can cause a flare-up of symptoms.
- It may cause relationship difficulties (due to anxiety, mood changes, and irritability).



Effective Treatments

Many patients we see at NeuroHealth have tried different treatments for their symptoms but haven't gotten the results they want. Often, a family doctor just doesn't have the equipment to accurately diagnose PCS, and some healthcare providers refer their PCS patients to us for a thorough exam and treatment plan.

Our proprietary concussion and post-concussion treatment program – **NeuroReset** – is an intensive five-day course of progressive diagnostic exams and therapies, including:

- Objective computerized assessment of the most common concussion biomarkers, including oculomotor movements, balance, reaction time, and pupillary light reflex (PLR)
- Making note of vital signs height/weight; heart rate variability while lying, sitting, and standing
- A comprehensive review of previous injuries, medical records, medications, labs, and imaging scans
- Getting a detailed chronological history of current symptom
- A review of systems (endocrine, vestibular, etc.), and a dietary review
- A complete review of all neurological and metabolic findings that will define a detailed treatment plan

Ready to Feel Like Yourself Again?

We understand the frustration that comes with PCS, and we want to help you feel well again. NeuroReset's fast-track rehab program for concussion and post-concussion patients can get you closer to resuming your life as usual, whether you're ready to return to team sports, get back to work, or just enjoy the experience of reading a book. Many of our patients feel significantly better in just one week!

RETRAIN YOUR BRAIN Contact NeuroHealth Today! (317) 848-6000

