



# TREATMENT AND PROGNOSIS FOR POST-CONCUSSION SYNDROME



People who have experienced a concussion, also called a mild traumatic brain injury (mTBI), may later develop post-concussion syndrome (PCS). While symptoms associated with the initial concussion tend to go away on their own after a few weeks, symptoms of PCS develop several weeks or months after the injury and may last for weeks, months, or even years.

Treatment of PCS typically focuses on relieving the individual symptoms, as the underlying cause of PCS isn't known and therefore can't be addressed as a condition, like giving an antibiotic for pneumonia, for example. However, both medication and non-medication therapies are used to treat individual PCS symptoms.

## COMMON TREATMENTS FOR PCS

### Medications

Over-the-counter and prescription medications can address many of the common symptoms of PCS, including headaches, dizziness, insomnia, depression, and other mood disorders.

### **Cognitive Behavioral Therapy (CBT)**

CBT has been found to be useful in treating many physical and psychological PCS symptoms, like headache, dizziness, insomnia, and other sleep disorders.

### **Psychotherapy**

Psychotherapy can be effective for treating depression and anxiety that can accompany PCS.

### **Physical and rehabilitation therapy**

Physical therapy and physical therapeutic treatments like heat and ice can address the underlying cause of certain types of headaches, backaches, and neck pain common in PCS.

One type of rehabilitation therapy called the canalith repositioning procedure (also called the “Epley maneuver”), specifically addresses dizziness or vertigo (a spinning sensation) caused by dislodged gravity-sensing crystals in the ear. The crystals can end up in the wrong place from a blow to the head. Vestibular rehabilitation therapy addresses vertigo and dizziness caused by other injury to the systems for equilibrium and balance that can occur after a concussion.

### **Neurocognitive rehabilitation therapy**

Some cognitive impairments like reduced concentration, memory, and attention cease to be a problem when other symptoms are addressed. If they do continue, neurocognitive rehabilitation therapy can help.

### **Chiropractic care, acupuncture, massage therapy, craniosacral therapy**

These alternative, or complementary, therapies can be effective at treating headaches, as well as neck and back pain that are common in PCS.

### **Prognosis of PCS**



The prognosis for PCS is good. It's believed that around 50% of people with a history of mTBI or concussion are still experiencing symptoms three months after their injury, and at a year that number has dropped to 10–15%, meaning that the majority of the symptoms go away within a year of the injury. (It should be noted that these numbers are debated and no number has the full consensus of experts.)

### Factors Related to Longer Recovery Times

Several studies have looked at what factors contribute to long recovery times and the incidence of post-concussion syndrome (PCS). Here are the factors that are most closely correlated with long-term mTBI-related symptoms:

**Age.** Children under eighteen and seniors over sixty have more symptoms and longer recovery times compared to non-senior adults. In children, learning disabilities and ADHD are also linked to longer recovery times.

**Psychological factors.** Pre-existing depression and post-injury depression, post-injury stressors, and negative expectations for recovery are correlated with higher rates of PCS symptoms and longer recovery times.

**Previous brain injury, including concussion.** Recovery is lengthened with each successive brain injury, and shorter times in between an injury to the brain are correlated with longer recovery times.

**Extent of physical injuries.** Recovery is reported to be shorter and rates of PCS symptoms are lower in people who had more physical injuries. The reasons for this are not known.

### Living with Symptoms Long After Injury

Helping people with brain injuries rehabilitate is the specialty of Dr. Mel Glenn, a physical medicine and rehabilitation (PM&R) physician in Boston and the subject of this month's interview. As a physiatrist focusing on brain injuries, he knows a lot about PCS. Be sure to watch our entire interview, as we cover many topics related to recovery from mTBI. You can watch that [right here](#).

