



Associated Neurologists of Southern Connecticut

Health & Wellness Newsletter

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What is a Concussion?

By Peter McAllister, MD

Director, Concussion Center



A concussion is a blow or jolt to the head that can change the way your brain normally works. Over 4 million concussions occur yearly. Also called a mild traumatic brain injury (or mTBI), a concussion can result from a sports injury, motor vehicle accident, or from a seemingly innocuous bump or fall. You do not need to lose consciousness to “qualify” for a concussion. In fact, the injury causing a concussion can be so minor that neither doctor nor patient makes the connection.

Concussion recovery times can vary greatly. Most people who sustain a concussion or mild TBI are back to normal in three weeks to a few months. But others have long-term, persistent problems (such as headache, memory and concentration difficulties), referred to as post-concussive syndrome. [Continued on Page two](#)

The Concussion Center at ANSC

- ◆ Evaluation by a Board-Certified Neurologist
- ◆ Cognitive Testing & Evaluation by a Neuropsychologist
- ◆ Ongoing Monitoring for Academic Accommodations, return to School and Sports
- ◆ Rapid Assessment—appointments are scheduled within two business days from contact

Helping You Live as Fully as Possible



What is a Concussion?

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Signs and symptoms

Signs and symptoms of a mild brain injury, or concussion, can show up right after the injury, or they may not appear until days or occasionally weeks afterward. Concussion symptoms can include headaches, weakness, irritability, decreased coordination or balance, confusion, change in sleep pattern, nausea, slurred speech and vomiting. Sometimes people complain of “just not feeling like themselves.”

Diagnosis and treatment

Getting diagnosed as early as possible and then seeking proper treatment is essential for prompt and complete recovery. Diagnosis is made by obtaining a detailed history of the injury, followed by a general and neurological exam. Most often brain imaging studies, such as CT or MRI scans, are not necessary. A neuropsychological battery of tests (such as CNS Vital Signs or ImPACT) may be used to get a sense of how the concussed brain is processing, and can be followed serially if necessary.

The hallmark of treatment is rest, and lots of it. Studies have shown that the brain of a concussion patient “cannot handle” typical amounts of sensory stimuli, such as lights, sounds, and physical activity. Current guidelines (and Connecticut state law, as of 2010) require abstinence from sports or other strenuous activities until the concussion symptoms have fully resolved.

Further recommendations include minimal or no television, computer use, texting, loud music. Even reading should be minimized if it triggers symptoms. However, there is little evidence to support “cocoon therapy” in which patients remain by themselves in a dark, quiet room for days or weeks at a time; in fact, this may be detrimental by isolating them from friends and family and causing them to assume a “sick role”. Headache can be treated with over-the-counter analgesics such as ibuprofen and acetaminophen. Hydration is encouraged (water mostly, refraining from caffeinated or alcoholic beverages), and insomnia can be helped with melatonin, which is available in most pharmacies and vitamin stores. Physical therapy, acupuncture, psychotherapy, cognitive therapy, massage and other complimentary modalities may be employed in refractory cases. Prescription medicines, such as narcotic pain relievers and muscle relaxants, are rarely indicated.

Most people who sustain a concussion will recover in a matter of weeks or months. Early diagnosis and proper treatment increase the odds of a full recovery. The bottom line: it’s important to take any head injury, even minor ones that seem like just a bump on the head, seriously.

For more information, visit our website

<http://www.anscneuro.com/concussionctr.shtml>

The Concussion Center at ANSC

By [Amy Palmer, Psy.D.](#), Neuropsychology Supervisor

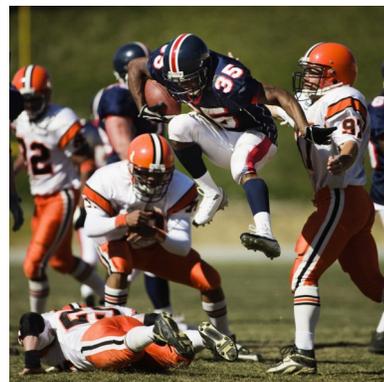


If your child has had a concussion, many thoughts have probably raced through your head. Is he going to be OK? When can she go back to school? Should I give him something for his headache? Is it wise for her to play in the big game this weekend? If you are a college student, you are probably wondering if you should take that physics exam, or if you should be sitting out of practice. There are so many questions, but oftentimes it is unclear who has the answers.

The Concussion Center at ANSC has developed a comprehensive evaluation and treatment program designed to give patients and their families the best care (and peace of mind) for students who have sustained a concussion. Within two business days of calling our office, patients are scheduled to see a nurse, neuropsychologist, and neurologist all in the same office visit. Upon arrival, the nurse takes a history then takes the patient to a private room where a computer test of cognitive functioning will be administered. This test lasts approximately 25 minutes, after which a neuropsychologist will analyze the results. The neuropsychologist then sits down with the patient (and family if the patient is a minor) and reviews the test results, as well as the symptoms of the concussion. Based on this information, a decision is made if any academic accommodations are needed. After the visit with the neuropsychologist, the patient is evaluated by a board certified neurologist. The neurologist takes a comprehensive history, performs a neurologic exam and discusses treatment of post-concussive symptoms. In addition, the neurologist advises the patient about physical exercise and return to sports.

After the initial visit, one of two outcomes occurs. If the patient does not have any symptoms from the concussion and is cleared by the neurologist and neuropsychologist, the patient is discharged from the Concussion Center and is cleared for a normal academic and physical education schedule. However, if the patient is having post-concussive symptoms, he or she will continue to have weekly or biweekly visits at the Concussion Center with the treatment plan being adjusted as needed.

The Concussion Center at ANSC is committed to providing excellent education, evaluation and treatment of all of our patients. To schedule an appointment, contact Joan, 203-333-1133.



Post –concussion Syndrome

[Dario M. Zagar, MD](#)



Post-concussion syndrome (PCS) is characterized by a constellation of symptoms that may occur in some patients after a mild head injury, including headache, dizziness, fatigue, slowness of thinking, difficulty concentrating, insomnia, and mood disturbance. In the vast majority of patients, these symptoms will improve completely or to a great extent within several weeks. However, in up to 20% of patients, symptoms may last months or even years.

Why do some people continue to have symptoms, while most people improve quickly? This has been a controversial topic of study. Evidence suggests that chronic symptoms are not solely related to brain injury. For starters, the degree of symptoms does not correlate with the severity of the head injury; in fact, data suggest that people with mild head injury are actually more likely to have persistent symptoms! The symptoms of PCS are surprisingly common in the general population even without history of head injury, especially in patients with mood disorders, and risk factors for developing chronic PCS after head injury include preexisting depression or anxiety and “all or nothing” thinking. At least in part because of these data, one school of thought has held that persistent symptoms are primarily psychological in nature.

As usual, it is likely that things are far more complicated, with a combination of physical and psychological factors in play. A recent study utilizing newer imaging techniques suggests that evidence of mild brain injury not detected by usual studies such as MRI or CT may be more common in people with chronic PCS. For many people with head injuries, for example involving motor vehicle accidents or assaults, the event involves both physical and emotional trauma. Physical symptoms after an injury, especially when they cause missing days of work or school, can be stressful in and of themselves. Another contributing factor may be post-traumatic stress disorder (PTSD), and early psychological intervention is likely to be helpful to restore people back to good health and function. Being involved in a lawsuit may be another risk factor, although people do not tend to improve after a settlement is reached.

So, how can we prevent symptoms from becoming chronic? The first step is educating patients early on that these symptoms are common after mild head injury, and that the prognosis is generally quite favorable. Understanding that physical symptoms do not typically indicate more significant brain injury is important. Dwelling on symptoms, which may be anxiety provoking when they are not understood, tends to make symptoms worse, and may slow recovery.

If symptoms haven't improved after a month or so, we may consider medication treatment and often use therapies that are effective for other types of headache, such as migraine. The most common include tricyclic antidepressants, such as amitriptyline or nortriptyline, and antiseizure medications, such as topiramate. Complementary approaches, including herbal supplements and acupuncture, and behavioral approaches, as mentioned previously, may also be helpful. Gradually increasing physical and cognitive activity, and getting back to usual routine of work or school as much as possible, as guided by your neurologist, is also important.

Healing from Concussions: How Counseling can help

By [Deb Del Vecchio-Scully, MS, LPC, NCC](#)



If you have a concussion, you may temporarily experience some symptoms which are categorized into 4 areas: cognitive, physical, emotional and sleep. Cognitive symptoms may include difficulties with attention, memory and thinking clearly. Examples of possible physical symptoms are headaches, fatigue, dizziness, noise and light sensitivity and nausea. Emotional symptoms may include anxiety, irritability, sadness, and feeling over-emotional. Sleep symptoms include sleeping more or less than usual, difficulty falling asleep and problems staying asleep.

The good news is these symptoms often improve with time. In the meantime, counseling to learn coping skills and ways to reduce symptoms can be very helpful.

Post-Concussion Self-Care Tips

- ◆ Self-Care following a concussion is important to reduce stress caused by the concussion and its symptoms.
- ◆ Relaxation is likely to improve your headache and manage your stress following a concussion.
- ◆ Identify and avoid headache triggers such as becoming over-stimulated, bright lights or noise.
- ◆ Maintain a regular sleep routine.
- ◆ If you have difficulty falling asleep, turn off all electronics - no TV, texting or internet during these periods! These will just stimulate you more than desired—you can try listening to soothing music that is low volume and relaxing or white noise (the sound of a fan), particularly immediately following a concussion.
- ◆ Limit your intake of caffeine and energy drinks which can be stimulating, further interrupting sleep.
- ◆ Get support by talking to a friend or a family member.
- ◆ Get outdoors for a break. If symptoms worsen, stop whatever activity you are doing and rest.
- ◆ Try to be patient as your body heals.

The Neuropsychologist's Role in Treating Concussions

By Christine McCarthy, Ph.D, Neuropsychologist



Neuropsychologists are identified in concussion care guidelines as the health-care professionals who possess the unique qualifications for assessing the neurocognitive and psychological effects of concussions. Thus, the routine inclusion of one of our three neuropsychologists in an concussion care team including a board-certified neurologists is among the many factors that distinguishes the quality of the patient care provided at ANSC's Concussion Center from that provided by other concussion care centers.

Since the initiation of our Concussion Care program in September 2010, our diagnostic and treatment efforts place extraordinary demands on the clinical skills honed in our years of clinical practice and doctoral-level education. We routinely use these specialized skills in distinguishing between post-concussive symptoms and the common physical symptoms of concussions (e.g., headaches, fatigue) or to the pre-existing medical or psychiatric conditions with symptom profiles that are quite similar to those of post-concussive injuries.

Neuropsychologists highly value the quality of standardized neurocognitive measures as evidenced by our selection of CNS Vital Signs computer-administered measure for use in the ANSC Concussion Center. This measure provides detailed, reliable, valid, and norm-referenced information about neurocognitive functioning in the domains of visual/verbal memory, psychomotor speed, reaction time, processing speed, cognitive flexibility, executive functions, and sustained attention. We are impressed by the sensitivity and the quality of the information that is summarized in the CNS Vital Signs performance profiles and the relative inferiority of the information contained in the profiles produced by other commonly used computerized concussion assessment measures (including ImPACT).

Our patients have benefited from such features of the CNS Vital Signs neurocognitive profiles as:

- ◆ The breadth of the cognitive domains that are sampled in this 30 minute measure.
- ◆ Access to information about eight distinct neurocognitive domains, as compared to the four neurocognitive domains sampled by the Impact subtests, provides us with a richer understanding of an individuals' cognitive status.
- ◆ Our ability to identify subtle post-concussive deficits has also been facilitated by the expanded cognitive demands of the CNS Vital Signs memory measures—as they contain 30 % more items and impose far more stringent learning demands than the Impact memory measures.
- ◆ The clarity and the specificity of the CNS Vital Signs performance reports. The score report contains raw scores and age-based standard scores for all facets of a patient's CNS Vital Signs performance. Access to this wealth of norm-referenced information further improves our abilities to pinpoint the exact cognitive functions that have been diminished by a concussive injury and to formulate treatment and education recommendations that are most likely to facilitate post-concussive recovery.

Acupuncture for Post-Concussion Syndrome

[By Hanni Heller-Ram, M.S., Diplomat Ac, L.Ac](#)

Licensed Acupuncturist



Traumatic brain injury or post-concussion syndromes can happen in a number of settings, including a car accident or sports injury. The injury could affect brain function such as thinking and remembering, cause emotional and mood changes, and produce physical changes such as sleep disturbances, fatigue, headache, balance problems, dizziness, and blurred vision.

Acupuncture is based on the teachings of traditional Chinese medicine, which claims that dysfunction or illness is the result of energy blockage or imbalances in the body. Energy, known as "qi," flows through a network of 14 meridians; six of the 14 meridian channels pass around the neck, face and head, and then continue to pass through the arm, hand, leg and foot. Where energy flows so does blood and therefore where there is a blockage or disruption of Qi flow there will also be a disruption of blood flow and vice-versa. Furthermore, the electrical activity that takes place in every function of the brain is the most closely related to the concept of "Qi" or energy flow.

To treat the Qi imbalances, fine, sterile needles will be inserted at specific acupuncture points along the meridian pathways. A concentration on acupuncture points that we know are specifically related to the flow of blood and energy (Qi) to the head and neck areas will be used. Other points will be needed to improve the overall Qi and blood circulation in the body to stimulate general repair and re-growth systems. Different acupuncture points have different indications, so points for treatment are chosen based on each patient's specific needs. Effect could show up in just 2-3 sessions, though chronic cases need longer treatment, and 10 treatments and more are common. Acupuncture is generally recognized as safe, according to the National Center for Complementary and Alternative Medicine. Patients sometimes report soreness or pain during treatment, but most feel deep relaxation with little or no pain.

Many patients with concussions benefit from acupuncture. In fact, the U.S. Military is now using acupuncture as a treatment for concussions in Afghanistan, with results that doctors say are "off the charts." To read the full article, [click here](#)

If you are interested in acupuncture, please call 203-333-1133 x152 to speak to the Neuropsychological Coordinator.

Concussion Baseline Testing

By [Christine McCarthy, Ph. D](#), Neuropsychologist



We encourage all children and adolescents, but particularly those who are athletically active, to have a baseline evaluation. This evaluation will provide information that can dramatically improve our abilities to determine the scope and the severity of any concussive injuries that may occur, despite all best preventive efforts. This information will greatly reduce the chances that a concussed athlete will be cleared to return to play too quickly, potentially while he or she is still at risk of re-injury. Conversely, it will also reduce the chances that evaluation findings that are actually consistent with normal baseline functioning will be misinterpreted as a lingering symptom of a concussive injury—in our efforts to err on the side of caution—and thus, unnecessarily prolong the post-concussion recovery period and the resumption of normal pursuits.

How does it work?

A baseline evaluation can be conducted at any time. It can be scheduled by calling our office. Health insurance does not cover the cost of this well-child procedure. For information on the cost, please call 203-333-1133 x152. The fee is payable at the evaluation date.

What can I expect?

Most children and adolescents complete the CNS Vital Signs evaluation in about 30 minutes. After it is completed, the results will be briefly reviewed by one of our neuropsychologists. In this review, we will make sure that the test was performed accurately and that the results are reasonably consistent with normal academic performance. If there were any unexpected test administration problems (this rarely occurs), either the whole test, or relevant portions, can be immediately re-administered. In the event of unexpected findings, we can also schedule another appointment to review test results in more depth and to determine appropriate next steps. Finally, we will provide you with a copy of the test results for your own records and place a copy of the results into the electronic medical record in our office.

How can I schedule a Baseline Testing Appointment?

Simply call our office, 202.333.1133, 152 and speak to Blanca.

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