# Signs, Symptoms and Therapy of Mild Traumatic Brain Injury

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#### Commentary

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### DESCRIPTION

A concussion is a head injury that briefly impairs brain function, commonly referred to as a Mild Traumatic Brain Injury (MTBI). Symptoms may include Loss Of Consciousness (LOC), mood swings, headaches, memory loss, trouble thinking, concentrating, or maintaining equilibrium. Any one of these symptoms could emerge right away or days after the accident. Concussion should be considered if a person impacts their head, whether directly or indirectly, and exhibits any of the associated symptoms. Concussion symptoms could appear 1-2 days after the trauma. In adults, symptoms can last up to two weeks, whereas in a child, they can last up to four weeks. Less than 10% of children's sports-related concussions are accompanied by loss of consciousness.

The most frequent causes are car accidents, slips and falls, sports injuries, and bicycle accidents. Lack of earthquake readiness, physical abuse, drinking alcohol, and a history of concussions are risk factors. Either a direct blow to the head or forces from other parts of the body that travel to the head make up the damage mechanism. Since the blood supply is insufficient and the glucose requirements are high, this is thought to cause neuron dysfunction. To rule out potentially fatal head injuries, cervical spine injuries, and neurological diseases, a thorough examination by a licenced medical professional (such as a doctor, physician assistant, or nurse practitioner) is necessary. To rule out serious brain injuries, diagnostic imaging tests such as a CT scan or an MRI may be necessary. Standard imaging is not required to diagnose concussion.

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The most prevalent mTBI symptom is a headache. Other symptoms include vertigo, nausea, vomiting, poor motor coordination, balance issues, or other issues with movement or feeling. Light sensitivity, perceiving bright lights, fuzzy vision, and double vision are examples of visual symptoms. A buzzing in the ears, known as tinnitus, is also frequently observed. Concussive convulsions occur in one in about seventy concussions, but seizures that happen during or right after a concussion are not "post-traumatic seizures" and, unlike post-traumatic seizures, are not indicative of post-traumatic epilepsy because post-traumatic epilepsy necessitates structural brain damage rather than just a brief disruption in normal brain function. Concussive convulsions are believed to be caused by a momentary loss or inhibition of motor function, and they are not linked to either epilepsy or more severe structural disorders.

Patients with head trauma are initially evaluated to rule out more serious emergencies such cerebral haemorrhage or other severe head or neck injuries. This includes stabilizing the cervical spine and the "ABCs" (Airway, Breathing, And Circulation), which are presumed to be impaired in any athlete who is discovered unconscious following a head or neck injury. 'Red flag symptoms' or 'concussion danger signals' include increased headaches, prolonged vomiting, increasing confusion or a deteriorating state of consciousness, seizures, and unequal pupil size. These are signs that a patient needs to be screened for a more serious injury. A person who exhibits these symptoms or is more likely to sustain a more severe brain injury needs to be evaluated by a doctor immediately.

A medical evaluation by a doctor or nurse practitioner is necessary for both adults and children who have a concussion suspicion in order to confirm the diagnosis and rule out any other more serious head injuries. Observation should continue for several hours after potentially fatal head injuries, cervical spine injuries, and neurological diseases have been ruled out. A person needs to be evaluated right away in an emergency room if they experience frequent vomiting, worsening headache, dizziness, seizure activity, severe sleepiness, double vision, slurred speech, an unsteady gait, weakness or numbness in their arms or legs, or any other symptoms indicating a basilar skull fracture. An essential component of treatment is observation to keep an eye out for deteriorating conditions.

Rest and over-the-counter painkillers to relieve a headache are typically the only treatments needed for mild traumatic brain injuries. A person with a moderate traumatic brain injury must, nevertheless, often be thoroughly watched at home for any lingering, deteriorating, or brand-new symptoms. Additionally, he or she might have follow-up medical appointments. When it is appropriate to resume job, school, or recreational activities, the doctor will let you know. For the first few days or until your doctor says it's okay to resume regular activities, relative rest, which is restricting physical or thinking (cognitive) activities that worsen matters, is typically advised. You shouldn't fully stop engaging in both mental and physical activity. Most people gradually get back to their regular routines. Emergency treatment for moderate to severe traumatic brain injuries focuses on keeping the patient's blood pressure stable, ensuring that they receive enough oxygen, and avoiding further head or neck traumas.