

Understanding concussion

What is concussion?

'Concussion' is used to describe a mild traumatic brain injury that is not usually life-threatening. It is a common sporting injury, particularly in contact sports (e.g. football), and recreational activities where falls are common, such as horse riding.

The impact causes inflammation, damage to neurons, and a change in your metabolic state. Your brain suddenly releases neurotransmitters that can either overstimulate or inhibit brain function.

Concussion was once believed to be a minor injury that does not cause ongoing complications. But new research has found that 10-30% of patients report persistent side effects, and repeated concussion is linked to neurodegenerative disease later in life.



Symptoms

Symptoms will usually present immediately or in the first few hours following a head knock. Whilst rare, asymptomatic concussions can also occur.

Some common symptoms include loss of consciousness, confusion, drowsiness, dizziness, headache, temporary memory loss, nausea/vomiting, and more. Concussion can cause a variety of sensory, cognitive, and emotional disturbances.

If the person is unconscious, repeatedly vomiting, experiencing neck pain, having a seizure, or exhibiting particularly rapid changes in cognitive function or behaviour, an ambulance should be called for help.

Causes

Concussion is most commonly caused in contact sports (e.g. AFL, rugby) as well as activities in which falls are common, such as cycling.

The brain normally floats in protective cerebrospinal fluid within the skull. In a concussive injury, something causes your brain to hit the inside of your skull. Direct blows are often the cause, but it can also occur from rapid acceleration and deceleration of the brain within the skull.

Treatment

Anyone suspected of having a concussion should be assessed by a doctor. The doctor might order a brain scan to ensure there is no bleeding in the brain, spinal injury, or increased intracranial pressure.

Usually treatment consists of physical and mental rest, and patients can take over-the-counter painkillers if they have a headache.

Even if a patient 'feels fine', it's important to avoid sports after being diagnosed with a concussion. A second impact can be even more dangerous as it exacerbates the existing inflammation. Athletes in particular should be monitored by a doctor when resuming their sporting activities.

Outlook

Most people recover completely within two weeks with no lasting problems. However, some patients experience lingering symptoms (headaches, dizziness, changes in cognition or behaviour) for longer. A small number of people may develop persistent post-concussion symptoms, which means they experience symptoms for more than three months.