

# Understanding Concussion

## A 'bump on the head', or something more serious?

**MYTH #1** Concussions only happen after a direct blow to the head.

**MYTH #2** You need to lose consciousness to have a concussion.

**MYTH #3** If you don't have symptoms immediately, you don't have a concussion.

**MYTH #4** You have to keep someone with a concussion awake.

**MYTH #5** You can return to playing sports as soon as you feel better.



Concussion is a mild brain injury caused by some kind of trauma to the head. It is common in contact sports (i.e. AFL, rugby) and activities in which falls are common, such as horse riding, skiing and cycling.

You might recognise some of these myths about concussion. The most important thing to remember is that concussions can be treated, but they can also be serious, and medical help is essential.

### What actually happens to your brain during a concussion?

The brain normally floats in a protective cerebrospinal fluid within the skull. In a concussion, something causes your brain to hit the inside of your skull. This doesn't have to be a huge impact, and can even happen without hitting your head. Direct blows are commonly the cause, but it can also occur due to a sudden change in direction or 'whiplash' movement

(like in a car crash).

The impact causes inflammation, damage to neurons, and a change in your metabolic state. Your brain suddenly releases neurotransmitters that either overstimulate or inhibit brain function (which is why symptoms are quite varied).

### Recognising a potential concussion

Only 10% of concussions include loss of consciousness.

#### Symptoms to look out for include:

- Loss of consciousness
- Confusion & trouble focusing
- Dizziness, vertigo & imbalance
- Headache
- Nausea and vomiting
- 'Seeing stars', blurred or altered vision
- Sensitivity to light & noise
- Drowsiness
- Temporary memory loss
- More anxious, sad, & emotional in general
- A blank or vacant look

Symptoms will usually present immediately or in the first few hours following a head knock. Asymptomatic concussions are far less common, but they do happen. 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.

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. Milder symptoms can usually be assessed by an on-site medical professional (at a sports game) or the patient should be taken to the nearest GP.

### Treatment & recovery

A medical professional can check for more serious traumatic injuries such as bleeding in the brain, spinal damage, or increased intracranial pressure. Once these concerns have been cleared, the patient can safely go home to rest and recover. Contrary to popular belief, the patient can sleep once they've been cleared - it would only cause complications if there is bleeding in the brain, which is rare in concussion.

#### Recovery timeline (if symptoms are stable)

<b>0-24hrs</b>	Rest physically and mentally; avoid excess screen time or study; low to moderate cognitive activity is fine.
<b>24-48hrs</b>	Slowly reintroduce light physical activity (i.e. walking); return to work or school but avoid hard tasks (exams, pitches, major meetings)
<b>3-5 days</b>	Continue to scale up activities with caution; athletes follow return-to-play guidelines.
<b>5 days</b>	Cognitive function should be at normal capacity; athletes return to play.
<b>7-10 days</b>	Most patients will be clear of metabolic abnormalities and inflammation.

Complete recovery from concussion should be within two weeks, but patients could experience post concussion syndrome. Headache is the most common post-traumatic symptom, along with a range of physical, cognitive & behavioural symptoms (which are similar to those listed above). Many people recover from post concussion syndrome in the following weeks or months, but in some patients it becomes persistent.