Concussion

Concussion, also known as mild traumatic brain injury, is a type of head injury that can result from a forceful external impact to the head, neck, or body, which causes the brain to move within the skull.

When a concussion occurs, the nerve cells and blood vessels in the brain can be damaged and change normal brain function. Concussion may also affect the vision and balance systems, and can make a person feel physically unwell, and/or affect their thinking, mood, and sleeping patterns.

Concussions can occur under a range of circumstances.

Common causes of concussion include:

- Falls (e.g. playground accidents, impaired mobility in older adults)
- Sports (contact and non-contact) and other recreational activities
- Road traffic crashes
- Workplace accidents, including in military context
- Assault
- Family, domestic and interpersonal violence

Signs and Symptoms

Concussion can result in many different **signs** (things you can see) and **symptoms** (things people say they are feeling or experiencing).

Concussion signs and symptoms may appear at the time of injury or can develop and/or get worse over the following hours or days. **Just one sign or symptom is enough to indicate that a concussion may have occurred.** Signs and symptoms of concussion include:

Immediate		Delayed
Signs	Symptoms	Symptoms
Immediate signs of concussion include:	Immediately after a concussion, a person may report experiencing:	Examples of delayed symptoms include:
 No protective action when falling to ground Lying motionless Slow to get up Stumbling Poor balance or trouble with coordination You may see the person: Grab or hold their head Look dazed or vacant 	 Headache or pressure in their head Dizziness Changes in vision (e.g., double vision, blurred vision, worsening vision or "seeing stars") Confusion Memory loss (amnesia) Increased irritability, frustration Feeling tired or drowsy 	 Persistent headaches Difficulties remembering or concentrating Sensitivity to light or noise Ringing in ears Feelings of sadness or anxiety Mood swings Easily irritable/over-reactive Changes in sleep patterns Fatigue or tiring easily
Appear confused or drowsySlurred or incoherent speechRepetitive questions	Not feeling rightNausea/ and or vomiting	

Each concussion is unique. The signs and symptoms of concussion can vary between individuals, even if they have had a concussion before. A person does not have to lose consciousness to have a concussion. In fact, more than 90% of concussions do not involve a loss of consciousness.

Just one sign or symptom is enough to indicate that a person may have experienced a concussion.



Red Flags

Red flags are signs and symptoms that may indicate more severe injury to the brain. If someone who you witness or suspect has had a concussion shows any of the following, seek medical attention immediately.



Go to your doctor, nearest hospital, or telephone an ambulance

- Severe or increasing headache
- Loss of consciousness or deteriorating conscious state
- Increased drowsiness (changes to alertness) or hard to wake up
- Seizure or convulsion (twitching or shaking)
- Unequal pupil size
- Repeated vomiting
- Blurred, double or changes in vision
- Continuous bleeding or clear fluid from ear or nose

- Neck pain or tenderness
- Weakness or inability to move the body as usual, decreased coordination
- Complaints of numbness, tingling, or burning sensation in arms or legs
- Increased restlessness, agitation or confusion
- Skull fracture or break
- Bruising on face/head (especially if the person is known to be taking anticoagulant medication i.e. blood thinners)

Concussion Management

The first **24 - 48 hours** following a concussion should be a period of **relative (not strict) rest**. General suggestions that can help with recovery are listed below. Make sure to follow all advice given to you by the doctor.

Area/Activity	Suggested action
Red flags	The person should be observed by a responsible adult and monitored for Red Flags for the first 48 hours following a diagnosed or suspected concussion. Seek immediate medical attention if the person develops any Red Flags during this time.
Pain Relief	Use paracetamol or ibuprofen to manage pain. Follow packet instructions. Use ice packs over swollen or painful areas. Caution should be used when applying ice packs to children under the age of 6 months. Do not use heat packs or gels for pain relief during this time.
Sleeping	It is ok for the person to sleep after a concussion. There is no need to wake them up but, if possible, consider checking on the person regularly to see if they have developed or experienced any Red Flags (e.g. vomiting).
Regular Routine	Try to maintain a normal routine as much as possible. This includes sleeping, naptime, bathing and mealtime routines for young children.
Cognitive activity	Light cognitive activity (e.g. reading) is ok as long as it does not make symptoms more than mildly worse. However, screentime should be limited for the first 48 hours after injury.
Sport and physical activity	Light physical activity that is unlikely to cause another concussion (e.g. walking, stationary bike riding) is ok if it does not make symptoms more than mildly worse. Do no participate in contact or high-speed sports during this time.
Driving/ Operating Heavy Machinery	Do not drive for at least 24 hours after a concussion. It is best to return to driving once all symptoms are resolved or cleared by a medical professional. Arrange alternative transportation during this time. Similar precautions should be taken for operating heavy machinery.
Flying	If possible, avoid air travel during this time. Seek medical advice.
Alcohol/Other drugs	Do not drink alcohol, take sleeping pills or recreational drugs, or smoke cigarettes/ vape, particularly following concussion. These can make symptoms worse and/or make it difficult for others to tell whether the concussion is affecting the injured person or not.



Recovery

Most people will fully recover from concussion within 4 weeks. However, some people will experience concussion symptoms for longer than expected. See your doctor if symptoms continue. Your doctor may refer you to one of a range of specialists if you do not improve. A graded return to activities such as school, work, and sports can help the recovery process. For more information see the Connectivity PPCS Fact Sheet.

More information

Connectivity Traumatic Brain Injury Australia is an Australia-wide not-for-profit organisation working to raise awareness of concussion and traumatic brain injury in the community. For more information on concussion, you can speak to your doctor, healthcare professional, or visit the Connectivity website at **www.connectivity.org.au**

DISCLAIMER: This flyer and the Connectivity website does not offer medical advice for individuals. If you have suffered a concussion, please seek medical advice.

