

# Mild traumatic brain injury

## WHAT IS A MILD TRAUMATIC BRAIN INJURY?

Mild traumatic brain injuries (MTBI) usually occur through sporting, car or workplace accidents and are usually caused by the head hitting something or being violently shaken. The most common type of MTBI is concussion.

MTBI is not easily diagnosed. Many people with a MTBI may not even be seen in a hospital because they did not think their injury was severe enough. In an emergency department or urgent care centre, symptoms may be subtle and the condition may go undiagnosed until the injured person sees their local doctor for ongoing problems.

## WHAT CAUSES A MILD TRAUMATIC BRAIN INJURY?

MTBI may be caused by diffuse (affecting the whole brain) or focal (affecting a specific area) injury.

In diffuse injuries, a blow to the head leading to temporary loss of consciousness can result in stretching and tearing of nerve fibres throughout the brain. Most stretched nerve cells will return to normal, but some may be permanently damaged, either functioning abnormally or not functioning at all. This causes the symptoms of MTBI.

In focal injuries, there is damage to a specific area either on the side of the blow or directly opposite it.

There is growing evidence the repeated MTBI can cause long-term brain damage.

## WHAT ARE THE SYMPTOMS?

MTBI can result in problems with thinking, physical symptoms or emotional difficulties. Some of the more common symptoms are shown in Table 1.

**Table 1: Common symptoms associated with mild traumatic brain injury**

| Problems with thinking             | Physical symptoms             | Emotional symptoms          |
|------------------------------------|-------------------------------|-----------------------------|
| Reduced concentration or attention | Headaches                     | Irritability                |
| Slower processing of information   | Nausea                        | Reduced control of emotions |
| Forgetfulness or memory problems   | Tiredness                     |                             |
| Difficulties with making decisions | Sensitivity to light or noise |                             |

## TREATMENT

While in the emergency department or urgent care centre, the injured person will be closely monitored and may have:

- pain medications for headache or pain
- anti-nausea medication for any nausea or vomiting
- observation to detect deterioration due to a serious brain injury
- a CT scan of the brain, neck or bones
- an X-ray of the neck if there is a suspicion of neck injury.

If serious injury is ruled out, the injured person will usually be sent home with family or friends.

## HOME CARE

- Rest quietly. This also means limiting mobile phone usage, watching television and longer periods of reading.
- Use ice packs over swollen or painful areas. To do this, wrap ice cubes, a bag of frozen peas or a sports ice pack in a towel. Do not put ice or ice packs directly on the skin.
- Take non-prescription pain medications (such as paracetamol) if you have a headache. Check the packet for the right dose and use only as directed. Aspirin and other anti-inflammatory medications should be avoided.

If an injured person is discharged from hospital in the evening, they may need to be woken during the night to check on them. Your doctor will advise if this is needed and how often this should occur.

- The injured person should not drive home.
- The injured person should not be alone for the next 24 hours.
- The injured person should not drink alcohol for at least 24 hours.
- The injured person should not take sedatives or other medication unless instructed.

Rarely, injured people develop a serious brain injury after discharge from an emergency department or urgent care centre. Go to the nearest hospital or call an ambulance (dial triple zero (000)) if the injured person experiences:

- repeated vomiting
- increasing confusion
- altered conscious state, 'black outs' or cannot be woken
- seizures (fits).

## WHAT TO EXPECT

Many people cannot remember events just before or just after their head injury (amnesia).

It can take some time for the brain to recover. During this time headaches and mild problems with thinking (such as difficulty concentrating, remembering things, performing complex tasks and mood changes) are common. It is also normal to feel more tired than usual.

Most people make a full recovery and the symptoms only last a few days. There is no specific treatment other than plenty of rest.

Do not return to work or school until fully recovered. The length of time depends on the type of work or study and the severity of the head injury. Ask your local doctor for advice.

Do not return to sport until all symptoms have been gone for at least a week. This is because your reaction times and thinking will often be slower, putting you at risk of another injury. It is important to avoid another head injury before fully recovering from the first, as a second injury can cause additional damage. For some contact sports, such as football, you may wish to consider wearing a helmet after an MTBI has occurred. Discuss this with your doctor.

If symptoms persist, see your local doctor, who may refer you for testing to assess the full extent of the injury and to plan activities to aid recovery. Sometimes referral to an occupational therapist or neuropsychologist is required if thinking difficulties persist.

## Seeking help

In a medical emergency call an ambulance – dial triple zero (000). Do this if the injured person:

- repeatedly vomits
- 'blacks out'
- has a seizure (fit)
- cannot be woken or is not responsive
- has a vision disturbance
- has weakness or numbness
- has severe or worsening headaches.

For other medical problems see your local doctor or healthcare professional.

For health advice from a registered nurse you can call NURSE-ON-CALL 24 hours a day on 1300 60 60 24 for the cost of a local call from anywhere in Victoria.\*

NURSE-ON-CALL provides access to interpreting services for callers not confident with English.

\* Calls from mobile calls may be charged at a higher rate.

## WANT TO KNOW MORE?

- Ask your local doctor or healthcare professional.
- Visit the Better Health Channel at [www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au).

To receive this publication in an accessible format phone 9096 7770, using the National Relay Service 13 36 77 if required, or email

**[emergencycare.clinicalnetwork@safercare.vic.gov.au](mailto:emergencycare.clinicalnetwork@safercare.vic.gov.au)**

Disclaimer: This health information is for general education purposes only. Please consult with your doctor or other health professional to make sure this information is right for you.

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