

## Head Injuries & Concussion

Chances are you have bumped your head before. Usually the injury is only minor because our skull is so hard and protects our brain. But some head injuries can be more severe, such as skull fracture, concussion or traumatic brain injury. Some of the most common causes of head injury include accidents at home, work, outdoors or while playing sports, falls, physical assault and traffic accidents. This information leaflet will discuss head injuries to give you a better understanding of how they happen, what they look like and how they should be managed.

*So what do you mean by head injury? Do you mean when someone splits their head open?*

Head injuries can present in many different ways, but are categorised broadly into 2 categories:

- **Open/penetrating head injury** – when a high velocity object breaks through the skull and enters the brain. This usually happens when you move at high speed such as going through the windshield during a car accident.
- **Closed** – when the head sustains a blunt force by striking against an object that does not break the skull **\*\*\*Important to note that closed injuries are not always less severe than open injuries – you should treat them all with extreme caution\*\*\***

*Some examples of common head injuries:*

- **Concussion** – occurs when there is no structural damage that can be seen on standard imaging tests like CT scan, but there ARE functional changes that occur in how the brain works. The brain floats in cerebrospinal fluid and is encased in the skull. These protections allow it to withstand many of the minor injuries that occur in day-to-day life. However, if there is sufficient force to cause the brain to bounce against the rigid bones of the skull then there is potential for injury.
- **Brain contusion** – this is when the brain becomes bruised; thus leading to some bleeding in the brain, resulting in swelling.
- **Skull fracture** – this is when the actual skull cracks. Another complication can occur from this, with the edges of the broken skull bones sometimes cutting into the brain and causing injury.
- **Haematoma** – this is bleeding in the brain that collects and clots to form a bump. Note that a haematoma may not be apparent for a day or even as long as several weeks!

### Signs and symptoms

Symptoms vary according to the type and severity of the injury. Some of the more common ones are:

- Headaches
- Dizziness
- Fatigue
- Being a little slower than usual to think
- Difficulty performing complex tasks
- Mood changes
- Difficulties with concentration
- Difficulties with memory, especially with the events surrounding the head injury

*Note that these symptoms generally only last a few days and then improve. Refer below for when to speak to your health professional for more critical medical assistance.*

When to seek urgent medical care

- If there is severe head or face bleeding
- If the person is confused, drowsy, or unconscious
- If the person stops breathing
- If you suspect a serious head or neck injury
- If the person behaves abnormally
- If they develop a severe headache or stiff neck
- If they vomit more than once
- If there is any bleeding or watery discharge from the ears or nose
- If the person suffers from any fits

### What not to do in a head injury

- Do not wash a head wound that looks deep or is bleeding profusely—this may disturb the natural clotting around the wound and cause it to bleed more
- Do not remove any objects stuck in the wound
- Do not move the person unless absolutely necessary
- Do not shake the person, even if they seem dazed
- Do not remove a helmet from a person who may have serious head injury
- Do not pick up a fallen child with any sign of head injury
- Do not stay in bed until you are better. You do need sleep for recovery; however, your brain also needs enough to do to help it recover.
- Do not use drugs or alcohol, as your brain may not deal with these things in the normal way.
- Do not drive your car/motorbike until you are sure your concentration and reaction times are back to normal
- Do not play sport or put yourself in a position where you are likely to get another bang on the head, as your body is still trying to heal.

### Optimal care for head injuries

- Advise the person affected that they should NOT drive home after a head injury – help them to catch the bus, call a taxi or a friend for them
- Advise them to rest quietly for the day
- Use ice packs over any swollen or painful area
- Use simple painkillers (with the pharmacist's assistance) for any headache. E.g. Paracetamol or ibuprofen
- A sterile dressing should be applied to minimise any bleeding
- It is usually better to refrain from eating or drinking too much over the first 6-12

hours, unless otherwise advised by the pharmacist/doctor. Once they are able to eat/drink again, rehydration solutions may be used to help them hydrate and feel better sooner. E.g. hydralate, gastrolyte, ORS

- Alcohol should be avoided for at least 24 hours
- Sedative medicines should be avoided unless instructed by the pharmacist/doctor
- The person affected should be allowed to sleep and rest, but should generally be woken every 4 hours to check their condition and gauge their reaction to familiar things.

*So let's make this a little more relevant and give some examples of what you might see day to day, and how your LiveLife Pharmacy may assist you/someone else suffering from a head injury.....*

*Head knock with blood—"Please help me, I have just fallen over on the pavement outside and bumped my head. I think it might be bleeding....what should I do for this?"*

- So first, remember to remain calm for the person—the last thing they need is somebody else panicking!
- Find a chair so the person can sit down if they wish and ask them if they would like you to call an ambulance. If they seem ok, have a closer look at them to check for bleeding.
- A sterile non-stick dressing should be held against any areas that are bleeding, but be careful to warn them not to move the dressing much once it is on the bleeding spot, as any movement may disturb the natural clotting behaviour of the wound.

*What else should you do to help the person?*

- Perhaps an ice pack for any bruised areas and some paracetamol. You should also ensure the person has the details of an after-hours doctor/hospital just in case there is any change in their condition once they return home.

*Egg on a child's head—"Please help me, my little girl was running around the back yard and hit her head on the tank stand.....now she has a big egg on her head—is there anything I should do for this?"*

*This is an example of what the pharmacist may say:*

"Don't be alarmed by how quickly these large bumps appear. 'The big egg' swelling over the forehead is because of collection of blood in the tissue below the skin layer and it is usually limited to the scalp and only occasionally indicates that the underlying brain has been damaged."

- Apply adequate pressure and an ice pack.
- Ibuprofen may also help to reduce the swelling and pain.
- It is a good sign if the child has not lost consciousness, but still keep a watch of them for at least 24 hours and observe for any vomiting, loss of balance, loss of consciousness over this time."

*What products may the pharmacist suggest for this person?*

- Ibuprofen for swelling and pain
- Paracetamol for extra pain relief if needed
- An instant ice-pack for now and a reusable one to use later
- They may even suggest a first aid kit to keep at home, as this may bring the parents' attention to the fact that they were not prepared for an "at-home accident."

*Head knock without blood (e.g. Sporting injury) - "Please help me, I'm in town playing football this weekend and have just finished a game. I hit my head quite severely during the game; it's not bleeding, but I'm not feeling very well since it happened.....what should I do for this? Can I play my next game tomorrow?"*

The pharmacist will double check if there has been any bleeding, seizures, change in vision, loss of memory etc. They will also advise you that playing football tomorrow is NOT a good idea.

*Some advice and products they may suggest to help you include:*

- Paracetamol and/or ibuprofen
- Ice packs
- Rehydration salts (as the person may also have not consumed enough fluids today whilst out in the sun playing sport—check with the pharmacist first though, as sometimes fluids are not recommended in head injuries)
- An information leaflet for the person on "what to look out for" once they leave the pharmacy

*First Aid Management for Head Injury*

*Always call an ambulance in cases of a serious head injury*

*For conscious patients:*

- Encourage them to minimise any movement of their head or neck
- Apply direct pressure to any head wounds with a dressing to control any significant blood loss. Remember that scalp injuries can bleed quite profusely, so it is important to avoid disturbing blood clots forming in the hair.
- Reassure the patient and try to keep them calm

*For unconscious patients:*

- Do not move the person at all unless in immediate danger (e.g. fire, flood)
- A carer must be in charge of protecting the injured person from any potential dangers at the scene. They also need to monitor the airway and breathing until arrival of an ambulance.
- If the person stops breathing or has no pulse, CPR may be required. Refer right for current instructions on first aid and CPR.