CHEO

WHAT YOU NEED TO KNOW: CONCUSSIONS

What is a concussion?

A concussion is a mild traumatic brain injury. It happens when a blow (hit) to the head or body disrupts normal brain function. Some people lose consciousness (get 'knocked out') after a concussion, but most do not. Concussion symptoms may not appear right away. X-rays and CTs of the head appear normal after a concussion.

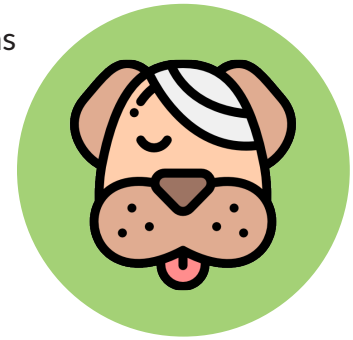
What causes a concussion?

In a concussion, the head moves very quickly and stops quickly. This causes a stretching injury to brain cells. A concussion can be caused by a blow to the head, face or neck, or sometimes the body. Concussions are most often caused by motor vehicle crashes, falls, assaults and sports.

What is post-concussion syndrome?

This term describes the physical, cognitive (thinking), and emotional symptoms that can last for a longer period of time after a concussion. Some symptoms show up right away, but others may appear later. Each person with post-concussion syndrome is different. Children and youth with post-concussion syndrome will differ in:

- the number and severity of symptoms
- how quickly they get better
- how symptoms affect their everyday lives.



Concussion symptoms

Cognitive (thinking):

- difficulty concentrating and paying attention
- trouble with learning and memory
- problems finding words and putting thoughts into words
- easily confused and losing track of time and place
- slower thinking, acting, reading and speaking
- easily distracted
- trouble doing more than one thing at a time
- lack of organization in everyday tasks

Physical:

- headache, neck pain
- nausea
- lack of energy
- dizziness, light-headedness, loss of balance
- blurred or double vision and sensitivity to light
- increased sensitivity to sounds
- ringing in the ears
- loss of sense of taste and smell
- change in sleep patterns, especially waking up at night

Social and emotional:

- mood changes: irritability, anxiety, depression
- less motivation
- easily frustrated, overwhelmed, tearful
- more impulsive and lacking normal inhibitions
- withdrawn, wanting to avoid social situations with lots of people

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How long does it take to get better?

Most people recover completely from a concussion within a couple of weeks or months. But recovery can sometimes take longer. In some cases, symptoms improve but do not go away completely. Recovery may be slower in those who have already had one or more concussions. There are many factors that impact recovery after a head injury. Stress is an important one. Reducing stress is key to helping your child or teen get better more quickly. Eating well, drinking enough fluids and getting the right amount of sleep and rest (but not too much) can also make a big difference.

Helping your child or youth recover

Rest

Physical rest

- take part in usual everyday activities, as tolerated.
- very light physical activity is OK as tolerated (gentle yoga, stretching, walks).
- avoid activities that make symptoms worse.
- avoid leisure activities that have a head injury risk (for example, street hockey or biking).

Cognitive (mental) rest

- increase rest periods, but limit sleep during the day (extra sleep during the day may affect quality of sleep at night)
- avoid video games, computers and television until symptoms improve

School

A temporary leave of absence from school may be needed, but it is important to get back to school as soon as possible. Discuss the time frame with your medical team. You can also speak with school staff about helpful accommodations during recovery from a concussion, like:

- extra help to finish and organize work (for example, a tutor)
- extra rest time or shorter school day
- less homework for mentally demanding tasks
- more time for tests, or delaying tests
- more flexible due dates for assignments
- seating that will decrease distractions
- access to classmate's or teachers' notes
- gradual return to school. For example, start with one or two hours a day, then gradually increase time spent at school.
- modify the school schedule according to energy and symptoms

Headaches

Avoid things that trigger your headaches, for example, not enough sleep, loud noise or computers. Keep a diary of your headaches and review with your doctor. Include things like:

- time of day
- how long the headache lasted

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- triggers (like foods or activities)
- how painful it was (on a scale of 0-10)
- other symptoms (like nausea or vomiting)
- what helped or didn't help

Give Acetaminophen (Tylenol®) _____ mg every six hours, only as needed. Give Ibuprofen (Motrin® or Advil®) _____ mg every 6-8 hours, only as needed. Most post concussion headaches get better over time, and prescription medications are not usually needed. Remember that using ibuprofen (Motrin® or Advil®) or acetaminophen (Tylenol®) more than 15 days each month can cause medication-overuse and rebound headaches.

Getting back in the game

Children do not need to be symptom free before returning to school. But they do need to be symptom free before any activity that puts them at risk for another hit. Your child or youth should never return to play while still having symptoms. Return to play should follow a step-by-step process, where your child or youth may go to the next level only if there are no symptoms. If your child or youth has symptoms, it is safest for them to fall back to step two. After 24 hours at step two, they can try to move forward again.

Important

1. A qualified medical professional must oversee this return to play plan.
2. Each step must take at least one day.
3. Return to step two for at least 24 hours if symptoms come back.
4. Get your doctor's approval before moving on to step five.

Step 1

Limited activity. Stretching, gentle yoga and light walks are OK. Do not go to Step 2 until your child or teen is symptom free for 24 hours.

Step 2

Light aerobic exercise. Increase heart rate (HR): walking, swimming, stationary cycling (intensity <70% predicted HR).

Step 3

Sport-specific exercise. Add movement; skating or running drills. Avoid any activity where there is a risk of a blow to the head, collisions, falls or sudden movements.

Step 4

Non-contact training drills. Exercise, coordination, cognitive load; progress to more complex training drills (for example, passing drills).

Step 5

Full contact practice. Restore confidence and allow coach to assess functional skills. Take part in normal training (after medical clearance)

Step 6

Return to normal game play.

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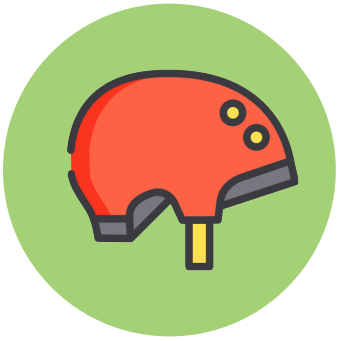
Preventing concussions



Use a helmet. Studies show that helmets can prevent severe head injuries, so it's important to wear one. Unfortunately, helmets don't prevent concussions. Wear a helmet for:

- football
- hockey
- rollerblading
- skateboarding
- riding a horse
- riding an ATV, dirt bike, motorcycle or snowmobile
- lacrosse
- riding a bike
- skiing and snowboarding

Play with respect. Learning and following the rules of your sport can help to prevent concussions and other serious injuries.

Need more information?

Cheo.on.ca is the best place to find information on CHEO's programs and services and learn about a variety of health topics for children and youth. Visit our online resource section to access CHEO-recommended websites, books, apps, videos and more!

Have you registered for MyChart?

MyChart is a FREE secure, online patient portal that connects patients to parts of their CHEO electronic health record, anywhere, at any time.

To apply for MyChart access, visit cheo.on.ca/mychart and fill out the MyChart Access Request Form. Once your application has been approved, we'll send you an email with an activation code and instructions on how to log in and get started.

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