

# BRAIN INJURY 2ND EDITION GUIDE FOR YOUTH

TO HELP YOU UNDERSTAND THE EFFECTS OF BRAIN INJURY



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2<sup>ND</sup>  
EDITION

## TEENMENTALHEALTH.ORG

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## ACKNOWLEDGEMENTS

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# WHAT IS A BRAIN INJURY?

A brain injury occurs when the brain has been damaged, but the damage is often only temporary and can return to regular functioning with rest and by you, its owner, following specific health returning steps. This may take a long time, and some people never get back to where they want to be. Consequently, the best option is to do your best to prevent a brain injury.

A brain injury can occur suddenly and without warning. Many occur as a result of accidents or during sports activities.

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## THERE ARE TWO TYPES OF BRAIN INJURIES TRAUMATIC & NON-TRAUMATIC

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### NON-TRAUMATIC:

- Not caused by a hit or blow. Occurs naturally inside the brain.
- Can be rapid or may take a long time to show itself.
- Can be caused by strokes, bleeds, tumors, and infections.

### TRAUMATIC:

- Is caused by something external, like a blow/hit to the head or body.
- Is common in sports, physical activity, and car collisions.
- Can be mild, moderate, or severe.

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“I’m so easily irritated since I had my brain injury. I thought wearing a helmet looked lame, but now I really wish I hadn’t cared so much about that and wore my helmet anyway. What was actually lame was getting a brain injury when it was so easy to prevent.”

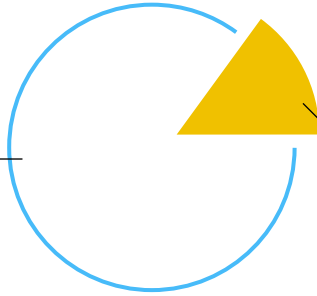
– *Jeremy*

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## MOST BRAIN INJURIES ARE CONSIDERED MILD

85-90%

MILD



10-15%

MODERATE/SEVERE

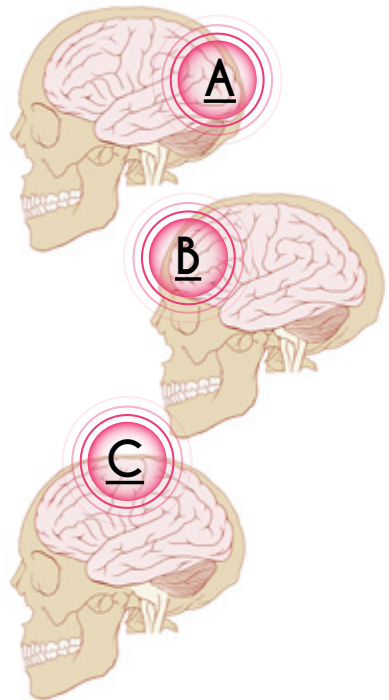
## OPEN BRAIN INJURY

Open brain injury happens when an object penetrates the skull or when the skull is broken. This type of injury is usually quite visible and requires medical treatment immediately. It can result in seizures, paralysis, coma, and death.

## CLOSED BRAIN INJURY

Imagine watching a hockey game and a player is skating up the ice with the puck. An opponent body checks him, causing him to fall backward and smack his head on the ice. This action may cause the player to damage his brain in at least two places, even if there was no obvious external head injury.

**Here's how:** The initial blow to the head causes damage to the back part of the brain where the head first struck the ice (see image A). This type of injury is called a “coup.” Following this, the brain will bounce around in the skull, striking the side opposite to where it first struck (see image B). This is called the “countercoup.” The brain may continue to bounce and strike the skull in different places, depending on the severity of the initial hit (see image C).



## QUICK FACTS

Most traumatic brain injuries are a result of a hit to the head or body, also known as a closed brain injury or concussion.



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## WHAT HAPPENS WITH A TRAUMATIC BRAIN INJURY?

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Imagine you fall off your skateboard and hit your forehead on the ground.



This can damage the front of the brain and the force of the fall can also push your head backward.



This causes the brain to move around inside your skull, damaging both the front and back of the brain.

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## THE EXTENT OF BRAIN DAMAGE DEPENDS ON

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The type of injury.



The strength of the impact from the hit.



Where the damage occurred in the brain.

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## COMMON SYMPTOMS OF MILD BRAIN INJURY

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Headache



Dizziness



Blurred Vision



Balance Problem



Confusion



Drowsiness



Brief loss of Consciousness



Memory Problem



Anxiety



Depression



Concentration Problems



Fatigue



Sleep Problem



Mood Swings

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## A HEAD INJURY CAN CAUSE PROBLEMS WITH

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Thinking



Emotions



Physical functions



Behaviour



Sleep



Relationships

# ONCUSSIONS

When a person gets a head injury, the brain tends to move around inside the skull and bang against it. This can cause damage to different parts of the brain. When this happens, the person is said to have a concussion, which is a temporary loss of some normal brain functions.

## ■ IF YOU SUSPECT THAT YOU MAY HAVE A CONCUSSION

- Do**
- immediately stop what you are doing.
  - tell your coach or parent that you may have a concussion.
  - get a medical checkup as soon as possible.

- Do NOT**
- return to activity.
  - drink alcohol or take medication that can affect your brain.
  - drive.

## ■ REMEMBER

- 1** You can have a concussion even if you don't lose consciousness or pass out.
- 2** Never return to play the day of any head injury. Wait until a doctor gives permission.

When the brain is damaged, its usual functions can become disorganized. That means that it has trouble doing things as well as it used to. Symptoms can be short lived or they can last for a long time. People recover at different rates and it's often difficult to determine how long it will take to make a full recovery after a concussion.

Imagine you are doing a crossword puzzle and can't use certain letters. This would make it hard to generate meaningful words and complete the puzzle. When there is damage to certain parts of the brain, it can make it hard for the brain to absorb the information it needs, make sense of it, and then follow through with the best action or thought.

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“Since my concussion, my brain’s sensitivity to noise has increased and it’s hard to concentrate at school. After meeting with a psychologist, though, I’m now getting special help in my classes.”

– John

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## IF YOU THINK YOU HAVE A CONCUSSION

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- 1** See your doctor or go to an emergency room to get a medical evaluation as soon as possible. Do not drive yourself. Tell a responsible adult.
- 2** If symptoms are not improving, ask your doctor about making an appointment with a specialist, who knows about brain injury.
- 3** Don’t go back to your usual activities (such as sports) until your doctor gives you clearance to return.
- 4** Don’t get discouraged by negative things you hear or read about traumatic brain injuries. Everyone is different and every brain injury is different. Focus on what you can do to make your situation better.

Talk to your parents, teachers, and/or guidance counsellor. You may need more help at school.

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For more information, check out: [parachutecanada.org](http://parachutecanada.org) and [TeenMentalHealth.org](http://TeenMentalHealth.org)

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## QUICK FACTS

A concussion can be the result of a blow to the head, but it can also happen without a direct hit, like in a car accident if your head whips back and forth so fast that your brain crashes around inside your skull.



# CONCUSSION MANAGEMENT & RECOVERY

Your brain is an amazing organ capable of healing and recovering. The amount of healing and recovery depends on many things – the kind of injury, how severe it was, how you functioned before the injury, the kinds of treatment you receive and social supports you have.

## COMPONENTS OF GETTING WELL

- 1 POSITIVITY.** Focusing on the positives can make a huge difference in your emotional well-being.
- 2 PATIENCE.** Have patience with yourself. Recovery takes time.
- 3 SOCIAL SUPPORT.** Spend time with others. Don't isolate yourself but don't overdo it.
- 4 HEALTHY LIVING.** This means eating a healthy diet and not using drugs and alcohol.
- 5 REST.** Rest gives your brain time to repair itself. Get plenty of it. Remember that rest is both physical and mental.

Every brain is different. Recovery can occur quickly or it can take a long time – and sometimes, even after doctors think no more recovery is possible – it happens! Never give up at trying to get better. Focus on what you can do today that you couldn't do yesterday. Try not to compare yourself to how you were before the brain injury.

After concussion symptoms have disappeared, a gradual (medically supervised) return to play/activity/sports (often just called “Return to Play”) can begin.

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## STEPS TO RETURN TO PLAY/ACTIVITY

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a

No activity, complete rest. Once cleared by a doctor, go to step b.

b

Light aerobic exercise (e.g., walking, yoga, or swimming) – no resistance training.

c

Sport-specific exercise (e.g., running in soccer or skating in hockey).

d

Non-contact training drills.

e

Full contact practice BUT ONLY after medical clearance.

f

Return to game play.

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If concussion symptoms return during any step, you must stop what you are doing and see your doctor right away. Each step should take a minimum of one day. If symptoms return during any step, return to step one. You can not rush this process. Take the time you need to get well.





# RETURN TO SCHOOL

Sometimes going back to school after a concussion can be challenging. Here are some tips to help.

- 1** Talk with you teachers and consellers so that they understand about is happening and can make a plan with you.
- 2** If you are tired, rest. Identify a quiet place where you can take a break if you need it.
- 3** You may need extra time to write test or exams.
- 4** Noisy classroom can make it more difficult for you to focus.
- 5** You may need to take fewer courses, or switch to subjects that are less stressful for you.

Don't give up if things are difficult. Your teachers are there to help you be successful. Ask for their help if you need it.



# CONCUSSION PREVENTION

## HOW CAN CONCUSSIONS BE PREVENTED?

We probably will never be able to prevent all concussions, but there are many things that you can do to help decrease the risk of getting a concussion. Here are some things that you can do that decrease that risk:

- 1 Always wear a seat belt in the car.
- 2 Never use alcohol, drugs, or your cell phone when you're driving a car, bicycle, or any other vehicle.
- 3 Never get into a car if the driver has been using alcohol or drugs.
- 4 Wear appropriate head gear and safety equipment when playing sports. This includes when you are riding a bike, skateboard, scooter, or using rollerblades.
- 5 Use the right equipment for the game, you are playing.
- 6 Be sure to wear equipment that has been certified and fits correctly.
- 7 Follow safety rules and regulations.
- 8 Play safe and fair; practice good sportsmanship at all times.
- 9 Keep a record of any concussions or suspected concussions that you have.

## QUICK FACTS

Wearing a helmet can help prevent a head injury, but concussions can happen even if you're wearing a helmet.

# CONCUSSIONS & MENTAL HEALTH

## ■ DEPRESSION

Depression is one of the most common mental disorders in young people. Sometimes the effects of a concussion can mimic Depression and sometimes Depression can begin following a concussion.

### SYMPTOMS OF DEPRESSION MAY INCLUDE

- Feeling sad or low.
- Not enjoying or being interested in the things you normally like to do.
- Eating or sleeping much less or much more than normal.
- Feeling worthless, hopeless, or guilty (without a good reason).
- Having trouble concentrating or making decisions.
- Having thoughts of death and dying, including suicidal thoughts and plans.
- Moving restlessly or barely moving at all.
- Feeling really tired and lacking energy.
- Attempting suicide.

For more information about Depression, visit:

[www.teenmentalhealth.org](http://www.teenmentalhealth.org)

or watch our video: [youtu.be/i8EPzkkAiVw](https://youtu.be/i8EPzkkAiVw)

TMH speaks... Depression (Magazine):

[www.teenmentalhealth.org/toolbox/tmh-speaks-depression/](http://www.teenmentalhealth.org/toolbox/tmh-speaks-depression/)





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## ■ ANXIETY DISORDERS

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Anxiety Disorders are common mental illnesses in adolescence. They are more than just everyday worries and can be triggered by biological changes in the brain as a result of brain injury. It is important to differentiate an Anxiety Disorder from the normal concerns that you may have after a concussion.

### SYMPTOMS OF AN ANXIETY MAY INCLUDE

- Feeling excessively anxious or worried about a situation, activity, or object that would not normally trigger such intense feelings of anxiety. This anxiety is so intense that it interferes with the person's ability to live their life, making it difficult for him or her to go to school, work at a job, or succeed in relationships.
- There are different kinds of Anxiety Disorders. The most common are Panic Disorder, Generalized Anxiety Disorder and Social Anxiety Disorder.

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For more information about Anxiety Disorders, visit: [teenmentalhealth.org](https://teenmentalhealth.org) or watch our videos: [youtube.com/teenmentalhealth1](https://youtube.com/teenmentalhealth1)

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### DON'T GIVE UP; GO GET HELP!

If you suspect that a concussion is making you feel depressed or anxious, speak to a parent, school counsellor, or doctor, or call Kids Help Phone at 1-800-668-6868 before it starts to affect your school, work, or personal life.

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## QUICK FACTS

Young people may take longer to recover from a concussion than adults.



# COPING STRATEGIES

It's common to not feel like yourself after a concussion. Those feelings will get better over time as your brain heals. There are some things you can do to help your brain get well. Once your symptoms have improved and your doctor has given you permission to return to school or play, try some of these strategies to help you feel better:

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- 1 LIGHT EXERCISE.** Such as: 20-30 minutes of walking every day.
  - 2 HEALTHY EATING.** Enjoy healthy foods like fruits and vegetables and drink plenty of water.
  - 3 SOCIAL ACTIVITIES.** Spend some time each day with people you like and enjoy being around.
  - 4 TALK.** Talk to people you like and trust about how you are feeling. Ask for help if you need it.
  - 5 LIGHT.** Spend part of each day outside. Don't shut yourself in a gloomy room. Fresh air and sunlight are good for you.
  - 6 PACE YOURSELF.** You may need to take time outs from socializing, reading, doing school work, etc. If you need time to rest, take the time you need. It's not a sign of weakness to take time to heal. It's a sign of strength.
- 

## QUICK FACTS

Resting your brain is a good strategy for healing your brain.



**7 MUSIC, ART, MOVIES, AND BOOKS.** Listen to music that makes you feel good. If you enjoy it, use drawing, painting, or writing to express your feelings. Watch movies you like. Read a good book. Doing enjoyable activities can help you get back to feeling like yourself.

**8 AVOID DRUGS.** Avoid alcohol, tobacco, and all illegal drugs.

**9 SLEEP.** Try to get 8-9 hours of sleep every night. If you have trouble sleeping, try these tips:

- Unplug (no phone, TV, computer, tablet, or gaming device) at least an hour before bed. This isn't a punishment. These devices stimulate the brain and make it difficult for people to fall asleep and experience a restful sleep.
- If you aren't tired yet, do something quiet in your room until you feel tired— reading, drawing, and writing in a journal are all great options.
- Try to go to sleep and wake up within 30 minutes of the same time every day – even on the weekend. Our bodies can't tell the difference between a weekday and a weekend. Staying up late or sleeping in on the weekend can make it difficult to fall asleep and wake up during the week.
- Develop and follow a regular nightly routine before you go to bed (e.g., brush teeth, wash face, read for 15-30 minutes, etc.). A series of steps to follow every night cues our bodies that it's time to fall asleep.
- Try not to read, do homework, or text friends from bed. Your bed should be used for sleeping. This teaches your body that when you're in bed, you should be asleep.
- For more information on getting a good night's sleep, check out: [teenmentalhealth.org/toolbox/healthy-sleeping/](https://teenmentalhealth.org/toolbox/healthy-sleeping/)

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Do not return to play before your brain has fully healed. Getting another concussion can make full recovery more challenging.

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## QUICK FACTS

Complete brain rest may be one of the most important things you need to do to help brain healing after a concussion.

# Helping Others

## REMEMBER

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1

It's important to extend a helping hand to friends or family members who have had a brain injury. Try to be patient with them. It may take time for them to recover. your help can be very important.

2

Try to understand that the changes that may take place in their functioning, emotions, sleep patterns, and personality are the result of their injury. They need your support, not your impatience.

### BE SUPPORTIVE. RECOVERY CAN TAKE TIME.

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“My doctor said that alcohol can make my symptoms worse and make it take longer for me to recover from my brain injury. I wish I didn't drink and drive in the first place; I wouldn't have had this brain injury. I learned that lesson the hard way”

– Sam

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## QUICK FACTS

It may take days, months, or longer to return to play after a concussion. Teens with a concussion also need mental rest, including time away from school and other brain stimulating activities.

# RECOGNIZING A CONCUSSION

The following information is provided to help you, your friends, your parents, your teachers, your coaches, better recognize a concussion.

This information has been modified from the Pocket Concussion Recognition Tool and other concussion evaluation suggestions.

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To view the original Concussion Awareness Card:

[www.parachutecanada.org/downloads/resources/Pocket\\_CRT\\_Final.pdf](http://www.parachutecanada.org/downloads/resources/Pocket_CRT_Final.pdf)

To view the original Pocket Concussion Recognition Tool:

[www.parachutecanada.org/downloads/resources/SCAT3.pdf](http://www.parachutecanada.org/downloads/resources/SCAT3.pdf)

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## RECOGNIZE & REMOVE

Concussion should be suspected if one or more of the following clues are present:



### VISIBLE CLUES OF SUSPECTED CONCUSSION

ANY ONE OR MORE OF THE FOLLOWING VISUAL CLUES CAN INDICATE A POSSIBLE CONCUSSION.

- |   |  |
|---|--|
| ■ Loss of consciousness                       | ■ Unresponsive to questions  |
| ■ Lying motionless on ground / slow to get up | ■ Unusual behavior   |
| ■ Grabbing / clutching of head                | ■ Vomiting   |
| ■ Dazed, blank or vacant look                 | ■ Unsteady on feet / balance problems or falling over / incoordination |
| ■ Confused / not aware of what is happening   |  |

When I got a concussion playing football I went and sat down on the other team's bench! I was really confused.

– Stan



### SIGNS AND SYMPTOMS OF SUSPECTED CONCUSSION

PRESENCE OF ANY ONE OR MORE OF THE FOLLOWING SIGNS & SYMPTOMS MAY SUGGEST A CONCUSSION.

- |                         |                            |                            |
|-------------------------|----------------------------|----------------------------|
| ■ Balance problems      | ■ Difficulty remembering   | ■ Amnesia                  |
| ■ Nausea                | ■ Headache                 | ■ Feeling like "in a fog"  |
| ■ Drowsiness            | ■ Dizziness                | ■ Neck Pain                |
| ■ Irritability          | ■ Feeling slowed down      | ■ Sensitivity to noise     |
| ■ Fatigue or low energy | ■ Feeling Pressure in head | ■ Difficulty concentrating |
| ■ Nervous or anxious    | ■ Blurred vision           |                            |
| ■ Confusion             | ■ Sensitivity to light     |                            |

### 3

## MEMORY FUNCTION

FAILURE TO ANSWER ANY OF THESE QUESTIONS CORRECTLY MAY SUGGEST A CONCUSSION.

- "Where are you right now?"
- "What is the date today?"
- "Who scored last in this game?"
- "What team did you play against last game?"
- "Did your team win the last game?"
- "What does 3 minus 2 plus 5 equal?"

Any athlete with a suspected concussion should be IMMEDIATELY REMOVED FROM PLAY, and should not be returned to activity until they are assessed medically and given written permission to return to play (page 9). Athletes with a suspected concussion should not be left alone and should not drive a motor vehicle.

It is recommended that in all cases of suspected concussion, the player is referred to a medical professional for diagnosis and guidance as well as return to play decisions even if the symptoms resolve quickly.

■ Don't rush return to play. Rest is essential for healing.

## RED FLAGS: FOR IMMEDIATE MEDICAL ATTENTION

If ANY of the following are reported then the player should be safely and immediately removed from the field. If no qualified medical professional is available, consider transporting by ambulance for urgent medical assessment:

- Increasing neck pain
- Increasing agitation
- Vomiting
- Seizure or convulsion
- Weakness or tingling / burning in arms or legs
- Increasing confusion
- Increasing headache
- More unusual behaviours
- Double vision
- Increasing drowsiness

## REMEMBER

- In all cases of head injury, the basic principles of first aid (danger, response, airway, breathing, circulation) should be followed.
- Do not remove helmet (if present) unless trained to do so.
- Do not attempt to move the player (other than required for airway support) unless trained to do so.

# CONCUSSION IDENTIFICATION TOOL (CIT)

## ?HOW TO USE THE CIT

Mark any item with an ☐. Even one ☐ may indicate the player could have suffered a concussion. If so, remove them from play and monitor. Send for medical assessment as appropriate.

1

### VISIBLE CLUES OF SUSPECTED CONCUSSION

ANY ONE OR MORE OF THE FOLLOWING VISUAL CLUES CAN INDICATE A POSSIBLE CONCUSSION.

- |  |   |
|--|---|
| <input type="checkbox"/> Loss of consciousness                       | <input type="checkbox"/> Unresponsive to questions  |
| <input type="checkbox"/> Lying motionless on ground / slow to get up | <input type="checkbox"/> Unusual behavior   |
| <input type="checkbox"/> Grabbing / clutching of head                | <input type="checkbox"/> Unsteady on feet / balance problems or falling over / incoordination |
| <input type="checkbox"/> Dazed, blank or vacant look                 |   |
| <input type="checkbox"/> Confused / not aware of what is happening   |   |

2

### SIGNS AND SYMPTOMS OF SUSPECTED CONCUSSION

PRESENCE OF ANY ONE OR MORE OF THE FOLLOWING SIGNS & SYMPTOMS MAY SUGGEST A CONCUSSION.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Balance problems      | <input type="checkbox"/> Difficulty remembering   | <input type="checkbox"/> Amnesia                  |
| <input type="checkbox"/> Nausea                | <input type="checkbox"/> Headache                 | <input type="checkbox"/> Feeling like "in a fog"  |
| <input type="checkbox"/> Drowsiness            | <input type="checkbox"/> Dizziness                | <input type="checkbox"/> Neck Pain                |
| <input type="checkbox"/> Irritability          | <input type="checkbox"/> Feeling slowed down      | <input type="checkbox"/> Sensitivity to noise     |
| <input type="checkbox"/> Fatigue or low energy | <input type="checkbox"/> Feeling Pressure in head | <input type="checkbox"/> Difficulty concentrating |
| <input type="checkbox"/> Nervous or anxious    | <input type="checkbox"/> Blurred vision           |   |
| <input type="checkbox"/> Confusion             | <input type="checkbox"/> Sensitivity to light     |   |

3

### MEMORY FUNCTION

FAILURE TO ANSWER ANY OF THESE QUESTIONS CORRECTLY MAY SUGGEST A CONCUSSION.

- |  |  |
|--|--|
| <input type="checkbox"/> "Where are you right now?"      | <input type="checkbox"/> "What team did you play against last game?" |
| <input type="checkbox"/> "What is the date today?"       | <input type="checkbox"/> "Did your team win the last game?"          |
| <input type="checkbox"/> "Who scored last in this game?" | <input type="checkbox"/> "What does 3 minus 2 plus 5 equal?"         |

4

### RED FLAGS: FOR IMMEDIATE MEDICAL ATTENTION

If ANY of the following are reported then the player should be safely and immediately removed from the field. If no qualified medical professional is available, consider transporting by ambulance for urgent medical assessment:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Increasing neck pain  | <input type="checkbox"/> Weakness or tingling / burning in arms or legs | <input type="checkbox"/> Unusual behaviours    |
| <input type="checkbox"/> Increasing agitation  | <input type="checkbox"/> Increasing confusion                           | <input type="checkbox"/> Double vision         |
| <input type="checkbox"/> Vomiting              | <input type="checkbox"/> Increasing headache                            | <input type="checkbox"/> Increasing drowsiness |
| <input type="checkbox"/> Seizure or convulsion |   |  |



# REFERENCES & FURTHER READING

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FOR MORE INFORMATION ABOUT CONCUSSIONS AND YOUNG ATHLETES, CHECK OUT THESE RESOURCES

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## ParachuteCanada.org

Parachute aims to reduce preventable injury to ensure that Canadian youth, families, and adults are able to live long and healthy lives.

Parachute merged with ThinkFirst.ca, a website and organization dedicated to teaching school-aged children and youth, sports teams, and community volunteers to safely participate in the activities they enjoy.

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## Centers for Disease control and Prevention ([www.cdc.gov](http://www.cdc.gov))

The CDC works to protect public health and safety by providing information to enhance health decisions. It also promotes health through partnerships with state health departments and other organizations.

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## Other Online Resources

General information about the teen brain and teen mental health:

[teenmentalhealth.org](http://teenmentalhealth.org)

[brainline.org](http://brainline.org)

Brain injury guides for educators:

[www.bced.gov.bc.ca/specialed/docs/moe\\_abi\\_resource\\_rb0116.pdf](http://www.bced.gov.bc.ca/specialed/docs/moe_abi_resource_rb0116.pdf)

Brain Injury Association of Canada

[biac-aclc.ca](http://biac-aclc.ca)

Brain injury and school: a problem solving system for students with brain injury:

[projectlearn.net](http://projectlearn.net)

Medical care after brain injury

[tbirecoverycenter.org/treatment.htm](http://tbirecoverycenter.org/treatment.htm)

Sport Concussion Assessment Tool (SCAT3)

[sportsclinic.ca/resources/TSC-SCAT3-Assessment.pdf](http://sportsclinic.ca/resources/TSC-SCAT3-Assessment.pdf)

Brain Injury Alliance New Jersey (Articles and Publications)

[www.bianj.org/brain-injury-articles-and-publications](http://www.bianj.org/brain-injury-articles-and-publications)

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## Books

Ashley, M.J. (2010). Traumatic brain injury: rehabilitation, treatment, and case management, 3rd ed. Boca Raton, FL: CRC Press.

McCrea, M. (2008). Mild traumatic brain injury and post-concussion syndrome: the new evidence base for diagnosis and treatment. American Academy of Clinical Neuropsychology. New York: Oxford University Press.

Roy-Bornstein, C. Crash. (2012). Morris Publishing Group, USA.

Silver, J.M., McAllister, T.W., & Yudofsky, S.C. (2005). Textbook of traumatic brain injury. Arlington, VA: American Psychiatric Publishing, Inc.

Patient: Family Education Working Group, Calgary Brain Injury Strategy. The Brain Injury Book. [www.albertahealthservices.ca/hp/if-hp-cbi-pf-coping-brain-injury-booklet.pdf](http://www.albertahealthservices.ca/hp/if-hp-cbi-pf-coping-brain-injury-booklet.pdf)

Mason, M. P. (2008). Head cases: Stories of brain injury and its aftermath (6th ed.). New York: Farrar, Straus and Giroux.

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## Articles

Laker, S. (2011). Return to play decisions. Physical Med Rehabilitation Clinical, 22: 619-634.

Harmon, K.G., et al. (2013). American Medical Society for Sports Medicine Position Statement: Concussion in Sport. BR J Sports Med. 47 (1): 15-26.

McCrory, P., Meeuwisse, WH, Aubry, M, et al. (2013). Consensus statement on concussion in sport: The 4th International Conference on Concussion in Sport held in Zurich, November 2012. British Journal of Sports Medicine, 47: 250-258.

Powell, K. (2006). How does the teenage brain work? Nature, 442(24): 865-867.

Grady, M. F. (2010) Concussion in the adolescent athlete. Current Problems Pediatric Adolescent Health Care. 40 (7): 154-169.

# Notes



