

Elementary School (Grade 3-5) Concussion Modules Instructor’s Script with Answers, Discussion Points, and Reference Guide

Instructor’s Information:

The following instructor’s script includes the scenarios, questions, and answers for the Elementary School (Grade 3-5) Concussion Modules. Discussion points are provided for each module as a teaching tool to consolidate the concepts presented.

Instructors are encouraged to preview the presentation and to take into consideration age and cognitive appropriate messaging (e.g., vocabulary) when presenting scenarios or providing information and instruction on concussions to their students.

From Ontario Ministry of Education: Policy/Program Memorandum 158 SCHOOL BOARD POLICIES ON CONCUSSION, - September 25, 2019

‘The Ministry of Education considers the concussion protocol outlined in the Ontario Physical Activity Safety Standards in Education to be the minimum standard available at Link: <https://safety-beta.ophea.net/concussions>

‘The Ministry of Education expects all school boards in Ontario to develop and maintain a policy on concussion.’

‘School Administrators, teachers, coaches are to refer to their school board/school/athletic organization concussion protocol, policy and procedures.

Additional information concerning concussions can be found at www.sportconcussionlibrary.com.

Prior to using any additional information the instructor should review all videos or extra information material to ensure that they are relevant to the age and academic level of their audience.

This program is meant to be a learning tool based on current literature, and is not meant as a certification course or as a basis of diagnosis or decision making.

Signs and symptoms of a suspected concussion can be identified by a designated and specifically-trained first responder. Specifically designated and trained first responders may include teachers, students, and parents, as well as professional first responders such as trainers, therapists, paramedics, nurse practitioners, and medical doctors.

The designated and specifically trained first responder may reference the Ontario Physical Activity Safety Standards in Education. available at: <https://safety-beta.ophea.net/concussions>

The minimum standard for the diagnosis of a concussion is from a medical doctor or nurse practitioner, who would follow-up with informed medical management. Due to the complexity of this serious brain injury, a consult with a medical concussion specialist (e.g., neurosurgeon, neurologist, primary care sports medicine doctor with added qualification) should be sought whenever possible.

Elementary School (Grade 3-5) Concussion Modules

Script Introduction:

Concussions are serious brain injuries.

You and your friends can keep each other safe, by knowing what a concussion is and learning to identify the signs and symptoms of a suspected concussion.

A concussion:

- is a traumatic brain injury that causes changes in how the brain functions, leading to signs and symptoms that can emerge immediately or in the hours or days after the injury. It is possible for symptoms to take up to 7 days to appear;
- signs and symptoms can be physical (e.g., headache, dizziness), cognitive (e.g., difficulty concentrating or remembering), emotional/behavioural (e.g., depression, irritability) and/or related to sleep (e.g., drowsiness, difficulty falling asleep);
- may be caused by a jarring impact to the head, face, neck or body, with an impulsive force transmitted to the head, that causes the brain to move rapidly within the skull;
- can occur even if there has been no loss of consciousness, (in fact most concussions occur without a loss of consciousness);
- cannot normally be seen on X-rays, standard CT scans or MRIs;
- and is typically expected to result in symptoms lasting 1-4 weeks in children and youth (18 years or under), but in some cases symptoms may be prolonged.

Signs and symptoms of a suspected concussion can be identified by a designated and specifically-trained first responder.

It is important for your immediate and long-term health to self-report any signs or symptoms of a concussion to your teacher/coach/trainer/parents. It is also important for you to report any signs or symptoms of a concussion that you observe from a friend/teammate to your teacher/coach/trainer/parents. Your friend/teammate may not be in a position to recognize the signs and symptoms at the time.

Signs and/or symptoms can appear immediately or take hours or even days to exhibit.

There may be an incident when after a blow to the body or head where signs or symptoms are not reported by the student or identified by the teacher/coach, after referring to the tool to identify a suspected concussion, the teacher/coach suspects a concussion either because of the significance of the hit or knowing that signs and symptoms can take hours or even days to exhibit themselves.

In this situation the teacher/coach will:

- Remove the student from physical activity for 24 hours
- Have student continue with school and monitor student while at school
- Contact parent/guardian and provide information on:
 - the incident
 - importance of no physical activity for 24 hours
 - monitoring student while at home for 24 hours.
- Provide parents with Sample Tool to Identify a Suspected Concussion in case signs/symptoms appear and urgent medical assessment is needed
- Inform principal of incident

Parent/guardian and school will:

- Monitor the student for 24 hours for delayed sign(s) or symptom(s)

If NO for signs or symptoms:

- Parent reports to principal and student permitted to resume physical activity.

If YES for signs or symptoms:

- If at school – school informs parent/guardian that child needs urgent medical assessment.
- If at home – parent/guardian takes child for urgent medical assessment along with Sample Tool to Identify a Suspected Concussion.

The minimum standard for the diagnosis of a concussion is from a medical doctor or nurse practitioner, who would follow-up with informed medical management. Due to the complexity of this serious brain injury, a consult with a medical concussion specialist (e.g., neurosurgeon, neurologist, primary care sports medicine doctor with added qualification) should be sought whenever possible.

Student Module Instructions

You will be presented with series of activity and sport scenarios to watch.

You will be asked to select the best answer from a list of options presented.

The correct answer will follow to assist you in learning about concussions.

What you learn today may keep you and your friends safe and might even save a life!

Module 1:

SKATEBOARDER

Brent fell and **hit his head** on the ground while doing a skateboarding trick. He wants to keep practicing but he has a **headache** that will not go away. Brent's family thinks that he may have a **concussion**.

What is a concussion?

Answer Choices:

1. A concussion is a serious brain injury.
2. A concussion can cause a short-term or permanent change in the way the brain works.
3. A concussion is caused when the brain moves around quickly in the head.
4. A concussion may affect your memory, balance, decision-making, and emotions.
5. All of the above.

Module 1: The answer is 5. All of the above.

Concussions are serious brain injuries.

A concussion is caused either by a **jarring impact to the head, face or neck** or by a **jarring impact to the body** that **transmits a force to the head**, that causes the **brain to move rapidly within the skull**.

Concussions can cause a **short-term or permanent change** in the way the **brain** works. Concussions may **affect** your **memory, balance, decision-making, and feelings/emotions**.

The **minimum standard** for diagnosis of a **concussion** is from a **medical doctor, nurse practitioner**, or (whenever available) **medical concussion specialist**, who would follow-up with **informed medical management**.

Module 1 Discussion Points

Scenario: A student hit their head, resulting in persisting headaches, and voices a common desire to return to activity.

- Describe that a concussion, resulting from the rapid movement of the brain, can happen from a jarring impact to the head or body.
- It is important to state that a concussion is a serious brain injury; there is no such thing as a “mild” or “moderate” concussion.
- Signs and Symptoms of a Concussion:
Resources: Ontario Physical Education Safety Guidelines (available at <https://safety-beta.ophea.net/concussions>) Sample Tool to Identify a Suspected Concussion.
Parachute - Concussion Recognition Tool 5 (available <http://bjism.bmj.com/content/bjsports/51/11/872.full.pdf>)
- *Symptoms* of a concussion are what the student experiences, and what a student is saying, such as ringing in the ears or saying “I feel sick and dizzy.”
- *Signs* of a concussion are what a student is observed to exhibit, such as being excessively emotional, stumbling, or demonstrating poor concentration/memory.
- It is important that signs and/or symptoms of a suspected concussion are recognized, diagnosed, and treated properly. If the signs and symptoms of an initial concussion are not recognized the student athlete may suffer long-lasting or permanent brain injuries, known as Post-Concussion Syndrome (PCS). If someone is hit a second time before their first concussion has gone, they may experience rapid brain swelling known as Second Impact Syndrome (SIS), which can lead to death.
- Describe the effects a concussion can have on cognitive and physical function: memory, judgment, social conduct, reflexes, speech, balance, and coordination.
- Inform students the importance of knowing and recognizing some of the common signs and symptoms of a suspected concussion.
- Stress the importance for the student’s immediate and long-term health to self-report any signs or symptoms of a concussion to their teacher/coach/parents. It is also important for the student to report any signs or symptoms of a concussion that they observe from a friend/teammate to their teacher/coach.
- Your friend/teammate may not be in a position to recognize the signs and symptoms at the time Signs and symptoms of a suspected concussion can be identified by a designated and specifically-trained first responder.

The minimum standard for the diagnosis of a concussion is from a medical doctor or nurse practitioner, who would follow-up with informed medical management. Due to the complexity of this serious brain injury, a consult with a medical concussion specialist (e.g., neurosurgeon, neurologist, primary care sports medicine doctor with added qualification) should be sought whenever possible.

Module 2:

PLAYGROUND ACCIDENT

Sara accidentally **ran into a goal post** while playing soccer with her friends during recess. The next day, Sara told her friend that she has **ringing in her ears, as well as a headache**. Sara expresses **anger** when she insists that she did not hit her head. She also says that the **ringing in her ears** is lasting longer than the last time she **hit her head**.

Which of the following signs or symptoms may indicate a concussion?

Answer Choices:

1. Having a headache, feeling dizzy, experiencing foggy or fuzzy thoughts, or seeing spots of light.
2. Being bothered by bright lights and loud sounds, hearing ringing in the ears, and feeling tired or like you are going to throw up.
3. Not being sure where you are, or feeling very angry/sad.
4. All of the above.

Module 2: The answer is 4. All of the above.

A **sign** is something that is **observed by another person**. A **symptom** is something **the student will feel and report**.

Signs and symptoms of a brain injury can occur **immediately**, or can present hours to days later.

A student who has suffered a concussion may admit to **symptoms**: a **headache, feeling dizzy or dazed, seeing spots of light** or being **bothered by bright lights, hearing ringing in the ears, feeling tired, getting sick to their stomach, getting angry easily, has thoughts that are foggy or fuzzy**, and is **not sure where they are**.

You may observe (**signs**) that the person who has suffered a **concussion** has **poor balance and coordination, slow and slurred speech, poor ability to focus or concentrate, difficulty answering questions, stares into space** or **does not look at you** when you talk to them, **decreased ability to play games or sports**, and unusual **changes** in the way the **person feels or acts** toward others.

If you have already had a **concussion**, you may be at **risk** for **second concussion**. Signs and symptoms of a suspected concussion can be **identified** by a **designated** and **specifically-trained first responder**.

The **minimum standard** for diagnosis of a concussion is from a **medical doctor, nurse practitioner**, or (whenever available) **medical concussion specialist**, who would follow-up with **informed medical management**.

Concussions can occur:

- From any **jarring impact to the head, face, or jaw**;
- From a **jarring impact to the body (from behind or any other angle)**;
- From a **sideways jarring impact to the head**.

Module 2 Discussion Points

Scenario: The student suffers a hard hit to the body, which results in hearing ringing in the ears that is similar to a previous experience. Excessive anger or other emotions are also mentioned, which can result from either frustration or the brain injury itself.

- *Symptoms* of a concussion are what the student experiences, such as ringing in the ears or saying “I feel sick and dizzy.”
- *Signs* of a concussion are what a student is observed to exhibit, such as being excessively emotional, stumbling, or demonstrating poor concentration/memory.
- Signs and symptoms of a suspected concussion can be identified by a designated and specifically-trained first responder.
- Inform students the importance of knowing and recognizing some of the common signs and symptoms of a suspected concussion.
- Stress the importance for the student’s immediate and long-term health to self-report any signs or symptoms of a concussion to their teacher/coach/parents. It is also important for the student to report any signs or symptoms of a concussion that they observe from a friend/teammate to their teacher/coach.
- Your friend/teammate may not be in a position to recognize the signs and symptoms at the time

Note that “ringing in the ears” that lasts longer than previous times is a good point <http://safety.ophea.net> of discussion concerning the dangers of unreported concussions. Unreported concussions can lead to a delayed diagnosis, cumulative injuries, or significant illness/death brought on by Second Impact Syndrome (SIS). Students should therefore report all suspected concussions so that they or their friend can be taken in for proper medical diagnosis and treatment. This question lists some possible signs and symptoms of a concussion; any ONE can indicate a concussion has occurred. The instructor may reference the Ontario Physical Activity Safety Standards in Education (available at <http://safety.ophea.net>) Sample Tool to Identify a Suspected Concussion. OR Concussion Recognition Tool 5 (available <http://bjism.bmj.com/content/bjsports/51/11/872.full.pdf>). (These tools are educational references only meant for the development of instructor’s knowledge. These tools should not be used for diagnostic purposes, but to assist with the initial identification of a possible concussion.)

Review that concussions can occur from any jarring impact to the head, face, neck or body.

Stress the importance of keeping a history of having previous concussions, which are thought to be cumulative in nature. (“Symptoms lasting longer than previous times.”)

Make students aware that the signs and symptoms of a concussion can have a delayed appearance.

Signs and/or symptoms can appear immediately or take hours or even days to exhibit.

There may be an incident when after a blow to the body or head where signs or symptoms are not reported by the student or identified by the teacher/coach, after referring to the Tool to Identify a Suspected Concussion, the teacher/coach suspects a concussion either because of the significance of the hit or knowing that signs and symptoms can take hours or even days to exhibit themselves.

In this situation the teacher/coach will:

- Remove the student from physical activity for 24 hours
- Have student continue with school and monitor student while at school
- Contact parent/guardian and provide information on:
 - the incident
 - importance of no physical activity for 24 hours
 - monitoring student while at home for 24 hours.
- Provide parents with Sample Tool to Identify a Suspected Concussion to assist with monitoring and Sample Medical Concussion Assessment Form in case signs/symptoms appear and urgent medical assessment is needed
- Inform principal of incident

Parent/guardian and school will:

- Monitor the student for 24 hours for delayed sign(s) or symptom(s)

If NO for signs or symptoms:

- Parent reports to principal and student permitted to resume physical activity.

If YES for signs or symptoms:

- If at school – school informs parent/guardian that child needs urgent medical assessment.
- If at home – parent/guardian takes child for urgent medical assessment along with Sample Tool to Identify a Suspected Concussion and Sample Medical Concussion Assessment Form.

The minimum standard for the diagnosis of a concussion is from medical doctor or nurse practitioner, who would follow-up with informed medical management. Due to the complexity of this serious brain injury, a consult with a medical concussion specialist (e.g., neurosurgeon, neurologist, primary care sports medicine doctor with added qualification) should be sought whenever possible.

Module 3:

DANCER

Kenesha suffered a **concussion a year ago**. She recovered and was cleared by a **medical doctor** to return to physical activity after completing the **Return to School Plan that addresses the Return to Learn and Return to Physical Activity stages** two months after the concussion was diagnosed. Kenesha was recently practicing her dance routine with a friend for an upcoming school concert and they accidentally **collided**. Kenesha immediately admitted that she had a **headache**, felt a lot of **pressure in her head**, could **not see very well**, and felt like she was going to **throw up**.

Kenesha believes she did not suffer another **concussion** because she did not **hit her head** and she did not black out. She expresses **anger** when her friends insist that she should tell an adult about how she feels.

Do you think Kenesha suffered a concussion?

1. Yes.

Or

2. No.

Module 3: The answer is 1. Yes.

Concussions can occur:

- From any **direct hit to the head, face, or jaw**;
- From a **hit to the body (from behind or any other angle)**;
- From a **sideways hit to the head**.

If you have already had a concussion, **you may be at risk for another one**.

The **minimum standard** for diagnosis of a **concussion** is from a **medical doctor, nurse practitioner**, or (whenever available) **medical concussion specialist**, who would follow-up with **informed medical management**

Module 3 Discussion Points

Scenario: The student athlete exhibits the signs and symptoms of a concussion after a physical collision that did not involve direct head contact.

- *Symptoms* of a concussion are what the student experiences, such as ringing in the ears or saying “I feel sick and dizzy.”
- *Signs* of a concussion are what a student is observed to exhibit, such as being excessively emotional, stumbling, or the demonstrating poor concentration/memory.
- Signs and symptoms of a suspected concussion can be identified by a designated and specifically-trained first responder.
- Inform students the importance of knowing and recognizing some of the common signs and symptoms of a suspected concussion.
- Stress the importance for the student’s immediate and long-term health to self-report any signs or symptoms of a concussion to their teacher/coach/parents. It is also important for the student to report any signs or symptoms of a concussion that they observe from a friend/teammate to their teacher/coach.
- Your friend/teammate may not be in a position to recognize the signs and symptoms at the time

The question in this module lists possible signs and symptoms of a concussion; any ONE can indicate a concussion has occurred. The instructor can refer to the signs and symptoms inventory in the [Sport Concussion Assessment Tool – 3rd Edition](#) (page 2) or refer to the [Ontario Physical Activity Safety Standards in Education](#) (Sample Tool to Identify a Suspected Concussion) OR Concussion Recognition Tool 5 (available <http://bjsm.bmj.com/content/bjsports/51/11/872.full.pdf>). Teachers, coaches, administrators, or trainers, therapists, and first responders should also refer to their school/board/sport organizations concussion protocol, policy, or procedure.

Review that concussions can occur from a jarring impact to the head, face, or jaw; a jarring impact to the body from behind (or any other) angle; or a sideways jarring impact to the head, face, neck or body.

Stress the importance of keeping a history of experiencing previous concussions, which are thought to be cumulative in nature.

Concussion symptoms or signs can reoccur when training is restarted, despite completing medically-supervised Return to School and Return to Physical Activity protocols. (See Module 5.) The Ontario Physical Health and Education Association (Ophea) guidelines may be accessed [here](#).

The minimum standard for diagnosis of a concussion is from a medical doctor, nurse practitioner, or (whenever available) medical concussion specialist, who would follow-up with informed medical management.

Module 4:

PLAYGROUND EQUIPMENT FALL

Joseph **hit his head** hard on the ground after accidentally falling from a playground swing. After he hit the ground, **he lay still** for a few minutes before being helped up by his friend. Joseph said that he felt he had **blacked out /lost consciousness**, he **felt foggy**, his **neck hurt**, he had a **headache**, and that he was **not sure where he was**. He did not want to **tell the teacher** and went to the washroom alone.

What should you do when you observe someone who you think has blacked out or lost consciousness?

Answer Choices:

1. Tell them that they will be okay, and to take a few minutes to rest before returning to physical activity.

Incorrect: Return to physical activity should NOT occur if there has been a loss of consciousness for any length of time, or if a concussion is suspected. Immediately inform a teacher/adult of what you saw and what your friend told you about how they felt.

2. Tell them to tell a teacher/adult what happened and how they felt after falling, as well as telling a teacher/adult about what you saw and what your friend told you.

Correct! It is important for a student to **immediately alert the teacher or an adult** about the observed injury as the injured student may not report their injury. The teacher/adult is to **call 911** for **emergency medical assistance** and follow the Board of Education's **Emergency Action Plans and Concussion Protocol**. Do not allow anyone to move the person and ensure the neck is protected. Allow an individual with **first responder** training to **assist** and **direct care to the injured person**. Do not administer medication (unless the student requires medication for other conditions – e.g., insulin for a student with diabetes, inhaler for asthma).

3. Stay with your friend and suggest that they take medicine for their headache.

Incorrect: Someone who might have a concussion should not be left alone after their injury. It is important to alert the teacher or an adult about the observed injury as your friend may not be able to report it themselves. The adult should call 911 for emergency medical assistance, based on Board of Education's Emergency Action Plans and Concussion Protocol. Do not allow anyone to move the injured student and ensure the neck is protected. Allow an individual with first responder training to assist and direct care to the injured person. No medication should be given to the person before being evaluated by a doctor or nurse practitioner, as the administration of medication before a medical evaluation could alter the diagnosis.

Module 4 Discussion Points

A student fell from a swing sustaining a probable concussion and a loss of consciousness. However, the observed incident was not immediately reported to a responsible adult.

- Review with students the importance of knowing and recognizing some of the common signs and symptoms of a suspected concussion.
 - Stress the importance for the student's immediate and long-term health to self-report any signs or symptoms of a concussion to their teacher/coach/parents. It is also important for the student to report any signs or symptoms of a concussion that they observe from a friend/teammate to their teacher/coach.
 - Your friend/teammate may not be in a position to recognize the signs and symptoms at the time.
- The adult is to call 911 for emergency medical assistance and follow the Board of Education's Emergency Action Plans and Concussion Protocol. Do not allow anyone to move the person and ensure the neck is protected. Allow an individual with first responder training to assist and direct care to the injured person.
- Do not administer medication (unless the student requires medication for other conditions – e.g., insulin for a student with diabetes, inhaler for asthma).
- Signs and symptoms of a suspected concussion can be identified by a designated and specifically-trained first responder.
- Discussion of other Red Flag signs and symptoms where the immediate action is to call 911 for emergency medical assistance.
- (Reference OPASSE Sample Tool to Identify a Suspected Concussion – Red Flags)
- The minimum standard for the diagnosis of a concussion is from a medical doctor or nurse practitioner, who would follow-up with informed medical management. Due to the complexity of this serious brain injury, a consult with a medical concussion specialist (e.g., neurosurgeon, neurologist, primary care sports medicine doctor with added qualification) should be sought whenever possible.
- Only a small percentage of concussions involve a recalled black out/loss of consciousness. The loss of consciousness can be for any length of time.
- Allowing a student to return to physical activity too soon after a suspected concussion may risk the occurrence of a second concussion in close proximity to the initial event. This is also known as Second Impact Syndrome (SIS), which is the uncontrollable swelling of the brain leading to possible death.

Module 5:

SCOOTER INJURY

Jamal was attempting a new scooter trick with his friends. He fell off his scooter and **hit his head** on the ground. Jamal's **doctor** told him to **rest** and **not to participate in games at recess**, or during his **physical education class**. Several weeks later Jamal's **doctor** allowed him to return to physical activity at school, after he had completed the **Return to School Plan that addresses the Return to Learn and Return to Physical Activity stages**. When Jamal returned to physical activity during recess, he admitted that he felt **lightheaded** and **dizzy**. As his friend, you notice Jamal is **not speaking properly** and having **difficulty concentrating**. Jamal is **angry** when you tell him that you don't think he should continue to play games at recess.

As Jamal's friend, what should you do next?

Answer Choices:

1. Try to talk to Jamal and explain why you are worried.

Incorrect: Talking to the student exhibiting signs of a concussion and expressing your concerns is good. However, your friend may not realize that they are acting strangely and so may not self-report a possible concussion.

2. Talk to a teacher because you think Jamal may not be better.

Correct!

3. Leave Jamal alone.

Incorrect: Everyone has a responsibility to report a suspected concussion to a teacher, coach, or responsible adult.

Module 5: The answer is 2.

- Jamal needs to be **diagnosed** by a **medical doctor, nurse practitioner**, or (whenever possible) **medical concussion specialist**.
- **Concussion signs or symptoms** can **reoccur** when physical activity is restarted, despite completing medically-supervised **Return to School Plan that addresses the Return to Learn and Return to Physical Activity stages**.
- **Anger and acting differently toward others** are **common signs** that someone has a concussion.
- It is important to **watch** a person **after a suspected concussion**, as the signs and symptoms may **appear later**. It is **dangerous to return** to physical activity **too soon** after a **concussion**.
- A concussion is a serious brain injury and may cause short-term or **permanent change in the way the brain works**. Concussions may **affect your memory, balance, decision-making, and feelings/emotions**.

Module 5 Discussion Points

Scenario: A student suffered a concussion, apparently recovered, and was cleared to return to physical activity by a doctor. The student exhibits signs that a concussion has reoccurred when they return to physical activity during recess or when playing sports.

- Concussion symptoms or signs can reoccur when physical activity is restarted, despite completing medically-supervised Return to School and Return to Physical Activity protocols. (See module 7.) Ontario Physical Activity Safety Standards in Education concussion protocol may be accessed [here](#).
- To prevent the student from suffering additional concussions while recovering from a preexisting injury, it is important for those around the student to be aware of and report any signs or symptoms they observe or hear expressed by the injured student.
- Inform students the importance of knowing and recognizing some of the common signs and symptoms of a suspected concussion.
- Stress the importance for the student's immediate and long-term health to self-report any signs or symptoms of a concussion to their teacher/coach/parents. It is also important for the student to report any signs or symptoms of a concussion that they observe from a friend/teammate to their teacher/coach. Your friend/teammate may not be in a position to recognize the signs and symptoms at the time
- Prolonged signs or symptoms may indicate Post-Concussion Syndrome (PCS) or Second Impact Syndrome (SIS), which may result from recurrent concussions occurring close together. PCS involves a prolonged period of concussion symptoms that persist for days, weeks, months, and sometimes even permanently. Examples of PCS symptoms are: headaches, dizziness, fatigue, irritability, sensitivity to sound and light, and memory and concentration impairment. Allowing a student to return to physical activity too soon after a concussion may also put them at risk for SIS, which commonly occurs as a result of a second concussion in close proximity to the initial event. SIS is the uncontrollable swelling of the brain, which may lead to death.
- Strategies to address emotional reactions (e.g., depression, changes in self-worth) related to prolonged PCS may include: providing coping skills, offering support, keeping an optimistic outlook, avoiding isolation, and accessing professional help to assist with recovery.

Module 6:

TV PROFESSIONAL HOCKEY PLAYER

Branka was watching a hockey game on TV. She saw one of her favourite players get **hit on the head** and fall to the ice. The injured player had to be helped back to the bench by his teammate.

The TV announcer later reported that Branka's favourite player suffered a **medically-diagnosed concussion** and would not return to play in the game.

Branka believed the helmet and mouth guard that her favourite hockey player was wearing would fully protect them against a concussion.

Can a good helmet or mouth guard prevent a concussion?

Answer Choices:

1. Yes.

Or

2. No.

Module 6: The answer is 2. No.

Helmets do not prevent concussions. They decrease **skull fractures** and **brain bleeds**.

Mouth guards do not prevent concussions. They **lessen injuries** to the **teeth and the jaw**.

Most individuals who sustain a **medically-diagnosed concussion** do not report a blackout/loss of consciousness.

Module 6 Discussion Points

Scenario: Branka believed that equipment (helmet and mouth guard) protected hockey players fully against concussion. She is surprised when her favourite hockey player who wears a helmet and mouthguard suffers a medically diagnosed concussion.

- Review the importance of reporting concussion symptoms to others.
- Stress that there is no scientific information that either mouth guards or helmets prevent concussion. Rather, they are designed to prevent skull fractures or brain bleeds, as well as jaw or dental fractures.
- Most individuals who sustain a medically-diagnosed concussion do not report experiencing a blackout/loss of consciousness.

Module 7:

BASEBALL PLAYER

Ajay was playing catch with his friend when he was accidentally **hit** by a baseball in the **head**. He had a large bruise on his forehead and his doctor diagnosed him a **concussion**. Ajay likes to play sports, but he was told by his doctor to **rest** to start his **recovery**.

There are **many stages** that the **medical doctor, nurse practitioner**, or (whenever available) **medical concussion specialist** will have Ajay complete to **recover** from a **concussion**, beginning with the **Return to School Plan that addresses the student's Return to Learn (RTL) and Return to Physical Activity (RTPA) stages**.

1. True.

Or

2. False.

Module 7: The answer is 1. True.

A student with a diagnosed concussion needs to follow an individualized and gradual **Return to School Plan that addresses the student's Return to Learn (RTL) and Return to Physical Activity (RTPA) stages**. In developing the Plan, the RTL process is individualized to meet the particular needs of the student, as there is not a pre-set plan of strategies and/approaches to assist a student return to their learning activities. In contrast the RTPA Plan follows an internationally recognized graduated approach.

The management of a student concussion is a shared responsibility, requiring regular communication, between the home, school (Collaborative Team) and outside sports team (where appropriate) with consultation from the student's medical doctor or nurse practitioner or (whenever available) medical concussion specialist and/or other licensed healthcare providers (e.g., nurses, physiotherapists, chiropractors and athletic therapists).

There are two parts to a student's Return to School Plan that address the Return to Learn and Return to Physical Activity stages. This first part occurs at home and prepares the student for the second part which occurs at school.

Home resource: OPASSE (<https://safety-beta.ophea.net/concussions>) Sample Home Concussion Management Form (RTL and RTPA).

School resource: OPASSE (<https://safety-beta.ophea.net/concussions>) Sample School Concussion Management Form (RTL and RTPA).

While the RTL and RTPA stages are inter-related they are not interdependent. A student's progress through the stages of RTL is independent from their progression through the RTPA stages. However, students must have completed Stage 4a and 4b of RTL and Stage 4 of RTPA and have obtained Medical Clearance prior to beginning Stage 5 of RTPA.

Until a student has successfully completed all stages in the RTL plan they must not participate in the following physical activities where the risk of re-injury is possible:

- full participation in the physical education curricular program;
- intramural activities;
- full participation in non-contact interschool activities; or
- participation in practice for a contact sport.

The Return to Physical Activity stages are as follows:

At home:

An initial period of 24-48 hours of both relative physical rest and cognitive rest before beginning the Return to Physical Activity progression.

Stage 1- Light physical activities that do not provoke symptoms. e.g. daily household tasks (e.g. bed making, dishes) slow walking for short time.

Stage 2a – Daily activities that do not provoke symptoms e.g. light physical activities e.g. use of stairs; 10-15 minutes slow walking

Stage 2b – Light aerobic activity e.g. 20-30 min. walking/stationary cycling at slow to medium pace, No resistance training

At school:

Stage 3 – Simple locomotor activities/sport-specific exercise to add movement e.g running or skating drills/ throwing drills, shooting drills. No head impact activities. Restricted recess activities e.g. walking.

Stage 4 – Progressively increased physical activity. Non contact training drills to add coordination and increase thinking. e.g. more complex training drills e.g passing drills in soccer; physical activity with no body contact (dance, badminton); participation in practices for non contact sports; DPA elementary; Recess – physical activity running/games with no body contact.

Stage 5 – Following medical clearance from medical doctor/nurse practitioner. Full participation in all non contact physical activities (i.e. non intentional body contact) and full contact training/practice in contact sports.

Stage 6 – Full participation in contact sports games/competitions.

If symptoms return or new symptoms appear:

- During all stages of RTL 1-4b and in Stages of 1-4 of RTPA the student returns to previous stage for a minimum of 24 hours and only participates in activities that can be tolerated.

- During stages 5 and 6 of RTPA: the student must return to medical doctor/nurse practitioner or (whenever available) medical concussion specialist to have the medical clearance re-assessed.

If symptoms worsen:

- During all stages of RTL and RTPA follow school (collaborative team procedures) for contacting parents/guardians to inform them that the student needs a follow-up medical assessment by a medical doctor/nurse practitioner or (whenever available) medical concussion specialist

Module 7 Discussion Points

Scenario: A student has suffered a concussion. How should they attempt to return to physical activity?

- The minimum standard for the diagnosis of a concussion is from a medical doctor or nurse practitioner, who would follow-up with informed medical management. Due to the complexity of this serious brain injury, a consult of a medical concussion specialist (e.g., neurosurgeon, neurologist, primary care sports medicine doctor with added qualification) should be sought whenever possible.
- Select key principles and phrases from OPASSE (<https://safety-beta.ophea.net/concussions>) Sample Home Concussion Management Form (RTL and RTPA), and Sample School Concussion Management Form (RTL and RTPA) to add to how students should attempt to return to physical activity.
- An individual's Return to School Plan that addresses the Return to Physical Activity must occur under medical supervision.
- Allowing a student to return to physical activity too soon after a suspected concussion may risk the occurrence of a second concussion in close proximity to the initial event. This is also known as Second Impact Syndrome (SIS), which is the uncontrollable swelling of the brain leading to possible death.

The following are in modules Grade 3-5, 6-8 and 9-12

2. Ontario Physical Activity Safety Standards in Education concussion protocol may be accessed here - Link to concussion material: <https://safety-beta.ophea.net/concussions>
3. Discuss that RTPA stages can occur at the same time as RTL stages. However, regular physical activity cannot take place until RTL stages 4a and 4b have been completed.
4. An individual's Return to School Plan that addresses the student's Return to Learn (RTL) and Return to Physical Activity (RTPA) stages must occur under medical supervision.

Module 8:

FORMER PROFESSIONAL FOOTBALL PLAYER

Jayne's uncle is 42, and is a retired professional football player. He has enrolled in **school** as an **adult** to upgrade his skills. He is frustrated by his **difficulty concentrating, poor memory, and disappointing test results**. He believes this may be because of **repeated concussions** that he suffered while playing football **many years ago**.

Could there be a connection between the many concussions suffered by Jayne's uncle and his difficulty concentrating and poor memory?

Answer Choices:

1. Yes.
2. No.

Module 8: The answer is 1. Yes.

Concussions can lead to **serious memory loss** and **difficulties with learning and thinking later in life**. Jayne's uncle should undergo a **thorough physical and mental examination** by a medical **doctor, nurse practitioner**, or (whenever possible) **medical concussion specialist** to evaluate for other causes of his learning difficulties.

Module 8 Discussion Points

Scenario: A retired football player is having problems with memory and concentration, and wonders if their previous injuries may be responsible.

- Review the long-term effects of concussions, as well as the need for proper medical assessment immediately after the original injury.
- Stress the importance of preventing repetitive or accumulative concussions as it may lead to long-term cognitive impairment.

Module 9:

TRACK AND FIELD COMPETITOR

Li has taken a few days off from track and field practice because she has **headaches** that won't go away. She is also **bothered by bright lights** and **loud sounds**. **These concussion signs and symptoms started one week ago**, after tripping and hitting her head on the ground. She **did not report** the symptoms to her parents, friends, or coach and feels well enough to run in the big track meet. Li believes that she may have a **concussion** but also thinks that it couldn't have done much damage. She fears that she **won't be allowed to play** if she **reports her symptoms**.

Li asks you what she should do. What would you suggest?

Answer choices:

1. Li should go ahead and play if she is able.

Incorrect: A student should self-report their suspected concussion symptoms to a responsible adult. The injured student may not be capable of determining whether or not they have suffered a concussion. Other students or teammates should also feel a responsibility to report a possible concussion, so that the injured student can obtain a diagnosis from a medical doctor, nurse practitioner, or (whenever available) medical concussion specialist. The coach should always encourage their team to report suspected concussions.

A student should not be allowed to return to physical activity until they have been cleared by a medical doctor, nurse practitioner, or (whenever available) medical concussion specialist. They should also successfully complete the school's Return to School Plan that addresses the students Return to Learn (RTL) and Return to Physical Activity (RTPA) stages, as outlined by the school's collaborative team. If the student returns to physical activity before medical clearance, they risk a second concussion and a possible prolonged period of recovery. In some cases they could even experience Second Impact Syndrome (SIS), which may lead to death.

2. Li should take a couple of extra days off to decide, because the track team needs her.

Incorrect: See the above answer.

3. Tell Li to report her symptoms to her parents and her coach. As her friend and teammate, you should also report your concerns about Li's probable concussion.

Correct!

Module 9: The answer is 3.

Advise Li to **report her symptoms** to her teacher, coach, or parent.

You can also help Li by **reporting the concussion symptoms**. The injured student may not be capable of determining whether or not they have suffered a concussion.

Even **one concussion** can cause **brain damage**, especially if the athlete **returns to play or school too soon**.

The attitude of “win at all costs” is wrong. It is only a game or sport.

Students should feel free to **self-report** concussions or **report concussions** that may have been suffered by a friend to a **responsible adult**. The **early identification** of a **concussion** is important for the **safety of the student**.

Individual **recovery times** from a concussion are **different**. It may take **hours, days, weeks or months**, and sometimes a player may **take a longer time to get better**.

A student is not to return to regular physical activity (i.e. full participation in the physical education program, intramural activities, interschool practices and competitions) until they have completed **Return to Learn stages 4a and 4b and stage 4 of RTPA** and cleared by a medical doctor, nurse practitioner or (whenever available) medical concussion specialist.

Following the Return To Physical Activity (RTPA) internationally recognized graduated approach the student is allowed to participate in low intensity physical activity in controlled and predictable environments.

If the injured student returns to regular, vigorous organized physical activity where the risk of injury is possible before medical clearance they risk a second concussion, a prolonged period of recovery, or possible Second Impact Syndrome (SIS) which could lead to death.

Module 9 Discussion Points

Scenario: A student athlete suffers a hit that produces concussion symptoms and chooses not to report them, fearing that they will be restricted from playing. The student also thinks that, as it is their first concussion, it could not have done much damage.

- Review that self- and peer-reporting of suspected concussions are important to help identify if a concussion has occurred.
- Remind students that those suspected of sustaining a concussion may not be capable of determining if they have done so themselves, and the student's peers should also feel a responsibility to report this injury.
- Signs and symptoms of a suspected concussion can be identified by a designated and specifically-trained first responder.
- The minimum standard for diagnosis of a concussion is from a medical doctor, nurse practitioner, or (whenever available) medical concussion specialist, who would follow-up with informed medical management.
- A student is not to return to regular physical activity (i.e. full participation in the physical education program, intramural activities, interschool practices and competitions) until they have completed Return to Learn and stage 4 of RTPA and cleared by a medical doctor, nurse practitioner or (whenever available) medical concussion specialist.
- Following the Return To Physical Activity (RTPA) internationally recognized graduated approach the student is allowed to participate in low intensity physical activity in controlled and predictable environments.
- If the injured student returns to regular, vigorous organized physical activity where the risk of injury is possible before medical clearance they risk a second concussion, a prolonged period of recovery, or possible Second Impact Syndrome (SIS) which could lead to death.
- Review that the "win at all costs" approach is wrong. A pressure-free environment created by the teacher or coach encourages concussion self-reporting, or reporting by a peer. This is very important to concussion identification and treatment.
- Discuss that individual recovery times from a concussion are dependent on factors such as the number of previous concussions, as well as the age of the student. Those with a history of previous concussions, or a younger individual, usually take longer to recover.

Elementary School E-Module Program Reference Guide

The OPASSE Concussion Protocol Return to School Plan that addresses the students Return to Learn (RTL) and Return to Physical Activity (RTPA) may be accessed at <https://safety-beta.ophea.net/concussions>

A primary reference tool for the e-module based program is the www.sportconcussionlibrary.com site. This site was originally designed to house over 5000+ peer-reviewed articles concerning sport concussions, and now has a significant amount of additional information, as well as links to other important sites.

The Sports Concussion Library articles can be accessed by registering freely on the site. Please click on the Library tab on the left of the toolbar. The site will ask you to create a personal user-name and password that will allow unlimited use of the articles housed in the library.

The Sport Concussion Library also contains many other helpful reference and educational tools which include:

- a copy of the recent and internationally-agreed upon Consensus statement on concussion in sport: the 5th International Conference on Concussion in Sport held in Berlin, November 2016;
- a General Information tab that includes information references for Parents, Athletes, Coaches and First Responders, Educational Institutions, and Physicians;
- a Documentaries tab allowing free access to 22 sport concussion documentaries;
- information concerning Chronic Traumatic Encephalopathy (CTE): League of Denial feature by Frontline (on main page); CBC Hits and Head Injuries with Peter Mans-bridge (on documentary section).

The instructor is invited to review all relevant videos and extra material to ensure that the information is age and academic appropriate to their students.

See also Ontario Physical Activity Safety Standards in Education Sample Tool to Identify a Suspected Concussion (Sample Tool to Identify a Suspected Concussion) for an inventory of signs and symptoms. Teachers, coaches, administrators, or trainers, therapists, and first responders should also refer to their school/board/sport organizations concussion protocol, policy, or procedure. These tools are educational references meant only for the development of the instructor's knowledge.

A Testimonial tab allows access to the testimonials of athletes, and parents of athletes, who have suffered a concussion or experienced Post-Concussion Syndrome.

A Legislation tab allows access to all current North American legislative efforts concerning sport concussion.

Further links found within the site include:

- selected media publications and audio recordings;
- a link to the Center for Disease Control and Prevention;
- information from the Montreal Children's Hospital;
- access to ThinkFirst/Parachute for young kids;
- and additional concussion information from the National College Athletic Association (NCAA).