



TAEKWONDO
CANADA

CONCUSSION EDUCATION TOOLKIT

for Athletes & Parents/Caregivers

January 2022

Table of Contents

PRE-COMPETITION CONCUSSION EDUCATION FACT SHEET.....	4
WHAT IS A CONCUSSION?.....	4
WHAT CAUSES A CONCUSSION?.....	4
WHEN SHOULD I SUSPECT A CONCUSSION?	4
WHAT ARE THE SYMPTOMS OF A CONCUSSION?	4
WHAT ARE THE VISUAL SIGNS OF A CONCUSSION?	5
WHAT SHOULD I DO IF I SUSPECT A CONCUSSION?	5
WHEN CAN THE ATHLETE RETURN TO SCHOOL, WORK AND SPORTS?	5
RETURN-TO-SCHOOL/WORK STRATEGY.....	5
TAEKWONDO-SPECIFIC RETURN-TO-SPORT STRATEGY	6
HOW LONG WILL IT TAKE FOR THE ATHLETE TO RECOVER?	6
HOW CAN I HELP PREVENT CONCUSSIONS AND THEIR CONSEQUENCES?	7
CONCUSSION CODES OF CONDUCT (OPTIONAL)	8
TIPS TO PREVENT CONCUSSIONS AND OTHER INJURIES IN TAEKWONDO GUIDE	11
TAEKWONDO RETURN-TO-SPORT STRATEGY	13
TAEKWONDO RETURN-TO-SCHOOL/WORK STRATEGY	18
CONCUSSION FREQUENTLY ASKED QUESTIONS (FAQ) GUIDE.....	20
GENERAL.....	20
CONCUSSION PREVENTION AND MANAGEMENT	23
PROVINCIAL SPECIFICATIONS	24
PERSONAL CONCUSSION RECORD FOR ATHLETES.....	25
REFERENCES	26
APPENDIX A – MEDICAL CLEARANCE LETTER.....	27
APPENDIX B – TAEKWONDO CONCUSSION PATHWAY	28
APPENDIX C – CONCUSSION RECOGNITION TOOL 5 (CRT5)	29

To our valued Taekwondo Canada members,

On behalf of Taekwondo Canada, I am proud to present our new Concussion Education Toolkit to you. This toolkit, created in conjunction with Parachute Canada, will allow our athletes as well as coaches, referees and parents the ability to better understand the realities of concussions and concussion management.

The development of this toolkit is crucial to the safety and development of athletes across Canada, ensuring that safety is the number one priority when training or competing in taekwondo at any age or skill level. It also ensures that coaches, referees and parents are better equipped to assist in the prevention of concussions and to recognize the signs should an athlete be suspected of suffering a concussion, a skill set which is important to the growth and development of the athlete. As additional information on concussion becomes available, the content of this toolkit will be updated.

I would also like to take this opportunity to thank Claire Westmacott, Stephanie Cowle and the staff of Parachute Canada for their tremendous assistance in the development of this project. Parachute is Canada's national charity dedicated to injury prevention. They are an industry leader in the field of concussion management and their assistance has been greatly appreciated.

Once again thank you to our athletes, coaches, referees and parents for your dedication to the sport of taekwondo in Canada. Your efforts are helping to provide a safer environment for all.

Regards,



Dave Harris
Executive Director
Taekwondo Canada



PRE-COMPETITION CONCUSSION EDUCATION FACT SHEET

What is a concussion?

A concussion is a brain injury that can't be seen on x-rays, CT or MRI scans. It affects the way an athlete thinks and can cause a variety of symptoms, including physical, cognitive, emotional and sleep-related symptoms. Continuing to participate in an activity when you may have a concussion increases the risk of more severe, longer-lasting concussion symptoms, and increases the risk of other injury. Anyone with a suspected concussion should be seen by a medical doctor or nurse practitioner as soon as possible.

What causes a concussion?

Any blow to the head, face or neck, or somewhere else on the body that causes a sudden jarring of the head may cause a concussion. Examples include receiving a headshot during competition or practice, falling hard on the floor, or experiencing whiplash in a car crash.

When should I suspect a concussion?

A concussion should be suspected in anyone who sustains a significant impact to the head, face, neck, or body and reports any symptoms or demonstrates any visual signs of a concussion. A concussion should also be suspected if an athlete reports any concussion symptoms to one of their peers, parents, teachers, or coaches or if anyone witnesses a player exhibiting any of the visual signs of concussion. Some athletes will develop symptoms immediately, while others will develop delayed symptoms, beginning 24 to 48 hours after the injury.

What are the symptoms of a concussion?

A person does not need to be knocked out (lose consciousness) to have had a concussion. Common symptoms include:

- Headaches or head pressure
- Dizziness
- Nausea and vomiting
- Blurred or fuzzy vision
- Sensitivity to light or sound
- Balance problems
- Feeling tired or having no energy
- Not thinking clearly
- Feeling slowed down
- Easily upset or angered
- Sadness
- Nervousness or anxiety
- Feeling more emotional
- Sleeping more or sleeping less
- Having a hard time falling asleep
- Difficulty working on a computer
- Difficulty reading
- Difficulty learning new information

What are the visual signs of a concussion?

Visual signs of a concussion may include:

- Lying motionless on the mat
- Slow to stand back up or move back into position after a direct or indirect hit to the head
- Disorientation or confusion or inability to respond appropriately to questions
- Blank or vacant stare
- Balance and gait difficulties, poor co-ordination, stumbling, slow laboured movements
- Facial injury after head trauma
- Clutching head

What should I do if I suspect a concussion?

If any athlete is suspected of sustaining a concussion during taekwondo training or competition, they should be immediately removed from sport activity. Any athlete who is suspected of having sustained a concussion must not be allowed to return to the same training session or competition.

Continuing to train or compete with a possible concussion puts the athlete at risk of further injury, including Second Impact Syndrome (SIS). SIS is a swelling of the brain that can occur when an athlete sustains a second head injury before a previous head injury has healed. Although rare, SIS can lead to permanent injury and death.

It is important that ALL athletes with a suspected concussion undergo medical assessment by a medical doctor or nurse practitioner, as soon as possible. It is also important that ALL athletes with a suspected concussion receive written medical clearance from a medical doctor or nurse practitioner before returning to sport.

When can the athlete return to school, work and sports?

It is important that all athletes diagnosed with a concussion follow a step-wise return to school, work and sports-related activities, guided by the following Return-to-School/Work and Return-to-Sport Strategies. It is important that youth and adults return to full-time school activities before progressing to stage 5 and 6 of the Return-to-Sport Strategy.

Return-to-School/Work Strategy

STAGE	AIM	ACTIVITY	GOAL OF EACH STEP
1	Daily activities at home that do not give the player symptoms.	Typical activities during the day as long as they do not increase symptoms (i.e. reading, texting, screen time). Start at 5-15 minutes at a time and gradually build up.	Gradual return to typical activities.
2	School or work activities at home.	Homework, reading or other cognitive activities outside of the classroom/workplace.	Increase tolerance to cognitive work.
3	Return to school/work part-time.	Gradual introduction of schoolwork. May need to start with a partial school day or with increased breaks during the day.	Increase academic activities.
4	Return to school/work full-time.	Gradually progress.	Return to full academic activities and catch up on missed schoolwork.

Taekwondo-Specific Return-to-Sport Strategy

Below is a summary of the Taekwondo Return-to-Sport Strategy.

An initial period of 24-48 hours of rest is recommended before starting the Taekwondo-Specific Return-to-Sport Strategy. If the athlete experiences new symptoms or worsening symptoms at any stage, they should go back to the previous stage before trying again.

STAGE	AIM	ACTIVITY	GOAL OF EACH STEP
1	Symptom-limiting activity	Daily activities that do not provoke symptoms.	Gradual reintroduction of work/school activities
2	Light aerobic activity	Light jog or stationary cycling at slow to medium pace. No resistance training. <ul style="list-style-type: none"> Light intensity jogging or stationary cycling for 15-20 minutes at sub-symptom threshold intensity 	Increase heart rate.
3	Sport-specific exercise	Low intensity sport-specific exercises. No head impact activities. <ul style="list-style-type: none"> Moderate intensity jogging for 30-60 minutes at sub-symptom threshold intensity Low intensity poomsae Low intensity target kicking 	Add movement.
4	Non-contact training drills	Higher intensity sport-specific exercises with no contact Harder training drills with moderate resistance May start progressive resistance training <ul style="list-style-type: none"> Participation in high intensity running and drills Paddle sparring Moderate intensity poomsae - no freestyle 	Exercise, coordination and increased thinking.
5	Full contact practice	Following medical clearance <u>Part A)</u> <ul style="list-style-type: none"> Training with controlled contact Eliminating situations of hard impact Sparring drills with partners <u>Part B)</u> <ul style="list-style-type: none"> Participation in full practice without activity restriction Freestyle and high intensity poomsae 	Restore confidence and assess functional skills by coaching staff.
6	Return to sport	Resume normal sport activities.	

How long will it take for the athlete to recover?

Concussion healing time varies from person to person. While an exact timeline is not possible to provide, most athletes will make a complete recovery within one to two weeks, while most youth athletes will recover within one to four weeks. In some cases, it can take weeks or months to heal. If a person has had a concussion before, it may take them longer to heal the next time.

Approximately 15 to 30 per cent of patients will experience persistent symptoms (symptoms that last longer than typical) that may require additional medical assessment and management.

Remember to always take the time you need to recover, as recommended by your medical doctor or nurse practitioner. Recovering from concussion is a process that takes patience. Going back to activities before you are ready is likely to make your symptoms worse, your recovery may take longer, and returning to active play before full recovery also puts you at higher risk of sustaining another concussion.

How can I help prevent concussions and their consequences?

Concussion prevention, recognition and management require athletes to follow the rules and regulations of their sport, respect their opponents, avoid illegal, unnecessary, or unsafe head contact and report suspected concussions.

To learn more about concussions please visit: <https://taekwondo-canada.com/safesport/concussion/> or <https://parachute.ca/concussion>.

Concussion Codes of Conduct (optional)

Please note that some provinces and/or territories have their own Codes of Conduct with specific requirements. This Taekwondo Concussion Education Toolkit does not replace any requirements under the law in those regions. The Concussion Education Toolkit was designed to provide you and other coaches, referees, athletes and parents across Canada with concussion resources that are Taekwondo-specific and meet your unique role to support athlete development while providing a safe participation environment. **If your province or territory has an existing Code of Conduct, this will carry the legal role for athletes in those areas. Please be sure to always consult with your sport governing body for more information.**

CONCUSSION CODE OF CONDUCT FOR TAEKWONDO ATHLETES

I will do my best to protect myself and others from concussion.

- I will wear the proper taekwondo equipment and wear it correctly.
- I will develop my skill and body strength so that I can play to the best of my abilities.
- I will respect the rules of taekwondo.
- I will respect myself and my opponents.
- I will not illegally strike an opponent.
- I will participate in a safe, smart and fair manner.

I will take concussions and concussion education seriously.

- I understand a concussion is a brain injury that can have both short- and long-term effects.
- I understand that I do not need to lose consciousness to have had a concussion.
- I understand that any blow to the head, face, or neck, or a blow to the body which causes a sudden jarring of the head may cause a concussion.
- I understand if I think I might have a concussion I should stop training or competing immediately.
- I understand continuing to compete or train with a suspected concussion increases my risk of more severe, longer lasting concussion symptoms, as well as increases my risk of other injury.
- I will follow and respect the concussion protocol and policies of my taekwondo club.

I will not train or compete through the pain. I will speak up for myself and others.

- I will not hide my symptoms. I will tell my coach, referee, safety person, parent, caregiver, or other adult I trust if I think I might have a concussion and/or experience any signs and symptoms of concussion following an impact.
- If another athlete tells me about concussion symptoms, or I notice they might have a concussion, I will tell a coach, referee, safety person, parent or another adult I trust so they can help.
- I understand that letting all my coaches and teachers know about any diagnosed concussions will help them support my recovery.
- I understand if I show any signs or symptoms of concussion, I will be removed from training or competition and cannot return until I am assessed by a doctor.

I will not return to full participation in taekwondo or other physical activity until I am ready and fully recovered.

- I understand I will not be able to return to training or competition following an impact where I experience any signs and symptoms of concussion.
- I understand I will have to be cleared by a doctor, preferably one with experience in concussion management, prior to returning to taekwondo and other physical activity.
- I understand I will have to follow the Taekwondo Return-to-Sport strategy when returning to taekwondo and other physical activity.
- I will respect my coaches, referees, team safety personnel, parents and medical professionals and any decisions made with regards to my health and safety.

Signature of Athlete

Signature of Parent/Guardian
(if under 18)

Date

CONCUSSION CODE OF CONDUCT FOR PARENTS AND CAREGIVERS

I will help my child prevent concussion.

- I will ensure my child wears the proper taekwondo equipment and wears it correctly.
- I will help my child develop their skills and strength so they can compete to the best of their ability.
- I will respect the rules of taekwondo and ensure my child does as well.
- I will respect my child's coaches, safety personnel, referees and all those involved with the league and team.
- I will ensure my child respects other athletes and participates in a fair and safe manner.

I will be aware of signs and symptoms of concussion in my child and take concussions seriously.

- I understand a concussion is a brain injury that can have both short- and long-term effects.
- I understand that any blow to the head, face, or neck, or a blow to the body that causes a sudden jarring of the head may cause a concussion.
- I understand that my child doesn't need to lose consciousness to have had a concussion.
- If I suspect my child may have a concussion, I will ensure they stop participating in competition or training immediately.
- I understand continuing to participate in taekwondo and other physical activity with a suspected concussion increases my child's risk of more severe, longer-lasting symptoms, and increases their risk of other serious injuries.
- I will be aware of and follow the concussion protocol and policies of my child's club.

I will ensure my child feels comfortable speaking up if they experience any signs or symptoms of a concussion.

- I will encourage my child not to compete or train through the pain or hide any concussion symptoms.
- I will ensure my child knows to tell me, their coach, safety person, a referee, or other adult they trust if they experience any concussion symptoms after an impact.
- I will ensure my child tells their coaches and teachers about any diagnosed concussions so they can support my child's recovery.

I will support my child's recovery and ensure they do not return to full participation in taekwondo or other physical activity until they are fully recovered.

- I understand and respect that if my child shows any signs or symptoms of concussion, they will be removed from competition or training and cannot return until they are assessed by a doctor and are medically cleared to return.
- I understand my child has to follow the Taekwondo Return-to-Sport strategy and I will help them do so.
- I understand my child will have to be cleared by a doctor before returning to taekwondo or other physical activity after a concussion.
- I will respect my child's coaches, referees, and medical professionals and any decisions made with regards to the health and safety of my child.

Signature of Parent/Guardian

Name of Athlete

Date

TIPS TO PREVENT CONCUSSIONS AND OTHER INJURIES IN TAEKWONDO GUIDE

Tips to assist athletes in preventing concussion and other injuries in Taekwondo

Follow these tips to help prevent concussion and other injuries and keep yourself and others safe during taekwondo training and competitions.

- Commit to strong skill and strength development
- Understand proper technique and follow the rules of the sport
- Ensure you are correctly wearing the appropriate equipment (e.g., protective helmet, pads, mouthguards)
- Avoid violent contact with an opponent if they are in a vulnerable position, such as with their back facing you
- Never hit, strike, kick or head-butt an opponent from behind
- Never hit, strike, kick or head-butt an opponent with intent to harm
- Practice fair sparring and respect the safety of yourself and your opponent
- Be aware and stay alert
- Practice and compete with self-control and integrity
- Communicate with your fellow athletes. If you think a teammate may have a concussion, report symptoms to your coach, referee, safety personnel or another adult you trust
- Remove yourself from training or competition if you experience any concussion symptoms after a hard hit. Report symptoms to your coach, referee, safety personnel, or another adult you trust

Tips to assist parents and caregivers in helping their child prevent concussions and other injuries in taekwondo

Follow these tips to help your child prevent concussion and other injuries and keep themselves and others safe during taekwondo training and competitions.

- Help your child develop strong skills and strength.
- Ensure you understand proper techniques and follow the rules of taekwondo, and go over these with your child
- Ensure your child correctly wears the appropriate equipment (e.g. protective helmet, pads, mouthguards) during training sessions and competition
- Ensure your child avoids violent contact with an opponent if they are in a vulnerable position, such as with their back facing them
- Ensure your child never hits, strikes, kicks or head-butts an opponent from behind or with intent to harm
- Encourage your child to practice fair sparring and respect the safety of themselves and their opponent
- Encourage your child to be aware and stay alert
- Talk with your child about the importance of removing them from training or competition if they experience any concussion symptoms after an impact. Ensure they report symptoms to you, their coach, referee, or safety personnel
- If you suspect your child has a concussion, ensure they stop participating in training or competition immediately.
- Attend the Pre-Competition Concussion Education Athlete Meeting and have a conversation with your child afterwards to ensure they understand everything that was discussed.

TAEKWONDO RETURN-TO-SPORT STRATEGY

This taekwondo specific Return-to-Sport Strategy ensures that the appropriate activities are completed at the correct stages of an athlete's return-to-sport journey. This is an important tool for stakeholders to use to establish the alignment necessary throughout this process.

Return-to-Sport Summary:

1: Rest (24-48 Hours)

An initial period of 24-48 hours of rest is recommended before starting the taekwondo specific Return-to-Sport strategy.

***CAUTION:** If the athlete experiences new symptoms or worsening symptoms at any stage, they should go back to the previous stage.

2: Follow the Taekwondo Return-to-School/Work Strategy and Return-to-Sport Strategy

These strategies are designed to work in conjunction with each other. Therefore, please review both strategies to understand the correct stage sequencing for a safe, step-wise return to school, work and sports after a concussion.

3: Return to Full Contact Sport Activities

Once the athlete has completed their Return-to-School/Work strategy and is working through their step-wise Return-to-Sport, a medical doctor or nurse practitioner can consider the athlete for a return to full contact training and competition activities, and issue a [Medical Clearance Letter](#) (found in [Appendix A](#)) if the athlete is ready to return. Never return to full contact sport activities until medically cleared by a doctor or nurse practitioner.

The final decision to medically clear an athlete to return to full contact training or competition should be based on the clinical judgment of the medical doctor or nurse practitioner taking into account the athlete's past medical history, clinical history, physical examination findings, and the results of other tests and clinical consultations where indicated (i.e. neuropsychological testing, diagnostic imaging).

Prior to returning to full contact training and competition, each athlete that has been diagnosed with a concussion must provide their coach with a standardized Medical Clearance Letter that specifies that a medical doctor or nurse practitioner has personally evaluated the patient and has cleared the athlete to return to sports. In geographic regions of Canada with limited access to medical doctors (i.e. rural or northern communities), a licensed healthcare professional (such as a nurse) with pre-arranged access to a medical doctor or nurse

practitioner can provide this documentation. A copy of the [Medical Clearance Letter](#) should also be submitted to sports organization officials that have injury reporting and surveillance programs where applicable.

Athletes who have been provided with a [Medical Clearance Letter](#) may return to full sport activities as tolerated. If the athlete experiences any new concussion-like symptoms while returning to training, they should be instructed to stop immediately, notify their parents/caregivers, coaches, trainer or teachers, and undergo follow-up Medical Assessment.

The Medical Clearance Letter can be found on in [Appendix A](#) and on the Taekwondo Canada website.

A visual representation of the Taekwondo Canada Concussion Pathway can be seen in [Appendix B](#).

RETURN-TO-SPORT STRATEGY – ATHLETES

STAGE 1: SYMPTOM-LIMITING ACTIVITY

After an initial short period of rest of 24 to 48 hours, light cognitive and physical activity can begin as long as these don't worsen symptoms. You can start with daily activities like moving around the house, simple chores, and gradually introducing school and work activities at home.

ACTIVITIES: Daily activities that do not provoke symptoms or make symptoms worse

GOAL OF THE STAGE: Gradual reintroduction of work/school activities

STAGE 2 : LIGHT AEROBIC ACTIVITY

Light exercise such as walking or stationary cycling, for 10 to 15 minutes. The duration and intensity of the aerobic exercise can be gradually increased over time if symptoms don't worsen and no new symptoms appear during the exercise or in the hours that follow. No resistance training or other heavy lifting.

ACTIVITIES:

Light jog or stationary cycling at slow to medium pace. No resistance training.

- Light intensity jogging or stationary cycling for 15-20 minutes at sub-symptom threshold intensity

NO RESISTANCE TRAINING OR OTHER HEAVY LIFTING.

GOAL OF STAGE: Increase heart rate

STAGE 3: SPORT-SPECIFIC EXERCISE

Activities such as running can begin for 20 to 30 minutes. There should be no body contact or other jarring motions, such as jumping. No resistance training.

ACTIVITIES:

Low intensity sport-specific exercises. No head impact activities.

- Moderate intensity jogging for 30-60 minutes at sub-symptom threshold intensity
- Low intensity poomsae
- Low intensity target kicking

NO HEAD IMPACT ACTIVITIES

GOAL OF THE STAGE: Add movement

STAGE 4: NON-CONTACT TRAINING DRILLS

Add in more challenging drills. There should be no impact activities (no kicking, jumping kicks, striking etc.). Start to add in progressive resistance training.

ACTIVITIES:

Higher intensity sport-specific exercises with no contact

Harder training drills with moderate resistance

May start progressive resistance training

- Participation in high intensity running and drills
- Paddle sparring
- Moderate intensity poomsae - no freestyle

MAY START PROGRESSIVE RESISTANCE TRAINING

GOAL OF THE STAGE: Exercise, coordination and increased thinking.

STAGE 5 : FULL CONTACT PRACTICE (FOLLOWING MEDICAL CLEARANCE)

ACTIVITIES:

Following medical clearance

Part A)

- *Training with controlled contact*
- *Eliminating situations of hard impact*
- *Sparring drills with partners*

Part B)

- *Participation in full practice without activity restriction*
- *Freestyle and high intensity poomsae*

***CAUTION:** This stage should not be started unless the athlete has completed all of the stages of the Return-to-School/Work Strategy

GOAL OF THE STAGE: Restore confidence and assess functional skills by coaching staff.

STAGE 6 : RETURN-TO-SPORT

ACTIVITIES: Normal training & return to competition

TAEKWONDO RETURN-TO-SCHOOL/ WORK STRATEGY

The following is an outline of the Return-to-School Strategy that should be used to help student-athletes, parents/caregivers and teachers to collaborate in allowing the player to make a gradual return to school activities. Depending on the severity and type of the symptoms present student-athletes will progress through the following stages at different rates. If the student-athlete experiences new symptoms or worsening symptoms at any stage, they should go back to the previous stage. Athletes should also be encouraged to ask their school if they have a school-specific Return-to-Learn Program in place to help student-athletes make a gradual return to school.

REST (24 – 48 hours)

STAGE 1: DAILY ACTIVITIES AT HOME

ACTIVITIES:

Typical activities during the day, as long as they do not increase symptoms (i.e. reading, texting, screen time). Start with 5-15 minutes at a time and gradually build up.

GOAL OF THIS STAGE: Gradual return to typical activities

STAGE 2: SCHOOL ACTIVITIES

ACTIVITIES:

Homework, reading or other cognitive activities outside of the classroom

GOAL OF THIS STAGE: Increase tolerance to cognitive work.

STAGE 3: RETURN-TO-SCHOOL/WORK PART-TIME

ACTIVITIES:

Gradual introduction of schoolwork. May need to start with a partial school day or with increased breaks during the day.

GOAL OF THIS STAGE: Increase academic activities.

**STAGE 4:
RETURN-TO-SCHOOL/WORK FULL-TIME**

ACTIVITIES:

Gradually progress, reduce modifications or adaptations until the student can handle a full day and full workload with no modifications or adaptations.

GOAL OF THIS STAGE: Return to full academic activities and catch-up on missed schoolwork.

***CAUTION:** *A signed medical clearance letter is required prior to the athlete entering stage 5 of the return-to-sport strategy!!!*

***NOTE:** It is important that youth and adult student-athletes return to full-time school/work activities before progressing to stage #5 & 6 of the taekwondo specific Return-to-Sport Strategy!!!

NOTE: These steps can also be used as a Return-to-Work Strategy* for those taekwondo athletes that train in taekwondo club programs, compete in taekwondo tournaments, or for coaches, officials and trainers.

*A more tailored and detailed Return-to-Work strategy is available for stakeholders on Parachute's website in both of Canada's official languages ([English](#) and [French](#)).

A visual representation of the Taekwondo Canada's Concussion Pathway can be seen in [Appendix B](#).

CONCUSSION FREQUENTLY ASKED QUESTIONS (FAQ) GUIDE

This guide provides a list of Frequently Asked Questions (FAQs) on a variety of topics that have not been explained in Taekwondo Canada's other concussion education resources or important information that Taekwondo Canada would like to emphasize for our members. These questions have been subdivided into smaller sections for ease. It is recommended that this guide be reviewed by coaches to the Pre-Season Concussion Education Team Meeting and referred to when necessary.

GENERAL

1. Who is responsible for recognizing a suspected concussion?

Although the formal diagnosis of concussion should be made following a medical assessment, all sport stakeholders including athletes, parents, teachers, coaches, officials, and licensed healthcare professionals are responsible for the recognition and reporting of athletes who may demonstrate visual signs of a head injury or who report concussion-related symptoms. This is particularly important because many sport and recreation venues will not have access to on-site licensed healthcare professionals.

A concussion should be suspected:

- In any athlete who sustains a significant impact to the head, face, neck or body and demonstrates ANY of the visual signs of suspected concussion or reports ANY symptoms of a suspected concussion as detailed in the **Concussion Recognition Tool 5 (CRT5)**, a copy of which can be found in [Appendix C](#).
- If an athlete reports ANY concussion symptoms to one of their peers, parents, teachers, or coaches or if anyone witnesses an athlete exhibiting any of the visual signs of concussion.

In some cases, an athlete may demonstrate signs of symptoms of a more severe head or spine injury including convulsions, worsening headaches, vomiting or neck pain. If an athlete demonstrates any of the 'Red Flags' indicated by the CRT, a more severe head or spine injury should be suspected, and Emergency Medical Assessment should be pursued. The Emergency Medical Assessment is located within Taekwondo Canada's Concussion Protocol.

2. Can a coach/instructor diagnose a concussion?

No, a coach/instructor is not qualified to diagnose a concussion. In addition to nurse practitioners, medical doctors that are qualified to evaluate patients with a suspected concussion include:

- Pediatricians;
- Family medicine physicians;
- Sport medicine physicians;
- Emergency department physicians;
- Internal medicine physicians;
- Rehabilitation physicians (physiatrists);
- Neurologists; and
- Neurosurgeons

In geographic regions of Canada with limited access to medical doctors (i.e. rural or northern communities), a licensed healthcare professional (i.e. nurse) with pre-arranged access to a medical doctor or nurse practitioner can facilitate this role.

Note: In Quebec, nurse practitioners cannot make a clinical diagnosis. Diagnosis must be made by a medical doctor.

3. How are concussions treated?

Athletes diagnosed with a concussion should be provided with education about the signs and symptoms of concussion, strategies about how to manage their symptoms, the risks of returning to sport without medical clearance and recommendations regarding gradual return to school and sport activities. Athletes diagnosed with a concussion are to be managed according to their Return-to-School/Work and Taekwondo Return-to-Sport Strategy. When available, athletes should be encouraged to work with the team athletic therapist or physiotherapist to optimize progression through their Sport-Specific Return-to-Sport Strategy.

4. What should I do if I suspect a concussion?

- **As an athlete:** if you as an athlete receive a blow to the head, face, neck, or elsewhere on your body or are experiencing any of the concussion symptoms you should stop practicing or playing and immediately notify your coach, instructor, teacher or parent/caregiver.
- **As a coach:** If you suspect an athlete may have suffered a concussion during a training session or competition, remove the athlete from play and consult your Concussion Action Plan for next steps.
- **As a parent/caregiver:** If you suspect a concussion in your child or another athlete, notify a coach, teacher or their parent/caregiver immediately. If your child is demonstrating visual signs of a concussion or experiencing concussion symptoms, suspect a concussion and have your child assessed by a medical doctor or nurse practitioner.
- **As a teammate:** If you see one of your teammates or fellow athletes receive a blow to the head, face, neck or elsewhere on their body, if they are acting peculiarly, showing visual signs of a concussion as outlined in the WPC Pre-Season Concussion Education Fact Sheet, or if they inform you that they are experiencing one of the symptoms commonly associated with a concussion you should inform your coach or instructor immediately.
- **As a referee/official:** If an athlete receives a blow to the head, face, neck or elsewhere on their body and is exhibiting any of the visual signs associated with concussions during a competition, a referee can stop the match for a period of 1 minute. During this time, the coaches and medical professionals are able to assess the injured athlete.

5. When should the athlete see a doctor?

If an athlete loses consciousness during a practice or game or exhibits any of the other “Red flag” symptoms they should be transported to a hospital immediately.

- Neck pain or tenderness
- Repeated vomiting
- Growing confusion
- Seizures or convulsions
- Weakness, tingling or burning in their arms or legs
- Increasingly restless, agitated or combative
- Double vision
- Severe or increasing headache
- Deteriorating conscious state or loss of consciousness
- If there is loss of consciousness, initiate the Emergency Action Plan and call an ambulance

Note: If the athlete is unconscious or you suspect a neck injury, continue to monitor airway, breathing and circulation. Do not attempt to remove any equipment.

If the athlete does not exhibit any “Red flag” symptoms during the practice or competition, their parents/caregivers should be notified and the athletes should be closely monitored until their parents/caregivers

arrive. If the athlete experiences constant or worsening concussion symptoms, they should make an appointment with their medical doctor or nurse practitioner.

6. What type of information should be provided to the doctor?

Details about how and when the injury happened, the athlete's signs and symptoms, any changes in the athlete's condition since the injury, and the athlete's personal concussion history are helpful for the medical assessment. Taekwondo Canada has created a Personal Concussion Record for Athletes sheet for our registrants to use to provide an overview of the athlete's concussion history, which doctors may find useful. However, it is not a legal medical document and as such should be used solely as a tool for athletes and parents/caregivers to use and refer to throughout the Return-to-School/Work and Return-to-Sport period and in the future.

7. How long does it take for a concussion to heal?

Most athletes who sustain a concussion while participating in sport will make a complete recovery and be able to return to full school and sport activities within 1-4 weeks of injury. However, approximately 15-30% of individuals will experience symptoms that persist beyond this time.

If available, individuals who experience persistent post-concussion symptoms (>4 weeks for youth athletes, >2 weeks for adult athletes) may benefit from referral to a medically supervised multidisciplinary concussion clinic that has access to professionals with licensed training in traumatic brain injury that may include experts in sport medicine, neuropsychology, physiotherapy, occupational therapy, neurology, neurosurgery, rehabilitation medicine as well as optometry and kinesiology.

Referral to a multidisciplinary clinic for assessment should be made on an individualized basis at the discretion of an athlete's medical doctor or nurse practitioner. If access to a multidisciplinary concussion clinic is not available, a referral to a medical doctor with clinical training and experience in concussion (e.g. a sport medicine physician, neurologist, or rehabilitation medicine physician) should be considered for the purposes of developing an individualized treatment plan. Depending on the clinical presentation of the individual, this treatment plan may involve a variety of health care professionals with areas of expertise that address the specific needs of the athlete based on the assessment findings.

8. What happens when an athlete returns too quickly to sport, school or work?

It is important that athletes, coaches and officials take the necessary time to heal when they have been diagnosed with a concussion. Concussions affect each individual differently and there can be severe consequences to those individuals who return too quickly to sport, school or work when they have a concussion. Going back to activities before you are ready is likely to make your symptoms worse, your recovery may take longer, and returning to active play before full recovery also puts you at higher risk of sustaining another concussion.

There is also the possibility, although minimal, that an athlete who returns too quickly to sport can be diagnosed with Second Impact Syndrome (SIS). SIS is a swelling of the brain that can occur when an athlete sustains a second head injury before a previous head injury has healed. Although rare, SIS can lead to permanent injury and death.

9. Can a concussion be classified as severe or mild?

No, concussions cannot be classified as severe or mild. There is no recognized system for classifying concussions. The full extent of the consequences of a concussion are difficult to predict at the outset and may change over time. Each concussion should be taken seriously and anyone who sustains a concussion should carefully follow step-wise Return-to-School/Work and Return-to-Sport Strategies to support a safe and healthy recovery.

10. How can athletes help their teammate who is suffering from a concussion feel included?

Athletes who are suffering from a concussion may find it difficult, at times, to feel included on their sport team. It is important that the athlete's teammates are aware of this and endeavor to increase the athlete's inclusion in team activities while respecting the that accompany their stage of concussion recovery. One method of increasing feelings of inclusion would be for the athlete's teammates to spend time with or communicate with the injured athlete. However, large gatherings may cause the symptoms of the athlete suffering from a concussion to worsen due to the amount of noise and the high level of concentration required. Therefore, individual support from teammates is preferred.

Teammates may also support the athlete by demonstrating empathy and understanding that, even though you can't see it, a concussion is a brain injury, which takes adequate time to recover safely. Often, athletes may want to return to sport before they are ready or fully recovered. Teammates should encourage the concussed athlete to take the time they need to recover and be there to support them through their recovery process.

11. Should an athlete take medication to help with their symptoms if they may have a suspected concussion (i.e. acetaminophen for a headache)?

Athletes removed from play due to a suspected concussion should not ingest or be given any type of medication, unless it is essential (e.g. insulin for diabetes). Their doctor will provide further guidance on medication use during recovery.

CONCUSSION PREVENTION AND MANAGEMENT

1. Why are pre-competition concussion education meetings important?

Despite recent increased attention focusing on concussion, there is a continued need to improve concussion education and awareness. Optimizing the prevention and management of concussion depends highly on annual education of all stakeholders (athletes, parents, coaches, officials, teachers, trainers and integrated support staff) on current evidence-informed approaches that can prevent concussion and more serious forms of head injury and help identify and manage an athlete with a suspected concussion. The Pre-Competition Concussion Education Meetings are extremely important in ensuring that taekwondo clubs across Canada are aligned in the Taekwondo Canada safe sport pillar of concussion prevention and management.

2. If an athlete wears a mouthguard, helmet, and padding, can they still receive a concussion?

Mouthguards, helmets and padding do not prevent concussions. Currently, there is limited research into the mechanisms of concussion in taekwondo, and as such, there is no proof to support the notion that specific equipment worn by taekwondo athletes can prevent concussion. The evidence on whether mouthguards can reduce the risk of concussion is inconclusive. Wearing proper equipment is important for other reasons: mouthguards can help protect the teeth from direct impact, helmets can help protect the skull or prevent other head injuries, and pads can help absorb the impact of a strike and reduce injury to the lower and upper extremities. But, an athlete can still receive a concussion while wearing equipment as a very rapid movement of the head with or without physical contact is often sufficient to cause a concussion.

Review [mouthguard, taping and bracing rules for competitions](#) to ensure equipment is worn correctly.

3. What should stakeholders, particularly coaches, referees, athletes and parents/caregivers, do during the season to help prevent and manage concussions?

Athletes:

- Use the tips to prevent concussions and other injuries sheet to ensure that you and your teammates are practicing awareness and safety in all practices and games.

- If you or your teammate are experiencing concussion symptoms, notify a coach, teacher or parent/caregiver immediately.
- Ensure that prior to returning to full contact practice and competition, you provide a signed Medical Clearance Letter to your coach.
- Follow the proper stage sequencing of the Return-to-School/Work and Return-to-Sport strategies and identify whether you are experiencing any new or worsening symptoms throughout or following each stage.

Parents/Guardians:

- If you suspect a concussion in your child or another athlete, notify a coach, teacher or their parent/caregiver immediately.
- Ensure that your child is following the proper stage sequencing of the Return-to-School/Work and Return-to-Sport strategies.
- Be aware of your child's team's/club's Concussion Action Plan.

Coaches:

- Use the tips to prevent concussions and other injuries sheet to help plan safe practices for your team. Ensure that you are aware of your Concussion Action Plan during practices and competitions and if there are differences based on club facilities.
- If you suspect an athlete may have suffered a concussion during a training session or competition, remove the athlete from play and consult your Concussion Action Plan for next steps.
- Create an emergency contact sheet with parent contact information for each athlete on your team in the event you need to contact them.
- Ensure you have the CRT5 in an easily accessible location for when you need to reference the information.
- Ensure any athlete diagnosed with a concussion is following the proper Return-to-Sport sequencing.
- Ensure prior to an athlete returning to full contact practice and games that you receive a signed Medical Clearance Letter from the athlete.

Referees:

- Ensure all athletes wear the proper equipment and wear it correctly.
- Enforce the rules of taekwondo and ensure all athletes participate in a fair and safe manner.
- If you suspect an athlete may have suffered a concussion during a competition, remove the athlete from play and consult your Concussion Action Plan for next steps.
- Ensure you have the CRT5 in an easily accessible location for when you need to reference the information.

PROVINCIAL SPECIFICATIONS

1. How is Rowan's Law being addressed for Ontario residents?

In Ontario, Rowan's Law is a mandatory legislation that sport organizations must adhere to and it addresses the prevention and management of concussions. As a result of this legislation, Taekwondo Canada requires that each taekwondo registrant who resides in Ontario and is under the age of 26 to sign their Concussion Code of Conduct and provide annual verification to their provincial sport organization that the Government of Ontario concussion awareness resources have been reviewed. In addition, coaches, officials and trainers of teams, which include athletes who are under the age of 26, must also complete these tasks.

For more information about Rowan's Law, please visit the following website: [Ontario.ca/concussions](https://ontario.ca/concussions)

PERSONAL CONCUSSION RECORD FOR ATHLETES

It is important for every athlete to record their concussions as they occur so that your team and doctors can be informed and as helpful as possible. Keep this record at home to keep track of your signs and symptoms, as well as to track your recovery process.

PERSONAL CONCUSSION RECORD	
Date of Concussion	
Activity and Location	
SEVERITY	
Loss of consciousness?	YES NO
What symptoms were experienced?	
How long did symptoms last?	
Did symptoms disappear completely?	
TESTING	
Was neuropsychological testing performed?	
If so, where and by whom?	
Was a CT or MRI performed?	
If so, where?	
Name and address of most involved physician	
RESULTS	
Was a medical clearance letter obtained before full return to sport?	
Date of full return to sport	
Were any symptoms experienced upon returning to sport?	
Other comments and notes	

REFERENCES

Parachute. (2017). Canadian Guideline on Concussion in Sport. www.parachute.ca/guideline

Parachute. (n.d.). Pre-Season concussion education checklist. <https://www.parachute.ca/wp-content/uploads/2019/08/Smart-Hockey-Pre-Season-Concussion-Education-Checklist.pdf>

Parachute. (n.d.). Pre-Season concussion education team meeting guide. <https://www.parachute.ca/wp-content/uploads/2019/08/Smart-Hockey-Pre-Season-Concussion-Education-Team-Meeting-Guide.pdf>

Parachute. (n.d.). Smart Hockey online guide. <https://www.parachute.ca/wp-content/uploads/2019/08/Smart-Hockey-Online-Guide.pdf>

Taekwondo Canada. (n.d.) Taekwondo Canada Concussion Protocol. <https://taekwondo-canada.com/wp-content/uploads/2021/02/Taekwondo-Canada-Policy-Concussion-Protocol.pdf>

APPENDIX A – MEDICAL CLEARANCE LETTER

MEDICAL SUSPENSION FORM FOR CONCUSSION/KNOCKDOWN

MUST BE COMPLETED BY A MEDICAL DOCTOR

- Indication: Any athlete who had head injury and/or diagnosed with concussion by TAEKWONDO CANADA commissioned MEDICAL doctor during the competition

Athlete Name:

Date of Competition:

Weight Class:

Province:

- Please send (1) Medical Certificate AND (2) SCAT5 form for this certificate to the Taekwondo Canada medical advisor email medical@taekwondo-canada.com to be released from the suspension and return to competition.

Your athlete Mr./Ms. _____ had sustained a head injury (or knockdown by a significant injury).

Following the injury, the event medical team: completed a SCAT 5 assessment and a physical examination. The medical doctor on site has diagnosed this athlete with concussion.

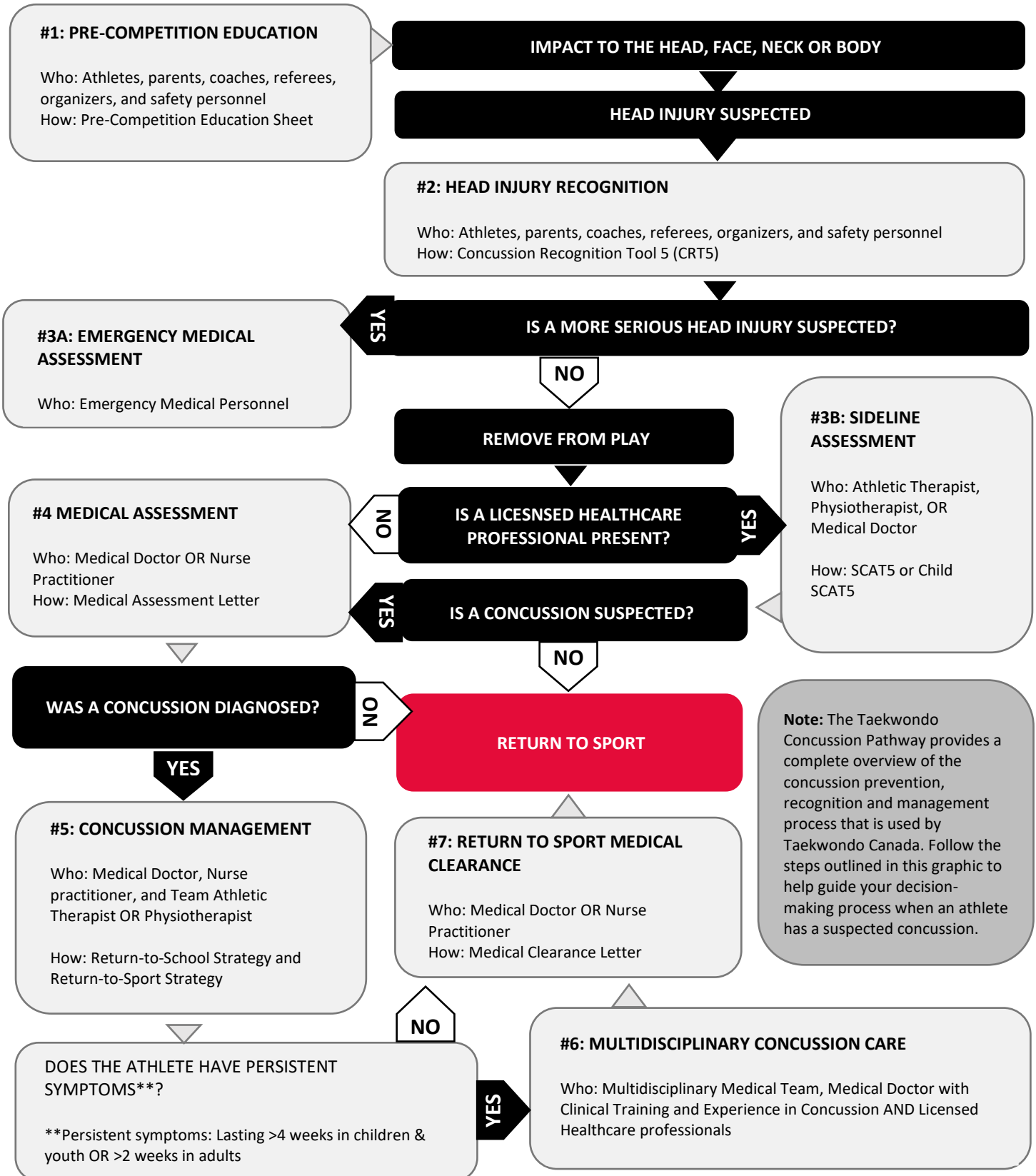
Prior to participation in any further taekwondo competitions in Canada the athlete must provide

1. A repeat SCAT5 assessment completed by a qualified therapist, DC or MD
2. A medical certificate issued by an MD that the concussion has resolved on a particular date
3. Written report that a return to learn process and a return to play process has been successfully completed and the athlete has remained symptom free

Terry DeFreitas MD CCFP
Chief Medical Advisor
Taekwondo Canada

Event Medical Doctor

APPENDIX B – TAEKWONDO CONCUSSION PATHWAY



APPENDIX C – CONCUSSION RECOGNITION TOOL 5 (CRT5)

CONCUSSION RECOGNITION TOOL 5 ©

To help identify concussion in children, adolescents and adults






Supported by

RECOGNISE & REMOVE

Head impacts can be associated with serious and potentially fatal brain injuries. The Concussion Recognition Tool 5 (CRT5) is to be used for the identification of suspected concussion. It is not designed to diagnose concussion.

STEP 1: RED FLAGS – CALL AN AMBULANCE

If there is concern after an injury including whether ANY of the following signs are observed or complaints are reported then the player should be safely and immediately removed from play/game/activity. If no licensed healthcare professional is available, call an ambulance for urgent medical assessment:

- Neck pain or tenderness
- Double vision
- Weakness or tingling/burning in arms or legs
- Severe or increasing headache
- Seizure or convulsion
- Loss of consciousness
- Deteriorating conscious state
- Vomiting
- Increasingly restless, agitated or combative

Remember:

- In all cases, the basic principles of first aid (danger, response, airway, breathing, circulation) should be followed.
- Assessment for a spinal cord injury is critical.
- Do not attempt to move the player (other than required for airway support) unless trained to do so.
- Do not remove a helmet or any other equipment unless trained to do so safely.

If there are no Red Flags, identification of possible concussion should proceed to the following steps:

STEP 2: OBSERVABLE SIGNS

Visual clues that suggest possible concussion include:

- Lying motionless on the playing surface
- Slow to get up after a direct or indirect hit to the head
- Disorientation or confusion, or an inability to respond appropriately to questions
- Balance, gait difficulties, motor incoordination, stumbling, slow laboured movements
- Blank or vacant look
- Facial injury after head trauma

STEP 3: SYMPTOMS

- Headache
- "Pressure in head"
- Balance problems
- Nausea or vomiting
- Drowsiness
- Dizziness
- Blurred vision
- Sensitivity to light
- Sensitivity to noise
- Fatigue or low energy
- "Don't feel right"
- More emotional
- More irritable
- Sadness
- Nervous or anxious
- Neck Pain
- Difficulty concentrating
- Difficulty remembering
- Feeling slowed down
- Feeling like "in a fog"

STEP 4: MEMORY ASSESSMENT

(IN ATHLETES OLDER THAN 12 YEARS)

Failure to answer any of these questions (modified appropriately for each sport) correctly may suggest a concussion:

- "What venue are we at today?"
- "Which half is it now?"
- "Who scored last in this game?"
- "What team did you play last week/game?"
- "Did your team win the last game?"

Athletes with suspected concussion should:

- Not be left alone initially (at least for the first 1-2 hours).
- Not drink alcohol.
- Not use recreational/ prescription drugs.
- Not be sent home by themselves. They need to be with a responsible adult.
- Not drive a motor vehicle until cleared to do so by a healthcare professional.

The CRT5 may be freely copied in its current form for distribution to individuals, teams, groups and organisations. Any revision and any reproduction in a digital form requires approval by the Concussion in Sport Group. It should not be altered in any way, rebranded or sold for commercial gain.

ANY ATHLETE WITH A SUSPECTED CONCUSSION SHOULD BE IMMEDIATELY REMOVED FROM PRACTICE OR PLAY AND SHOULD NOT RETURN TO ACTIVITY UNTIL ASSESSED MEDICALLY, EVEN IF THE SYMPTOMS RESOLVE

© Concussion in Sport Group 2017

Source: Davis GA, et al. Br J Sports Med 2017;51:872. Doi:10.1136/bjsports-2017-097508CRT5