



**TAEKWONDO CANADA**

**Policy**

# Concussion Protocol

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## Revision History

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## Table of Contents

<b>POLICY</b> .....	<b>4</b>
<b>PURPOSE</b> .....	<b>4</b>
<b>SCOPE</b> .....	<b>4</b>
<b>DEFINITIONS</b> .....	<b>4</b>
<b>PROCEDURE</b> .....	<b>4</b>
5.1 <i>Pre-Competition Education</i> .....	4
5.2.1 <i>Concussion Prevention</i> .....	5
5.2.2 <i>Head Injury Recognition</i> .....	5
5.3 <i>Onsite Medical Assessment</i> .....	6
5.4 <i>Medical Assessment</i> .....	6
5.5 <i>Concussion Management</i> .....	6
Return-to-School Strategy .....	7
Taekwondo-Specific Return-to-Sport Strategy .....	7
5.6 <i>Multidisciplinary Concussion Care</i> .....	8
5.7 <i>Return to Sport</i> .....	8
5.8 <i>Surveillance</i> .....	9
<b>APPENDIX A</b> .....	<b>10</b>
<i>Taekwondo Canada Concussion Pathway</i> .....	10
<b>APPENDIX B</b> .....	<b>11</b>
<i>Pre-Season Concussion Education Sheet</i> .....	11
What is a concussion? .....	11
What causes a concussion?.....	11
When should I suspect a concussion?.....	11
What are the symptoms of a concussion? .....	11
What are the visual signs of a concussion? .....	11
What should I do if I suspect a concussion?.....	11
When can the athlete return to school and sports? .....	12
Return-to-School Strategy .....	12
Sport-Specific Return-to-Sport Strategy.....	12
<b>APPENDIX C</b> .....	<b>13</b>
<i>Concussion Recognition Tool 5</i> .....	13
<b>APPENDIX D</b> .....	<b>14</b>
<i>Medical Clearance Letter</i> .....	14
<b>APPENDIX F</b> .....	<b>15</b>

*Taekwondo Specific Return-to-Sport Strategy* ..... 15

## POLICY

1.1 Taekwondo Canada has developed this Policy to help guide the assessment and management of athletes who may have a suspected concussion as a result of participation in Taekwondo Canada sanctioned and hosted activities.

1.2 A summary of the Taekwondo Canada Concussion Protocol is available in the **Taekwondo Canada Sport Concussion Pathway (Appendix A)** at the end of this document.

## PURPOSE

2.1 The concussion protocol within this Policy aligns and has been approved with Parachute Canada through the [Canadian Guideline on Concussion in Sport \(parachute.ca\)](http://parachute.ca).

## SCOPE

3.1 This Policy is intended for use by all individuals who participate in Taekwondo Canada sanctioned and hosted activities. It is recommended that all member organizations adopt the same policies for their events.

## DEFINITIONS

4.1 **Concussion:** as defined by Parachute Canada ([parachute.ca](http://parachute.ca))

4.2 **Health Care professionals:** licensed and in good standing in Canada by their provincial professional association, including but not limited to: athletic therapists, physiotherapists, chiropractors, registered nurses, etc.

4.3 **Medical Doctor:** Medical doctors that are licensed and in good standing who are qualified to evaluate patients with a suspected concussion include: pediatricians, family medicine, sports medicine, emergency medical doctor, internal medicine, psychiatrists, neurologists, and neurosurgeons

## PROCEDURE

### 5.1 Pre-Competition Education

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 sport stakeholders (athletes, parents, coaches, officials, trainers, licensed healthcare professionals) 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.

Concussion education on the Taekwondo Canada website includes information on:

- The definition of concussion
- Possible mechanisms of injury

- Common signs and symptoms
- Steps that can be taken to prevent concussions and other injuries from occurring in sport
- What to do when an athlete has suffered a suspected concussion or more serious head injury
- What measures should be taken to ensure proper medical assessment
- *Return-to-School and Return-to-Sport Strategies*

AND

- Return to sport medical clearance requirements

**Who:** Athletes, parents, coaches, officials, trainers, licensed healthcare professionals are expected to review this information on the Taekwondo Canada website prior to each Taekwondo Canada sanctioned or hosted event.

**How:** Participation in Taekwondo Canada sanctioned, or hosted events includes a confirmation check box that all participants have reviewed this information prior to registration for an event.

### 5.2.1 Concussion Prevention

The incidence of concussions can be mitigated by the proper implementation of prevention strategies, including:

- Limiting contact during training and competition, in particular for younger participants
- Modifying rules to limit the use of certain drills or techniques to help reduce the risk of injury
- Checking equipment often. Make sure equipment fits well, is in good condition, is stored properly, and is replaced according to manufacturers' instructions
- Fair play and respect for opponents are ethical values that should be encouraged in all sport, recreation and physical activities

The incidence of concussions can be mitigated by the proper implementation of prevention strategies by ensuring coaches, officials, parents and athletes are properly educated about concussions, policies and procedures are followed at all times and that training and competition venues are properly prepared and free of obstacles.

### 5.2.2 Head Injury Recognition

Although the formal diagnosis of concussion should be made following a medical assessment, all athletes, parents, coaches, officials, trainers, 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.

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 a suspected concussion or reports *ANY* symptoms of a suspected concussion as detailed in the ***Concussion Recognition Tool 5 (Appendix C)***.

- If an athlete reports ANY concussion symptoms to one of their peers, parents, coaches, officials, trainers, licensed healthcare professionals or if anyone witnesses an athlete exhibiting any of the visual signs of concussion.

In some cases, an athlete may demonstrate signs or 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 [Concussion Recognition Tool 5](#), a more severe head or spine injury should be suspected, and Emergency Medical Assessment should be pursued.

**Who:** Athletes, parents, coaches, officials, trainers, and licensed healthcare professionals.

**How:** If a head injury is suspected, athletes, parents, coaches, officials, and trainers, are expected to use the [Concussion Recognition Tool 5](#) in the event there is no licensed healthcare professionals immediately available.

### 5.3 Onsite Medical Assessment

Taekwondo Canada sanctioned or hosted events will have a licensed medical doctor on site for the duration of the event. Depending on the suspected severity of the injury, an initial assessment may be completed by another on-site licensed healthcare professional. In cases where an athlete loses consciousness or it is suspected an athlete might have a more severe head or spine injury, assessment by a medical doctor shall take place. If a more severe injury is not suspected, the athlete should undergo Sideline Medical Assessment or Medical Assessment.

### 5.4 Medical Assessment

In order to provide comprehensive evaluation of athletes with a suspected concussion, the medical assessment must rule out more serious forms of traumatic brain and spine injuries, must rule out medical and neurological conditions that can present with concussion-like symptoms, and must make the diagnosis of concussion based on findings of the clinical history and physical examination and the evidence-based use of adjunctive tests as indicated.

The medical assessment is responsible for determining whether the athlete has been diagnosed with a concussion or not. Athletes with a diagnosed concussion should be provided with a **Medical Assessment Letter** ([Appendix D](#)) indicating a concussion has been diagnosed. Athletes that are determined to have not sustained a concussion must be provided with a *Medical Assessment Letter* indicating a concussion has not been diagnosed and the athlete can return to school, work and sports activities without restriction.

**Who:** The medical doctor officially appointed to Taekwondo Canada sanctioned or hosted events will provide the Medical Assessment letter.

**How:** *Medical Assessment Letter* ([Appendix D](#))

### 5.5 Concussion Management

When an athlete has been diagnosed with a concussion, it is important that the athlete's parent/legal guardian is informed if they are a minor. All athletes diagnosed with a concussion must be provided with a standardized [Medical Assessment Letter](#) that notifies the athlete and their parents/legal guardians (if they are a minor) that they have been diagnosed with a concussion and may not return to any activities with a risk of concussion until medically cleared to do so by a medical doctor. Because the *Medical Assessment Letter* contains personal health information, it is the responsibility of the athlete or their parent/legal guardian to provide this documentation to

the athlete’s coaches, teachers, or employers. It is also important for the appointed medical doctor to provide this information to sport organization officials that are responsible for injury reporting and concussion surveillance.

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 a gradual return to school and sport activities. Athletes diagnosed with a concussion are to be managed according to their *Return-to-School and Taekwondo-Specific Return-to-Sport Strategy* under the supervision of a medical doctor. When available, athletes should be encouraged to work with an appointed Taekwondo Canada athletic therapist or physiotherapist to optimize progression through their **Taekwondo-Specific Return-to-Sport Strategy (Appendix F)**. Once the athlete has completed their *Return-to-School and Taekwondo-Specific Return-to-Sport Strategy* and are deemed to be clinically recovered from their concussion, the medical doctor can consider the athlete for a return to full sports activities and issue a *Medical Clearance Letter (Appendix D)*.

The stepwise progressions for *Return-to-School* and *Return-to-Sport Strategies* are outlined below. As indicated in stage 1 of the *Return-to-Sport Strategy*, reintroduction of daily, school, and work activities using the *Return-to-School Strategy* must precede return to sport participation.

### Return-to-School Strategy

The following is an outline of the *Return-to-School Strategy* that should be used to help student-athletes, parents, and teachers to collaborate in allowing the athlete 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.

Stage	Aim	Activity	Goal of each step
1	Daily activities at home that do not give the student-athlete 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 activities	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work
3	Return to school 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 full-time	Gradually progress	Return to full academic activities and catch up on missed schoolwork

McCorry et al. (2017). Consensus statement on concussion in sport – the 5<sup>th</sup> international conference on concussion in sport held in Berlin, October 2016. *British Journal of Sports Medicine*, 51(11), 838-847.

### Taekwondo-Specific Return-to-Sport Strategy (Appendix F)

**Appendix F** contains an outline of the Return-to-Sport Strategy that should be used to help athletes, coaches, trainers, and medical professionals to partner in allowing the athlete to make a gradual return to sport activities. An initial period of 24-48 hours of rest is recommended before starting *Taekwondo-Specific Return-to-Sport Strategy*. The athlete should spend a minimum duration of 24 hours without symptom increases at each stage before progressing to the next one. If the athlete experiences new symptoms or worsening symptoms at any stage, they should go back to the previous stage. It is important that youth and adult student-athletes return to full-time school activities before progressing to stage 5 and 6 of the Taekwondo-Specific Return-to-Sport Strategy. It is also



important that all athletes provide their coach with a *Medical Clearance Letter* prior to returning to full contact sport activities.

Although World Taekwondo has their own concussion regulations with set timing for return to competition, Taekwondo Canada events require athletes to have medical clearance which supersedes World Taekwondo rules for Taekwondo Canada sanctioned or hosted events.

*McCroly et al. (2017). Consensus statement on concussion in sport – the 5<sup>th</sup> international conference on concussion in sport held in Berlin, October 2016. British Journal of Sports Medicine, 51(11), 838-847.*

**Who:** Medical doctor

**How:** *Return-to-Learn Strategy, Taekwondo-Specific Return-to Sport Strategy, Medical Assessment Letter*

## 5.6 Multidisciplinary Concussion Care

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 frame. 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, and rehabilitation medicine.

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.

**Who:** Multidisciplinary medical team, medical doctor with clinical training and experience in concussion (e.g. a sports medicine physician, neurologist, or rehabilitation medicine physician), licensed healthcare professionals.

## 5.7 Return to Sport

Those that have been diagnosed with a concussion and have successfully completed their *Return-to-School and Taekwondo-Specific Return-to-Sport Strategy* can be considered for return to full sports activities. The final decision to medically clear an athlete to return to full game activity should be based on the clinical judgment of the medical doctor 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 practice and game play, each athlete that has been diagnosed with a concussion must provide Taekwondo Canada with a standardized *Medical Clearance Letter* that specifies that a medical doctor has personally evaluated the patient and has cleared the athlete to return to sports.

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 play, they should be instructed to stop playing immediately, notify their parents (if they are a minor), coaches, trainer or teachers, and undergo follow-up *Medical Assessment*. In the event that the athlete sustains a new suspected concussion, the Taekwondo Canada Concussion Protocol should be followed as outlined here.

**Who:** Medical doctor

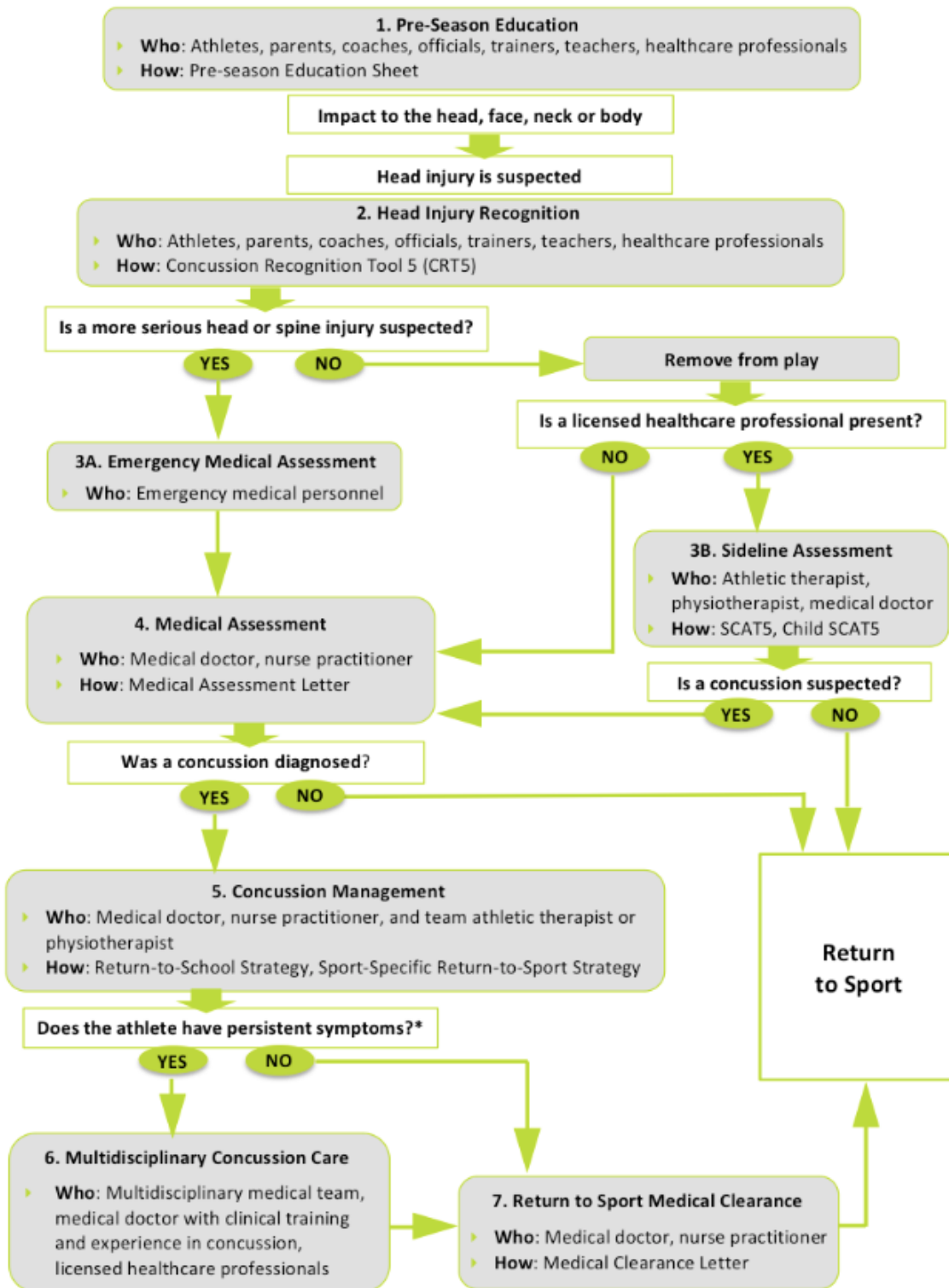
**Document:** *Medical Clearance Letter*

## 5.8 Surveillance

The Taekwondo Canada Representative will complete a detailed Incident Report and provide the same to the Tournament Director prior to the end of that day's competition.

## APPENDIX A

### Taekwondo Canada Concussion Pathway



\*Persistent symptoms: lasting > 4 weeks in children & youth or > 2 weeks in adults

## APPENDIX B

### Pre-Season Concussion Education 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 a player thinks and can cause a variety of symptoms.

#### 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: getting body-checked in hockey or hitting one's head on the floor in gym class.

#### When should I suspect a concussion?

A concussion should be suspected in any athlete 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 an athlete 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 playing surface
- Blank or vacant stare
- Facial injury after head trauma
- Disorientation or confusion or inability to respond appropriately to questions
- Clutching head
- Slow to get up after a direct or indirect hit to the head
- Balance and gait difficulties, poor co-ordination, stumbling, slow laboured movements

#### What should I do if I suspect a concussion?

If any player is suspected of sustaining a concussion during sports they should be immediately removed from the game or practice. Any player who is suspected of having sustained a concussion during sports must not be allowed to return to the same game or practice.

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

### When can the athlete return to school and sports?

It is important that all athletes diagnosed with a concussion follow a step-wise return to school and sports related activities that includes the following Return-to-School and Return-to-Sport Strategies. It is important that youth and adult student-athletes return to full-time school activities before progressing to stage 5 and 6 of the Return-to-Sport Strategy.

### Return-to-School Strategy

The following is an outline of the *Return-to-School Strategy* that should be used to help student-athletes, parents, and teachers to partner in allowing the athlete 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.

Stage	Aim	Activity	Goal of each step
1	Daily activities at home that do not give the student-athlete 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 activities	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work.
3	Return to school 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 full-time	Gradually progress.	Return to full academic activities and catch up on missed school work.

### Sport-Specific Return-to-Sport Strategy

The following is an outline of the *Return-to-Sport Strategy* that should be used to help athletes, coaches, trainers, and medical professionals to partner in allowing the athlete to make a gradual return to sport activities. Activities should be tailored to create a sport-specific strategy that helps the athlete return to their respective sport.

An initial period of 24-48 hours of rest is recommended before starting their *Sport-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. It is important that youth and adult student-athletes return to full-time school activities before progressing to stage 5 and 6 of the *Sport-Specific Return-to-Sport Strategy*. It is also important that all athletes provide their coach with a *Medical Clearance Letter* prior to returning to full contact sport activities.

Stage	Aim	Activity	Goal of each step
1	Symptom limiting activity	Daily activities that do not provoke symptoms.	Gradual re-introduction of work/school activities.
2	Light aerobic activity	Walking or stationary cycling at slow to medium pace. No resistance training.	Increase heart rate.
3	Sport-specific exercise	Running or skating drills. No head impact activities	Add movement.
4	Non-contact training drills	Harder training drills, e.g. passing drills. May start progressive resistance training.	Exercise, coordination and increased thinking.
5	Full contact practice	Following medical clearance and complete return to school.	Restore confidence and assess functional skills by coaching staff.
6	Return to sport	Normal game play.	

## APPENDIX C

### Concussion Recognition Tool 5

### CONCUSSION RECOGNITION TOOL 5 ©

To help identify concussion in children, adolescents and adults



#### 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

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#### 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**

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## APPENDIX D

## Medical Clearance Letter

## TAEKWONDO CANADA

## 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

Name:

Date of Competition:

Weight Class:

Province:

- Please send (1) Medical Certificate AND (2) SCAT 5 form for this certificate to the Taekwondo Canada medical advisor email [medical@taekwondo-canada.com](mailto: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 significant injury).

Following the injury, the event medical team: completed a SCAT5 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 F

### Taekwondo Specific Return-to-Sport Strategy

Stage	Aim	Activity	Goal of each step
1	Symptom-limiting activity	Daily activities that do not provoke symptoms or make symptoms worse	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"> <li>• <i>Light intensity jogging or stationary cycling for 15-20 minutes at sub-symptom threshold intensity</i></li> </ul>	Increase heart rate
3	<i>Sport-specific exercise</i>	<i>Low intensity sport-specific exercises. No head impact activities.</i> <ul style="list-style-type: none"> <li>• <i>Moderate intensity jogging for 30-60 minutes at sub-symptom threshold intensity</i></li> <li>• <i>Low intensity poomsae</i></li> <li>• <i>Low intensity target kicking</i></li> </ul>	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"> <li>• <i>Participation in high intensity running and drills</i></li> <li>• <i>Paddle sparring</i></li> <li>• <i>Moderate intensity poomsae -no freestyle</i></li> </ul>	Exercise, coordination and increased thinking
5	Full contact practice	Following medical clearance <u>Part A)</u> <ul style="list-style-type: none"> <li>• <i>Training with controlled contact</i></li> <li>• <i>Eliminating situations of hard impact</i></li> <li>• <i>Sparring drills with partners</i></li> </ul> <u>Part B)</u> <ul style="list-style-type: none"> <li>• <i>Participation in full practice without activity restriction</i></li> <li>• <i>Freestyle and high intensity poomsae</i></li> </ul>	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal training & return to competition	