



Policy Type: Health and Safety
Policy Title: Concussion
Authority: Chief Executive Officer
Limitation: Subject to Provincial or Federal Legislation

1.1 Policy Statement

Freestyle Canada recognizes that participation in freestyle skiing has an inherent amount of risk that may lead to head injuries and concussions. The purpose of this policy statement is to outline in broad terms the objectives to be achieved by the policy.

The policy applies to all members of the Freestyle Canada, including individuals, clubs and Provincial Sport Organizations (PSO) and is consistent with the *Canadian Guidelines on Concussion in Sport (2017)*.

The policy recognizes certain jurisdictions across Canada have legislation that govern the management of concussions within their jurisdiction in development or that has received royal assent. Government legislation supersedes this policy.

This document is designed to provide guidance to Freestyle Canada members responsible for operating, regulating or planning Freestyle Canada sanctioned activities with a risk of concussion to participants in the development, establishment and implementation of policies, procedures and programs for the prevention, treatment, and education of sport-related concussions and head injuries.

1.2 Purpose

This policy and related protocols cover the recognition, medical diagnosis, and management of Freestyle Canada members who are athletes and who may sustain a suspected concussion during a sport activity. It aims to ensure that athletes with a suspected concussion receive timely and appropriate care and proper management to allow them to return back to their sport safely. This policy may not address every possible clinical scenario that can occur during sport-related activities but includes critical elements based on the latest evidence and current expert consensus.

1.3 Concussion Policy

Freestyle Canada is committed to maintaining the health of its members and believes that participating in the sanctioned activities organized by Freestyle Canada can lead to better health. Freestyle Canada recognizes that concussions are a significant public health issue because of their potential short- and long-term consequences. Freestyle Canada enacts this policy and related protocols as tools to help educate, prevent, recognize, medically diagnose, and manage concussions that may occur while participating in Freestyle Canada sanctioned activities.

Freestyle Canada members will follow all treatment protocols, return to school, and



return to sport protocols.

1.4 Definitions

In this policy,

(a) Concussion means '[a] form of traumatic brain injury induced by biomechanical forces that results in signs and symptoms that are typically resolved spontaneously within 1 to 4 weeks of injury.¹

In plain language, a concussion:

- Is a brain injury that causes changes in how the brain functions, leading to symptoms that 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, poor quality of sleep);
- May be caused either by a direct blow to the head, face or neck, or a blow to the body that transmits a force 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); and,
- Cannot normally be seen on x-rays, standard CT scans or MRIs.

(b) Suspected Concussion means the recognition that an individual appears to have either experienced an injury or impact that may result in a concussion, or is exhibiting unusual behaviour that may be the result of concussion.

(c) Concussion Diagnosis means a clinical diagnosis made by a medical doctor or nurse practitioner.

(d) Youth or youth athlete means an athlete who is less than 18 years of age.

(e) Recognition means the detection of an event (i.e. suspected concussion) occurring during sports or a sport activity.

(f) Persistent Symptoms means concussion symptoms that last longer than 2 weeks after the injury in adults and long than 4 weeks after injury in youth.

(g) Licensed healthcare professional means a healthcare provider who is licensed by a national-professional regulatory body to provide concussion-related healthcare services that fall within their licensed scope of practice. Example include medical doctors, nurses,

¹ McCrory P, Meeuwisse W, Dvorak J, et al. "Consensus statement on concussion in sport – the 5th international conference on concussion in sport held in Berlin, October 2016," in Br J Sports Medicine 51(11), 838-847.



physiotherapists, athletic therapists, and chiropractors.

Among licensed healthcare professionals, only medical doctors and nurse practitioners are qualified to conduct a comprehensive medical assessment and provide a concussion diagnosis in Canada. The types of medical doctors qualified to do such an evaluation are: pediatricians; family medicine, sport medicine, internal medicine, orthopaedic surgeon, emergency department and rehabilitation (physiatrists) physicians; neurologists; and neurosurgeons.

- (h) **Medical Assessment** means the evaluation of an individual by a licensed healthcare professional to determine the presence or absence of a medical condition or disorder, such as a concussion.
- (i) **Treatment** means an intervention provided by a licensed healthcare professional to address a diagnosed medical condition/disorder or its associated symptoms, such as physical therapy.
- (j) **Multidisciplinary concussion clinic** means a facility or network of licensed healthcare professionals that provide assessment and treatment of concussion patients and are supervised by a physician with training and experience in concussion.
- (k) **Tool** means a standardized instrument or device that can be used to help recognize an event (i.e. a suspected concussion) or assess an individual with a suspected medical diagnosis (i.e. Sport Concussion Assessment Tool 5).
- (l) **Concussion Recognition Tool – 5th Edition (CRT5)** means a tool intended to be used for the identification of suspected concussion in children, youth, and adults. Published in 2017 by the Concussion in Sport Group, the CRT5 replaced the previous Pocket Concussion Recognition Tool from 2013.

1.5 Policy Objective

The objective of this policy is to protect the short-term and long-term health and safety of Freestyle Canada members who may have a suspected concussion or have received a concussion diagnosis.

1.6 Authority Levels

National Sport Organization (NSO): Developing policy, including Return to School and Return To Sport protocols, that guide the management of concussions for member PSOs and clubs; collecting data and reporting on the incidence of concussions; participating in multi-disciplinary working groups on concussions; ensuring compliance with policy; developing of education materials.

Provincial Sport Organizations (PSO): Developing of PSO specific concussion policies that conform with Provincial legislation or guidelines and Freestyle Canada policies;



implementing concussion education with PSO individual members and clubs; maintaining records for athlete concussions, including medical clearance letters; annually reporting on concussions to NSO.

Member Clubs: Ensuring coaches are properly trained regarding concussions; actively promoting concussion education with clubs, athletes, officials, volunteers and parents; reporting all incidents of suspected concussions to PSO; ensuring athletes have proper medical assessment letters and medical clearance letters to return to play (training or competition, on or off snow); providing PSO with medical clearance letters.

1.7 Stages of Concussion Management

In order to achieve the policy objective, the policy outlines direction for prevention, identification, management, access to care, communication, surveillance of concussions and policy review.

(a) Prevention: Ensuring Safe Play - Concussion Prevention Strategies

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

Pre-season Education (see Appendix A)

Education is the first line of defense to managing the risk of concussions.

Freestyle Canada will provide access to annual concussion educational information to every athlete, official, coach and parent prior to the beginning of each season. Freestyle Canada will publish this policy and any concussion management protocols to its website. Freestyle Canada will provide Freestyle Canada members, clubs and PSOs with an annual update on its concussion management policy. This will be provided through email, social media, website and educational courses

Freestyle Canada coaches and officials will be required to participate in annual concussion education as prescribed by Freestyle Canada. Freestyle Canada educational materials will meet with the Canadian Guidelines in Concussion in Sport (2017). Education will include:

- the definition of concussion,
- Possible mechanisms of injury.
- Common signs and symptoms,
- Steps that can be taken to prevent concussion and other injuries from occurring in sport,



- What to do when an athlete has suffered a suspected concussion or a more serious head injury,
- What measures should be taken to ensure proper medical assessment including *Return-to-School* and *Return-to-Sport* Strategies, and
- Return-to-sport medical clearance requirements.

An education sheet will be provided to all registered participants, parents or guardians if the registered participant is less than 18 years of age, coaches, officials, and club representatives before the beginning of each season. Participants will be required to confirm they have received this key information.

The pre-season education will also include information on the Freestyle Canada Concussion Protocol and policies for freestyle skiing in Canada.

Terrain and Competition Policies and Procedures

Freestyle Canada has developed terrain and facility guidelines and competition guidelines the provide direction on the type of terrain to be used for specific skill levels and how competition and training venues should be prepared to provide the maximum amount of safety to Freestyle Canada members.

Freestyle Canada requires that all Freestyle Canada sanctioned activities follow the Freestyle Canada policies and procedures and that the policies and procedures will be consistently enforced in order to effectively ensure safe play.

Helmets

Freestyle Canada requires helmets to be worn by Freestyle Canada Members who are licensed athletes or individuals who are demonstrating skills in a competition or training venue. Mouth guards are recommended.

Sport-specific concussion prevention strategies as outlined in this document will be implemented for all Freestyle Canada sanctioned activities.

(b) Head Injury Recognition

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



Early identification of a suspected concussion is important to properly manage a suspected concussion.

Identification of Suspected Concussion

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 (CRT5)*. A concussion should also be suspected if a player 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 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 in the CRT5, a more severe head or spine injury should be suspected, and Emergency Medical Assessment should be pursued.

Freestyle Canada the Concussion Action Plan (CAP) will be available and implemented at all Freestyle Canada sanctioned activities and events in case of a concussion or suspected concussion.

The Concussion Action Plan (CAP) outlines a general set of steps that will allow proper care for athletes when a suspected concussion occurs and will provide appropriate direction to all individuals. The CAP will include:

- Actions to take when concussion is suspected following an incident.
- Defining who has the authority to determine if a suspected concussion has occurred.
- Defining the authority to prohibit an individual from continuing to train or compete in a Freestyle Canada sanctioned activity.
- Outlining the necessary steps to inform the individual’s coach and parents (or guardians).
- Defining the steps to inform Freestyle Canada.
- Defining the necessary steps to seek medical care following a suspected concussion.

Documentation of Incident

Tracking the incidence of suspected concussion is a key component of the Freestyle Canada concussion policy.

Freestyle Canada will use the Freestyle Canada Accident Report to record the details of the incident to the National Sport Organization. The accident report will record the date, time, location, weather conditions, course conditions and describe the mechanics of the incident.



The Freestyle Canada Accident Report will be submitted to the NSO by the proper authority. If the incident occurs during training, the Coach will be required to submit the Freestyle Canada Accident Report within 48 hours of the incident. If the incident occurs during a competition, the Technical Delegate (or Event Organizer) will submit the Freestyle Canada Accident Report within 48 hours of the incident.

Freestyle Canada will follow up with the individual to determine if a physician has diagnosed concussion and request that a formal note from the physician be provided to Freestyle Canada.

(c) On-site Medical Assessment

Depending on the suspected severity of the injury, an initial assessment may be completed by emergency medical professionals or by an on-site licensed healthcare professional where available. In cases where an athlete loses consciousness or it is suspected an athlete might have a more severe head or spine injury, Emergency Medical Assessment by emergency medical professionals should take place (see “d” below). If a more severe injury is not suspected, the athlete should undergo Sideline Medical Assessment or Medical Assessment, depending on if there is a licensed healthcare professional present (see “e” below).

(d) Emergency Medical Assessment

If an athlete is suspected of sustaining a more severe head or spine injury during an event or training, an ambulance should be called immediately to transfer the patient to the nearest emergency department for further Medical Assessment.

Coaches, parents, teachers, trainers and officials should not make any effort to remove equipment or move the athlete until an ambulance has arrived. The athlete should not be left alone until the ambulance arrives. After the emergency medical services staff has completed the Emergency Medical Assessment, the athlete should be transferred to the nearest hospital for Medical Assessment. In the case of youth (under 18 years of age), the athlete’s parents should be contacted immediately to inform them of the athlete’s injury. For athletes over 18 years of age, their emergency contact person should be contacted if one has been provided

- **Who:** Emergency medical professionals

(e) Sideline Medical Assessment

If an athlete is suspected of sustaining a concussion and there is no concern for a more serious head or spine injury, the player should be immediately removed from the field of play.



Scenario 1: If a licensed healthcare professional is present

The athlete should be taken to a quiet area and undergo Sideline Medical Assessment using the Sport Concussion Assessment Tool 5 (SCAT5) or the Child SCAT5. The SCAT5 and Child SCAT5 are clinical tools that should only be used by a licensed healthcare professional that has experience using these tools. It is important to note that the results of SCAT5 and Child SCAT5 testing can be normal in the setting of acute concussion. As such, these tools can be used by licensed healthcare professionals to document initial neurological status but should not be used to make sideline return-to-sport decisions in youth athletes. Any youth athlete who is suspected of having sustained a concussion must not return to the game or practice and must be referred for Medical Assessment.

If a youth athlete is removed from play following a significant impact and has undergone assessment by a licensed healthcare professional, but there are NO visual signs of a concussion and the athlete reports NO concussion symptoms then the athlete can be returned to play but should be monitored for delayed symptoms.

In the case of national team-affiliated athletes (age 18 years and older), an experienced certified athletic therapist, physiotherapist or medical doctor providing medical coverage for the sporting event may make the determination that a concussion has not occurred based on the results of the Sideline Medical Assessment. In these cases, the athlete may be returned to the practice or game without a *Medical Clearance Letter* but this should be clearly communicated to the coaching staff. Athletes that have been cleared to return to games or practices should be monitored for delayed symptoms. If the athlete develops any delayed symptoms the athlete should be removed from play and undergo medical assessment by a medical doctor or nurse practitioner.

Scenario 2: If there is no licensed healthcare professional present

The athlete should be referred immediately for medical assessment by a medical doctor or nurse practitioner, and the athlete must not return to play until receiving medical clearance.

- ▶ **Who:** Athletic therapists, physiotherapists, medical doctor
- ▶ **How:** [Sport Concussion Assessment Tool 5 \(SCAT5\)](#), [Child Sport Concussion Assessment Tool 5 \(Child SCAT5\)](#)

(f) 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 (i.e CT scan). In addition to nurse practitioners, medical



doctors² that are qualified to evaluate patients with a suspected concussion include: pediatricians; family medicine, sports medicine, emergency department, internal medicine, orthopaedic surgeons, and rehabilitation (physiatrists) physicians; 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. 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* 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:** Medical doctor, nurse practitioner, nurse
- ▶ **How:** *Medical Assessment Letter (See Appendix B)*

(g) Concussion Management

When an athlete has been diagnosed with a concussion, it is important that the athlete's parent/legal guardian is informed. All athletes diagnosed with a concussion must be provided with a standardized *Medical Assessment Letter* that notifies the athlete and their parents/legal guardians/spouse 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 or nurse practitioner. 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 athlete to provide this information to sport organization officials that are responsible for injury reporting and concussion surveillance where applicable.

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 Sport-Specific Return-to-Sport Strategy* under the supervision of a medical doctor or nurse practitioner. 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*. Once the athlete has completed their *Return-to-School and Sport-Specific*

² Medical doctors and nurse practitioners are the only healthcare professionals in Canada with licensed training and expertise to meet these needs; therefore all athletes with a suspected concussion should undergo evaluation by one of these professionals.



Return-to-Sport Strategy and are deemed to be clinically recovered from their concussion, the medical doctor or nurse practitioner can consider the athlete for a return to full sports activities and issue a *Medical Clearance Letter*.

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 school work

Return to Sport Strategy

Freestyle Canada-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. An initial period of 24-48 hours of rest is recommended before starting the **Freestyle Canada -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 Freestyle Canada Specific Return-to-Sport Strategy.

It is also important that all athletes provide their coach and Freestyle Canada with a *Medical Clearance Letter* prior to returning to full contact sport activities.

STEP	ACTIVITY LEVEL	FREESTYLE SKI CONTEXT	Symptoms Present?	
			Yes	No
1	No activity, only complete rest.	Minimum of 24-48 hours of rest. Limit school, work and tasks requiring concentration. Refrain from physical activity until symptoms are gone.		A physician, should be consulted before moving to step 2
2	Light aerobic exercise.	Activities such as walking or stationary cycling. Someone who can help monitor for symptoms and signs should supervise the player. No resistance training or weight lifting. The duration and intensity of the aerobic exercise can be gradually increased over time if no symptoms or signs return during the exercise or the next day. Follow this 2-step process with 24 hours of rest between each step. a) Step 1 - 15 minutes on stationary bicycle, rest 24 hrs. If symptom free go to step 2 b) Step 2 - 60 minutes of more aggressive cardio work (75% of max Heart Rate) such as bike or jogging.	Return to rest and step 1 until symptoms have resolved. If symptoms persist, consult a physician.	Proceed to Step 3 only if athlete is: asymptomatic after 60 minute cardio session
3	Sport specific activities	Gentle skiing on flat, easy terrain. No jumping or jarring movements. No bouncing on trampolines. Continuous skiing for 60 minutes.	Return to rest until symptoms have resolved then resume at step 2. If symptoms persist, consult a physician.	Proceed to Step 4 the next day if asymptomatic.
4	Begin Discipline Specific Drills (up to moderate)	60 minutes of continuous discipline-specific training (on or off snow) - Skiing on moderate, terrain with moguls. - Skiing the halfpipe with small, easy jumps. - Riding "ability appropriate" boxes/rails	Return to rest until symptoms have resolved then resume at step 3.	The time needed to progress from non-contact exercise will vary with the severity of the concussion and

Commented [SC1]: Consider off snow sport specific progressions prior to returning to snow – in snow sports this is a common point of discussion given the risk of falling when on snow – thus, consider step 3 to be off snow training and step 4 to be return to snow with medical clearance prior to.



STEP	ACTIVITY LEVEL	FREESTYLE SKI CONTEXT	Symptoms Present?	
			Yes	No
	intensity)	- No big air tricks. - Small bouncing on trampoline or bounding drills.	If symptoms persist, consult a physician.	with the player. Proceed to Step 5 with Medical Clearance Only.
5	Begin Sport Specific Drills (up to full intensity) **	Gradually increase the intensity of training to include all normal training activities.	Return to rest until symptoms have resolved then resume at step 4 If symptoms persist, consult a physician.	Proceed to Step 6 the next day.
6	Game Play	Return to Competition		

** If the athlete is a student, the athlete should complete the Return-to-School protocol before engaging in Stage 5 of the **Freestyle Canada-Specific Return-to-Sport Strategy**

- ▶ **Who:** Medical doctor, nurse practitioner and team athletic therapist or physiotherapist (where available)
- ▶ **How:** *Return-to-Learn Strategy, Sport-Specific Return-to Sport Strategy, Medical Assessment Letter (See Appendix C)*

(h) 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

(i) Return to Sport

Athletes who have been determined to have not sustained a concussion and those that have been diagnosed with a concussion and have successfully completed their *Return-to-School and Freestyle Canada-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 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 practice and game play, 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 play, they should be instructed to stop playing immediately, notify their parents, coaches, trainer or teachers, and undergo follow-up *Medical Assessment*. In the event that the athlete sustains a new suspected concussion, the **Freestyle Canada Concussion Protocol** should be followed as outlined here.

- ▶ **Who:** Medical doctor, nurse practitioner
- ▶ **Document:** *Medical Clearance Letter*

(l) Communication

The individual, the individual's family, coach and medical professionals must communicate regularly with each other during the recovery process. The coordinated efforts to ensure the proper care and recovery steps are taken will ensure the individual returns to play when fully recovered.

(j) Surveillance



Freestyle Canada will determine appropriate methods to collect information regarding suspected concussions, concussion diagnoses and return to play. Data will be reported in an aggregated format without personal identification of any individual.

Data collected will be used to monitor the impact of Freestyle Canada's concussion policy and programs and inform ongoing development of these policies.

(k) Policy Review

Freestyle Canada will review this policy on an annual basis.

1.7 Baseline Testing

The following position on baseline testing is consistent with the Parachute Canada position statement on baseline testing. (see <http://www.parachutecanada.org/downloads/injurytopics/BaselineTestingStatement-Parachute.pdf>)

Youth and Recreational Adult Athletes

Baseline testing of youth and adult recreational athletes using any tool or combination of tools is not required to provide post injury care of those who sustain a suspected or diagnosed concussion. Baseline testing is not recommended in youth athletes regardless of the sport or level of play.

Current evidence does not support a significant added benefit of baseline testing in youth athletes or adult recreational athletes with the Child SCAT5, SCAT5 or computerized neurocognitive tests. Therefore, baseline testing of youth athletes or adult recreational athletes to assist in the medical management of those with a diagnosed concussion is not necessary and is not recommended. Because medical doctors and nurse practitioners are the only healthcare professionals that are licensed in Canada to provide medical assessment of athletes with a suspected concussion and medical clearance of athletes with a suspected or diagnosed concussion, obtaining baseline testing from allied health professionals using any tool or test is not recommended.

High Performance Program and Elite Provincial Athletes



Baseline testing is often used for adult national team affiliated athletes where teams have access to licensed healthcare professionals who provide care to these athletes on a regular basis. If baseline testing using certain tests is considered for selected adult athletes, it is recommended that the medical teams caring for these athletes have access to the licensed healthcare professionals who are optimally trained and licensed to administer and interpret these tests.

The *Canadian Guideline on Concussion in Sport* states that licensed healthcare professionals (an experienced athletic therapist, physiotherapist or medical doctor) may use the SCAT5 to evaluate national team affiliated adult athletes with a suspected concussion and make sideline decisions regarding Return-to-Sport (Parachute, 2017). Only those licensed healthcare professionals that have experience administering and interpreting the results of sideline assessment tools should consider use of these tools for baseline and post injury testing in national team affiliated adult athletes.

If other baseline tests are considered to aid in the in-office medical management of selected national team affiliated adult athletes (for example, computer-based or non-computer-based neurocognitive or neuropsychological tests), it is recommended that licensed healthcare professionals that are optimally trained to use these tests (for example, neuropsychologists) be available to interpret the results (McCrory et al, 2017). All licensed healthcare professionals that consider baseline testing of selected adult athletes should be aware of the potential limitations of the tests they use and take this into clinical consideration when providing multimodal medical assessment and medical clearance of athletes with a suspected or diagnosed concussion.

1.8 Government Policies and Regulations

Government of Ontario:

- Ministry of Education (English): <http://www.edu.gov.on.ca/extra/eng/ppm/158.pdf>
- Ministry of Education (French): <http://www.edu.gov.on.ca/extra/fre/ppm/158f.pdf>
- Rowan's Law: http://www.ontla.on.ca/bills/bills-files/41_Parliament/Session1/b149ra.pdf

1.9 Stages of Concussion Management and Associated Documents

Canadian Guideline on Concussions in Sport

- <http://www.parachutecanada.org/concussion>

Education

- Complete Concussion Management: <https://completeconcussions.com/>
- Coaching Association of Canada – Making Headway: <http://www.coach.ca/-p153487>
- Institut nationale d'excellence en santé et en services sociaux: <http://fecst.inesss.qc.ca/en/documentation/publications.html>
- Alberta Concussion Alliance: <http://www.sportmedab.ca/content.php?id=1745>
- Canadian Concussion Collaborative: <http://casem-acmse.org/education/cccl/>



- BC Injury Research and Prevention Unit: <http://www.cattonline.com/>

Prevention

- Freestyle Canada Concussion Action Plan policy

Management Procedures for a Diagnosed Concussion

- Freestyle Canada Return to Play Guidelines (English): Currently being updated
- Freestyle Canada Return to Play Guidelines (French): Currently being updated

1.10 Stages of Concussion Management and Associated Documents

Originally Approved by Freestyle Canada Board of Directors: October 22, 2016

Update by Freestyle Canada:



Appendix A

Pre-Season Concussion Education Sheet

HOW TO USE THIS EDUCATION SHEET:

Distribute this pre-season concussion education sheet to your athletes and their parents or legal guardians during a pre-season meeting, at the time of registration or the first day of training. We recommend the athlete and parent sign this sheet and a copy of retained by the club

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

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 getting body-checked in hockey, hitting one's head on the floor in the gym class, or landing on your side or back while landing during a ski jump.

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 report ANY symptoms or demonstrates ANY visual signs of 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 24-48 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	• Easily upset or angered
• Dizziness	• Sadness
• Nausea and vomiting	• Nervousness or anxiety
• Blurred or fuzzy vision	• Feeling more emotional
• Sensitivity to light or sound	• Sleeping more or sleeping less
• Balance problems	• Having a hard time falling asleep
• Feeling tired or having no energy	• Difficulty working on a computer
• Nothing thinking clearly	• Difficulty reading
• Feeling slowed down	• 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
Slow to get up after a direct or indirect hit to the head	Balance, gait difficulties, motor incoordination, stumbling slow labored movements
Disorientation or confusion or inability to respond appropriately to questions	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 sports they should be immediately removed from play. Any athlete who is suspected of having sustained a concussion during sports must not be allowed to return to the game or practice.

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 activities.

WHEN CAN AN ATHLETE RETURN TO SCHOOL OR 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-Sports 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-Sports strategy.

Return-to-School Strategy

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

Return-to-Sports Strategy

STEP	ACTIVITY LEVEL	FREESTYLE SKI	Symptoms Present?	
		CONTEXT	Yes	No



STEP	ACTIVITY LEVEL	FREESTYLE SKI		Symptoms Present?	
		CONTEXT		Yes	No
1	No activity, only complete rest.	Minimum of 24-48 hours of rest. Limit school, work and tasks requiring concentration. Refrain from physical activity until symptoms are gone.			A physician, should be consulted before moving to step 2
2	Light aerobic exercise.	Activities such as walking or stationary cycling. Someone who can help monitor for symptoms and signs should supervise the player. No resistance training or weight lifting. The duration and intensity of the aerobic exercise can be gradually increased over time if no symptoms or signs return during the exercise or the next day. Follow this 2-step process with 24 hours of rest between each step. a) Step 1 - 15 minutes on stationary bicycle, rest 24 hrs. If symptom free go to step 2 b) Step 2 - 60 minutes of more aggressive cardio work (75% of max Heart Rate) such as bike or jogging.		Return to rest and step 1 until symptoms have resolved. If symptoms persist, consult a physician.	Proceed to Step 3 only if athlete is: asymptomatic after 60 minute cardio session
3	Sport specific activities	Gentle skiing on flat, easy terrain. No jumping or jarring movements. No bouncing on trampolines. Continuous skiing for 60 minutes.		Return to rest until symptoms have resolved then resume at step 2. If symptoms persist, consult a physician.	Proceed to Step 4 the next day if asymptomatic.
4	Begin Discipline Specific Drills (up to moderate intensity)	60 minutes of continuous discipline-specific training (on or off snow) - Skiing on moderate, terrain with moguls. - Skiing the halfpipe with small, easy jumps. - Riding "ability appropriate" boxes/rails - No big air tricks. - Small bouncing on trampoline or bounding drills.		Return to rest until symptoms have resolved then resume at step 3. If symptoms persist, consult a physician.	The time needed to progress from non-contact exercise will vary with the severity of the concussion and with the player. Proceed to Step 5 with Medical Clearance Only.
5	Begin Sport Specific Drills (up to full intensity) **	Gradually increase the intensity of training to include all normal training activities.		Return to rest until symptoms have resolved then resume at step 4 If symptoms persist,	Proceed to Step 6 the next day.



STEP	ACTIVITY LEVEL	FREESTYLE SKI CONTEXT	Symptoms Present?	
			Yes	No
6	Game Play	Return to Competition	consult a physician.	

HOW LONG WILL IT TAKE FOR THE ATHLETE TO RECOVER?

Most athletes who sustain a concussion will make a complete recovery within 1-2 weeks while most youth athletes (less than 18 years of age) will recover within 1-4 weeks. Approximately 15-30% of patients will experience persistent symptoms (>2 weeks for adults; >4 weeks for youth) that may require additional medical assessment and management.

HOW CAN I HELP PREVENT CONCUSSIONS AND THEIR CONSEQUENCES?

Concussion prevention, recognition, and management require athletes to follow the rules and regulations of Freestyle Canada, respect their opponents, avoid head contact, and report suspected concussions.

TO LEARN MORE ABOUT CONCUSSIONS PLEASE VISIT: www.parachutecanada.org/concussion

SIGNATURES (optional): The following signatures certify that the athlete and his/her parent or legal guardian have reviewed the above information related to concussion.

Printed name of athlete

Signature of athlete

Date

Printed name of parent

Signature of parent

Date



Appendix B

Medical Assessment Letter

To the Physician/NP: This athlete has been identified as having possibly sustained a concussion. Freestyle Canada's policy is that all athletes who sustain a suspected concussion should be reviewed by a physician or nurse practitioner*, as per the Canadian Guideline on Concussion in Sport. (insert URL link here) We appreciate your assistance in helping this athlete safely return to his or her sport.

Date: _____

Athlete Name: _____

Results of the Medical Assessment:

- ☐ This patient has not been diagnosed with a concussion and can resume full participation in school, work, and sport activities without restriction.
- ☐ This patient has not been diagnosed with a concussion but the assessment led to the following diagnosis:

- ☐ This patient has been diagnosed with a concussion.
- ☐ In the management of this confirmed concussion, I would recommend that this patient be allowed to participate in school and low-risk physical activity as tolerated starting on _____(date).

Other Comments:

I have personally completed a Medical Assessment of this patient,

Signature/print _____
M.D. / N.P (circle the appropriate designation)*

Freestyle Canada greatly appreciates your assistance in completing these form(s).

* In rural or northern regions, the Medical Assessment Letter may be completed by a nurse with pre-arranged access to a medical doctor or nurse practitioner. Forms completed by other licensed healthcare professionals should not be otherwise accepted.

To the Physician/NP in the case of confirmed Concussion:



In order to assist you in helping this athlete safely return to sport, we are providing for your reference the Return-to-School and Return-to-Sport Strategies as outlined in the current Canadian Guideline on Concussion in Sports. As you know, the goal of concussion management is to allow complete recovery of the patient's concussion by promoting a safe and gradual return to school and sport activities. Your patient has been instructed to avoid all recreational and organized sports or activities that could potentially place them at risk of another concussion or head injury. Your patient has been advised not to return to any full contact practices or games until the coach has been provided with a Medical Clearance Letter provided by a medical doctor or nurse practitioner (attached), in accordance with the Canadian Guideline on Concussion in Sports.

Return-to-School Strategy

The following is an outline for 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 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

Return-to-Sports 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.

STEP	ACTIVITY LEVEL	FREESTYLE SKI	Symptoms Present?	
		CONTEXT	Yes	No
1	No activity, only complete	Minimum of 24-48 hours of rest. Limit school, work and tasks requiring concentration.		A physician, should be consulted before moving to step 2



STEP	ACTIVITY LEVEL	FREESTYLE SKI CONTEXT	Symptoms Present?	
			Yes	No
	rest.	Refrain from physical activity until symptoms are gone.		
2	Light aerobic exercise.	Activities such as walking or stationary cycling. Someone who can help monitor for symptoms and signs should supervise the player. No resistance training or weight lifting. The duration and intensity of the aerobic exercise can be gradually increased over time if no symptoms or signs return during the exercise or the next day. Follow this 2-step process with 24 hours of rest between each step. a) Step 1 - 15 minutes on stationary bicycle, rest 24 hrs. If symptom free go to step 2 b) Step 2 - 60 minutes of more aggressive cardio work (75% of max Heart Rate) such as bike or jogging.	Return to rest and step 1 until symptoms have resolved. If symptoms persist, consult a physician.	Proceed to Step 3 only if athlete is: asymptomatic after 60 minute cardio session
3	Sport specific activities	Gentle skiing on flat, easy terrain. No jumping or jarring movements. No bouncing on trampolines. Continuous skiing for 60 minutes.	Return to rest until symptoms have resolved then resume at step 2. If symptoms persist, consult a physician.	Proceed to Step 4 the next day if asymptomatic.
4	Begin Discipline Specific Drills (up to moderate intensity)	60 minutes of continuous discipline-specific training (on or off snow) - Skiing on moderate, terrain with moguls. - Skiing the halfpipe with small, easy jumps. - Riding "ability appropriate" boxes/rails - No big air tricks. - Small bouncing on trampoline or bounding drills.	Return to rest until symptoms have resolved then resume at step 3. If symptoms persist, consult a physician.	The time needed to progress from non-contact exercise will vary with the severity of the concussion and with the player. Proceed to Step 5 with Medical Clearance Only.
5	Begin Sport Specific Drills (up to full intensity) **	Gradually increase the intensity of training to include all normal training activities.	Return to rest until symptoms have resolved then resume at step 4 If symptoms persist, consult a physician.	Proceed to Step 6 the next day.
6	Game Play	Return to Competition		

What if symptoms occur? Any athlete who has been cleared for physical activities, gym class or non-contact practice, and who has a recurrence of symptoms, should immediately remove himself or herself from the activity and inform the teacher or coach. If the symptoms subside, the athlete may continue to participate in these activities as tolerated.

Athletes who have been cleared for full contact practice or game play must be able to participate in full-time school (or normal cognitive activity) as well as high intensity resistance and endurance exercise (including non-contact practice) without symptom recurrence. Any athlete who has been cleared for full-contact practice or full game play and has a recurrence of



symptoms, should immediately remove himself or herself from play, inform their teacher or coach, and undergo Medical Assessment by a medical doctor or nurse practitioner before returning to full-contact practice or games.

Any athlete who returns to practice or games and sustains a new suspected concussion should be managed according to the *Canadian Guideline on Concussion in Sport*.



Appendix C

Medical Clearance Letter

Date: _____

Athlete Name: _____

This athlete has been followed by me for a concussive injury. I have monitored the athlete's progression through the Return to School and Return to Sport Strategies as outlined in the Canadian Guideline on Concussion in Sports. As per the Guideline, clearance by a medical doctor or nurse practitioner is required before the athlete can return to any activity with significant risk of recurrent head injury.

In my opinion, the athlete is now ready to return to:

- ☐ Full-contact practice (including gym class activities with risk of contact and head impact, e.g. soccer, dodgeball, basketball)
- ☐ Full game play

Other Comments:

Signature/print _____

M.D. / N.P (circle the appropriate designation)*

Freestyle Canada greatly appreciates your assistance in completing these form(s).

* In rural or northern regions, the Medical Clearance Letter may be completed by a nurse with pre-arranged access to a medical doctor or nurse practitioner. Forms completed by other licensed healthcare professionals should not be otherwise accepted.

Appendix D

Concussion Recognition Tool 5 (CRT5)

Available on-line at: <http://bjsm.bmj.com/content/bisports/51/11/872.full.pdf>

[illegible]



Appendix E

Concussion Action Plan (Pathway)

