

RINGETTE CANADA CONCUSSION PROTOCOL

*Adapted from: Parachute. (2024). Canadian Guideline on Concussion in Sport (2nd edition).
<http://www.parachute.ca/guideline>*

Ringette Canada has developed the **Ringette Canada Concussion Protocol** to help guide the management of athletes who may have a suspected concussion as a result of participation in **Ringette Canada** activities.

Purpose

This protocol covers the recognition, medical diagnosis, and management of all Ringette Canada participants who may sustain a suspected concussion participating in a Ringette related activity. It aims to ensure that athletes with a suspected concussion receive timely and appropriate care and proper management to allow them to return to Ringette safely. This protocol 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.

Who should use this protocol?

This protocol applies to athletes, coaches, officials, trainers, Safety Personnel, licensed healthcare professionals, parents/guardians, administrators, and decision makers of Ringette Canada and their members/associations.

For a summary of the **Ringette Canada Concussion Protocol** please refer to the **Ringette Canada Sport Concussion Pathway** figure at the end of this document.

1. Pre-Season 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 individuals with a role in the sport community on 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 should include 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 including Return-to-School and Ringette-Specific Return-to-Sport Strategies, and
- Ringette-Specific Return-to-Sport medical clearance requirements.

All athletes, parents/guardians, coaches, trainers, Safety Personnel, and team staff are required to review and submit a signed copy of the **Pre-season Concussion Education Sheet** to their coach, or team designate, prior to the first practice of the season.

All officials are required to review and submit a signed copy of the **Pre-season Concussion Education Sheet** to their administrator prior to officiating their first game of the season.

In addition to reviewing information on concussion, it is also important that all sport stakeholders have a clear understanding of the **Ringette Canada Concussion Protocol**. This can be accomplished through pre-season in-person orientation sessions for athletes, parents/guardians, coaches, trainers, Safety Personnel, team staff and other sport stakeholders.

- **Who:** athletes, parents/guardians, coaches, trainers, Safety Personnel, team staff, officials
- **How:** Pre-season Concussion Education Sheet

2. Head Injury Recognition

Although the formal diagnosis of concussion should be made following a **medical assessment**, all individuals in the Ringette community, including athletes, parents/guardians, coaches, trainers, Safety Personnel, team staff, and officials are responsible for the recognition and reporting of athletes with a suspected concussion. This is particularly important because many Ringette and training venues will not have access to on-site licensed healthcare professionals.

Suspected concussion

A concussion should be suspected if an athlete sustains an impact to the head, face, neck, or body and:

- **demonstrates one or more observable signs** of a suspected concussion (as detailed in the **Concussion Recognition Tool 6**), OR
- **reports one or more symptoms** of suspected concussion (as detailed in the **Concussion Recognition Tool 6**).

This includes cases where the impact wasn't witnessed, but anyone witnesses an athlete exhibiting one or more observable signs of suspected concussion or an athlete reports one or more symptoms of suspected concussion to one of their peers, parents/guardians, coaches, trainers, Safety Personnel, team staff, or officials.

In all cases of suspected concussion, the athlete should be removed from the activity immediately and undergo medical assessment as soon as possible.

Delayed signs and symptoms

If an athlete is removed from play following an impact for cautionary reasons, but there are no observable signs or symptoms of a suspected concussion, then the athlete can be returned to play but should be monitored for delayed symptoms for up to 48 hours.

Red flag symptoms

In some cases, an athlete may show signs or symptoms that potentially indicate a more severe head or spine injury, including loss of consciousness, convulsions, worsening headaches, repeated vomiting, or neck pain (see a detailed list in the **Concussion Recognition Tool 6**).

If an athlete demonstrates any red flags, a more severe head or spine injury should be suspected, principles of first aid should be followed and emergency medical assessment should be pursued.

- **Who:** athletes, parents/guardians, coaches, trainers, Safety Personnel, team staff, officials
- **How:** **Concussion Recognition Tool 6**

3. Onsite 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 any red flags are present, emergency medical assessment by emergency medical professionals should take place (see 3a 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 3b below).

3a. Emergency medical assessment

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

Parents/guardians, coaches, trainers, Safety Personnel, team staff and officials should not make any effort to remove equipment (unless formally trained to do so) or move the athlete and 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 athletes, the athlete's parents/guardians should be contacted immediately to inform them of the injury. For adult athletes, their emergency contact person should be contacted if one has been provided.

- **Who:** Emergency medical professionals

3b. 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 athlete should be immediately removed from the ice or training area.

Scenario 1: 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 6 (SCAT6) or the Child SCAT6. 10 - 15 minutes should be allocated for athlete assessment to be completed.

The SCAT6 and Child SCAT6 are clinical tools that should only be used by a licensed healthcare professional who has training and experience using them. These tools can be used as part of the overall clinical assessment and screening for concussion. It is important to note that the results of SCAT6 and Child SCAT6 testing can be normal in the setting of acute concussion and that signs and symptoms may evolve over time. As such, these tools can be used by licensed healthcare professionals to document initial symptoms and 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 should be referred for medical assessment. A youth athlete is a participant who is less than 18 years of age.

Who: Licensed healthcare professionals

- (A healthcare provider who is licensed or certified by a provincial, territorial, or national professional regulatory body to provide concussion-related healthcare services that fall within their licensed scope of practice. Examples include, but are not limited to, medical doctors, nurses, physiotherapists, and athletic therapists.)
- **How: Sport Concussion Assessment Tool – 6th Edition (SCAT6)**
 - Child Sport Concussion Assessment Tool – 6th Edition (Child SCAT6)

Scenario 2: No licensed healthcare professional present.

An athlete with suspected concussion should be referred for medical assessment by a medical doctor or nurse practitioner as soon as possible.

Considerations for Athletes with Disabilities

There is a recognized gap in research evidence regarding the experiences, assessment, and management of concussion in athletes with disabilities. The Sport Concussion Assessment Tools have not been validated for use with individuals with disabilities.

The Concussion in Para Sport Group recommends that, for athletes with disabilities, concussions should be managed according to current guidelines, as able. Care should be individualized, considering the athlete and the implications of their disability on assessment and management.

More detailed considerations and recommendations for the care of athletes participating in para sport are detailed in "Concussion in para sport: the first position statement of the Concussion in Para Sport (CIPS) Group".

4. Medical Assessment

The medical assessment is responsible for determining whether the athlete has a diagnosed concussion or not. 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,
- rule out medical and neurological conditions that can present with concussion-like symptoms, and
- make the differential diagnosis of concussion based on findings of the clinical history and physical examination and the evidence-based use of adjunctive tests as indicated (e.g., CT scan).

Licensed healthcare professionals in Canada whose scope of practice matches these requirements are medical doctors and nurse practitioners. Medical doctors who can evaluate patients with a suspected concussion include pediatricians, family medicine physicians, sports medicine physicians, emergency department physicians, internal medicine physicians, physiatrists (rehabilitation physicians), neurologists and neurosurgeons.

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

Scope of practice for licensed healthcare professionals can vary by province and territory. Of note:

- In Manitoba, physician assistants can diagnose concussion.

In Quebec, nurse practitioners cannot diagnose concussion. The role of physiotherapists in the assessment and management of concussion is specified. [Learn more](#)

Athletes who are determined to have not sustained a concussion should be provided with a

Medical Assessment Letter indicating a concussion has not been diagnosed. The athlete can return to Ringette related activities without restriction.

Athletes diagnosed with a concussion should be provided with a Medical Assessment Letter indicating a concussion has been diagnosed. The athlete must follow a gradual return to activities, including school, work, and Ringette-related activities (see 5. Concussion Management).

Because the Medical Assessment Letter contains personal health information, it is the responsibility of the athlete or their parent/guardian to provide this documentation to the athlete's coaches or Safety Personnel. It is also important for the athlete or coach to provide this information to Ringette organization administrators who are responsible for injury reporting and concussion surveillance, where applicable.

- **Who:** Medical doctor, nurse practitioner, nurse
- **How:** Medical Assessment Letter

5. Concussion Management

Athletes diagnosed with a concussion should be provided with education about the signs and symptoms of concussion, treatment/management of their symptoms, the risks of returning to sport without medical clearance and recommendations regarding a gradual return to school (if applicable) and sport activities.

Athletes diagnosed with a concussion are to be managed according to their Return-to-School (if applicable) and Ringette-Specific Return-to-Sport Strategies under the supervision of a medical doctor or nurse practitioner. When available, athletes should be encouraged to work with their team's licensed healthcare professional to optimize progression through their Ringette-Specific Return-to-Sport Strategy.

The stepwise progressions for Return-to-School and Ringette-Specific Return-to-Sport Strategies are outlined below. Note that these strategies begin at the same time, can happen concurrently and the first step of both is the same.

Return-to-School Strategy

The following is an outline of the Return-to-School Strategy that should be used to help students, parents/guardians, and teachers to partner in allowing the athlete to make a gradual return to school activities (Table 1). Every concussion is unique and, depending on the severity and type of the symptoms present, progression through the following steps will look different for each student-athlete. This tool is a recommendation and should not replace medical advice.

Medical clearance is not required to return to school, except for full participation in school-based sport and physical activity. Return to sport and physical activity should be guided by the Ringette-Specific Return-to-Sport Strategy.

Students do not need to be symptom-free to return to school and a complete absence from school of more than one week is not recommended. It is common for a student's symptoms to worsen slightly with activity. This is acceptable as they progress through steps so long as the symptom exacerbation is:

- **mild:** Symptoms worsen by only one to two points on a zero-to-10 scale, and
- **brief:** Symptoms settle back down to pre-activity levels within an hour.

If the student's symptoms worsen more than this, they should pause and adapt activities as needed.

RETURN-TO-SCHOOL STRATEGY

CONCUSSION MANAGEMENT

Step	Activity	Description
1	Activities of daily living & relative rest (First 24-48 hours)	<ul style="list-style-type: none"> • Typical activities at home (e.g. preparing meals, social interactions, light walking). • Minimize screen time.
After a maximum of 24-48 hours after injury, progress to Step 2.		
2	School activities with encouragement to return to school (as tolerated)	<ul style="list-style-type: none"> • Homework, reading or other light cognitive activities at school or home. • Take breaks & adapt activities as needed. • Gradually resume screen time, as tolerated.
If the student can tolerate school activities, progress to Step 3.		
3	Part-time or full days at school with accommodations	<ul style="list-style-type: none"> • Gradually reintroduce schoolwork. • Part-time school days with access to breaks & other accommodations may be required. • Gradually reduce accommodations related to the concussion and increase workload.
If student can tolerate full days without accommodations for concussion, progress to Step 4.		
4	Return to school full-time	<ul style="list-style-type: none"> • Return to full days at school & academic activities, without accommodations related to the concussion. • For return to sport & physical activity, including physical education class, refer to the Ringette-Specific Return-to-Sport Strategy.
Return to School is complete.		

Ringette-Specific Return-to-Sport Strategy

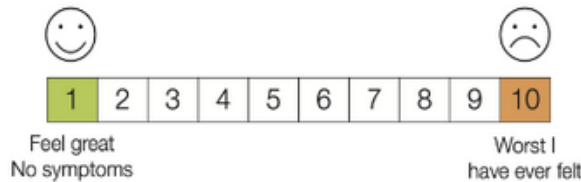
The following is an outline of the Ringette-Specific Return-to-Sport Strategy that should be used to help athletes, parents/guardians, coaches, trainers, Safety Personnel, and medical professionals to partner in allowing the athlete to make a gradual return to Ringette-related activities. This tool is a guideline and should not replace medical advice; with direction from a healthcare professional, timelines and activities may vary.

The athlete should spend a minimum of 24 hours at each step before progressing on to the next. It is common for an athlete’s symptoms to worsen slightly with activity. This is acceptable as they progress through steps 1 to 3 of return to sport, so long as symptom exacerbation is:

- mild: symptoms worsen by only one to two points on a zero-to-10 scale, and
- brief: symptoms settle back down to pre-activity levels within 1 hour.

If the athlete’s symptoms worsen more than this, they should stop the activity and try resuming the next day at the same step.

Sample 0-10 scale for describing symptom severity



Before progressing to step 4 of the Ringette-specific Return-to-Sport Strategy, athletes must:

- successfully complete all steps of the Return-to-School Strategy (if applicable), and
- provide their coach with a Medical Clearance Letter indicating they have been medically cleared to return to activities with risk of falling or contact.

If the athlete experiences concussion symptoms after medical clearance (i.e., during steps 4 to 6), they should return to step 3 to establish full resolution of symptoms. Medical clearance will be required again before progressing to step 4.

RINGETTE-SPECIFIC

RETURN-TO-SPORT STRATEGY

Step	Activity	Description
1	Activities of daily living & relative rest (First 24 – 48 hours)	<ul style="list-style-type: none"> Typical activities at home (e.g. preparing meals, social interactions, light walking). Minimize screen time.
After maximum of 24–48 hours after injury, progress to Step 2		
2	2A: Light effort aerobic exercise	<ul style="list-style-type: none"> Walking or stationary cycling at slow to medium pace for 10 – 15 minutes. May begin light resistance training that does not result in more than mild & brief worsening of symptoms. Exercise up to approximately 55% of maximum heart rate. Take breaks & modify activities as needed.
	2B: Moderate effort aerobic exercise	<ul style="list-style-type: none"> Gradually increase tolerance & intensity of aerobic activities, such as walking or stationary cycling at a brisk pace for 10 – 15 minutes. May begin light resistance training that does not result in more than mild & brief worsening of symptoms. Exercise up to approximately 70% of maximum heart rate. Take breaks & modify activities as needed.
If the athlete can tolerate moderate aerobic exercise, progress to Step 3		
3	Individual ringette-specific activities, without risk of inadvertent head impact	<ul style="list-style-type: none"> Add ringette-specific activities (e.g., skating, changing direction, individual drills) for 20 – 30 minutes. Perform activities individually & under supervision from a parent/guardian, coach, or Safety Personnel. Progress to where the athlete is free of concussion-related symptoms, even when exercising. There should be no body contact or other jarring motions, such as high-speed stops. Athletes should wear a “No Contact” identification pinny.
Medical Clearance		
If an athlete has completed Return-to-School (if applicable) & has been medically cleared, progress to Step 4.		
4	Non-contact training drills and activities	<ul style="list-style-type: none"> Progress to exercises with no body contact at high intensity, including more challenging drills & activities (e.g., shooting & passing drills, multi-athlete training, & practices). Where possible, give extra space around other athletes to avoid collisions or falls on the ice. Athletes should wear a “No Contact” identification pinny.
If the athlete can tolerate the usual intensity of activities with no return of symptoms, progress to Step 5.		
5	Return to all non-competitive activities, full-contact practice & physical education activities	<ul style="list-style-type: none"> Progress to higher-risk activities including typical training activities, full-contact ringette practices & physical education class activities. Do not participate in competitive gameplay.
If the athlete can tolerate non-competitive, high-risk activities, progress to Step 6.		
6	Return to sport	<ul style="list-style-type: none"> Unrestricted sport & physical activity Full gameplay
Return to Sport is complete.		

- **Who:** Medical doctor, nurse practitioner, licensed healthcare professionals
- **How:** Return-to-School Strategy, Ringette-Specific Return-to Sport Strategy, Medical Clearance Letter

6. Interdisciplinary 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 without any concussion-related accommodations and full sport participation without restrictions within four weeks of injury. However, approximately 15 to 30 percent of individuals will experience symptoms that last longer beyond this time frame.

Athletes who experience persisting symptoms (longer than four weeks) may benefit from referral to specialized interdisciplinary concussion care for assessment and care that addresses the athlete's individual symptoms and needs.

Care of persisting symptoms should follow the management recommendations in Canada's clinical practice guidelines:

- [Pediatric guidelines \(children and youth under 18\)](#).
- [Adult guidelines](#) (18 and older)

7. Return to Sport

Athletes who have been determined to have not sustained a concussion and provide a Medical Assessment Letter indicating that they can return to Ringette-related activities without restriction, may resume all Ringette-related activities.

Athletes who have been diagnosed with a concussion can be considered for medical clearance to return to sport activities with risk of contact or fall once they have successfully completed:

- all steps of the Return-to-School Strategy (if applicable), and
- steps 1 to 3 of the Ringette-Specific Return-to-Sport Strategy.

The final decision to medically clear an athlete to return to activity with risk of falls and contact 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 (e.g., neuropsychological testing, diagnostic imaging).

To progress to step 4 of return to sport, the athlete must provide their coach or Safety Personnel with a 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 sport. In geographic regions of Canada with limited access to medical doctors (i.e. rural, remote, or northern communities), a licensed healthcare professional (i.e. a nurse) with pre-arranged access to a medical doctor or nurse practitioner can provide this documentation.

It is also important for the athlete, parent/guardian, or coach to provide this information to sport organization administrators who are responsible for injury reporting and concussion surveillance, where applicable.

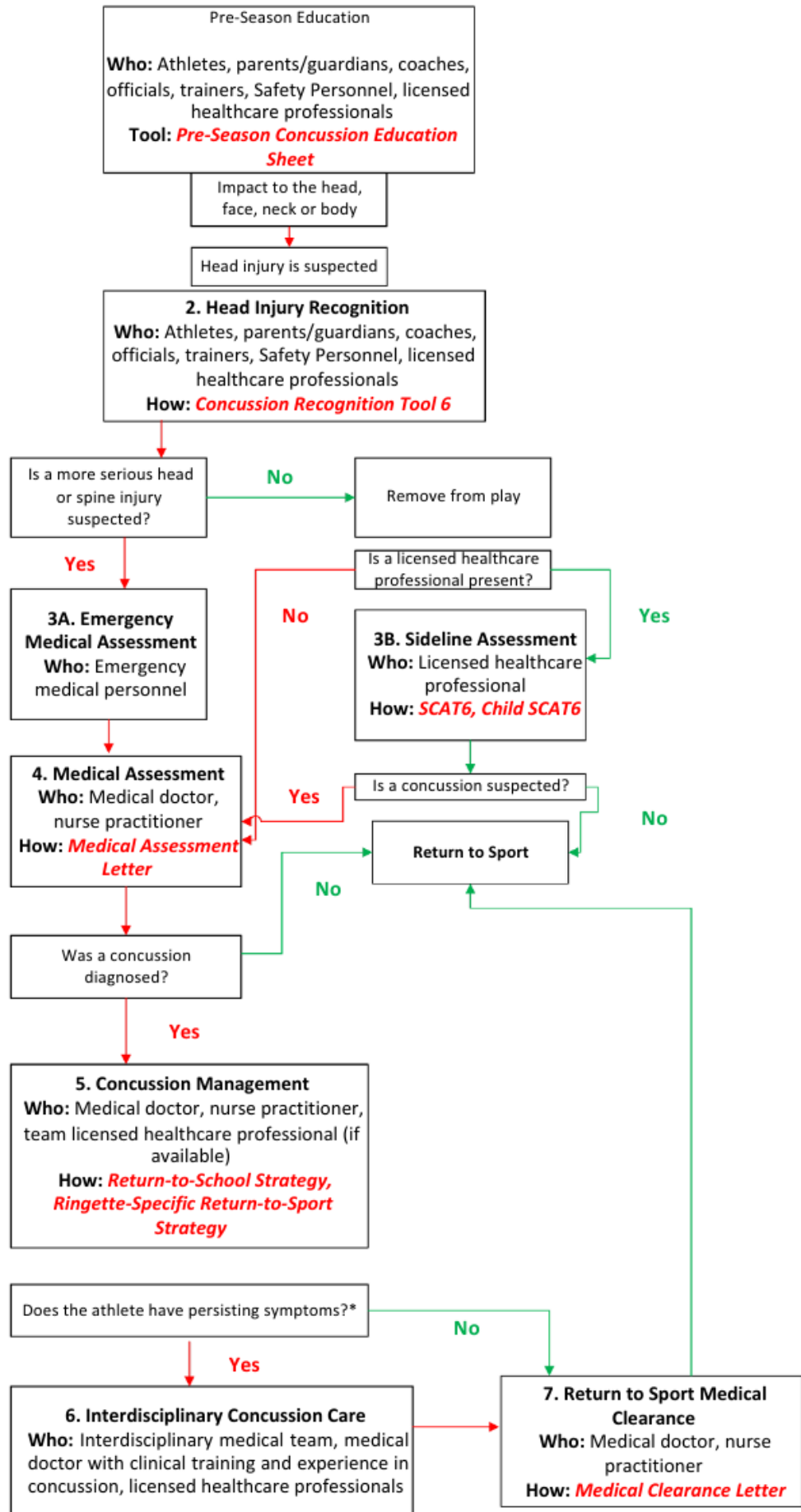
Athletes who have been provided with a Medical Clearance Letter may progress through steps 4, 5 and 6 of the Ringette-Specific Return-to-Sport Strategy to gradually return to full, unrestricted Ringette-related activities. If the athlete experiences any new concussion-like symptoms during these steps, they should be instructed to stop the activity and return to step 3 to establish the full resolution of symptoms. Medical clearance is required again before progressing to step 4. This information should be provided to the appropriate people (e.g., coach, trainer, Safety Personnel, organization administrators).



If the athlete sustains a new suspected concussion, the **Ringette Canada Concussion Protocol** should be followed as outlined here.

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

Concussion Awareness Detection and Management Pathway



*Persisting symptoms: lasting longer than four weeks