



Archery Manitoba - Concussion Protocol

Approved by the Board of Directors on April 15, 2020

1. Preamble

- 1.1 Archery Manitoba has developed the Archery Manitoba Concussion Protocol to help guide the management of athletes and registrants who may have a suspected concussion while participating in the sport of archery. This protocol will apply whether the suspected concussion is as a result of an incident with the sport environment of archery or due to an incident outside of the sport environment.

2. Purpose

- 2.1 This protocol covers the recognition, medical diagnosis, and management of archers, parents, officials and coaches who may have sustained a concussion and are participating in an archery activity. It specifically aims to ensure that athletes with a suspected concussion receive timely and appropriate care and proper management to allow them to return back to archery 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.

3. Who Should Use this Protocol?

- 3.1 This protocol is intended for use by all individuals who interact with athletes inside and outside the context of school and non-school based organized sports activity, including athletes, parents, coaches, officials, teachers, trainers, and licensed healthcare professionals.
- 3.2 For a summary of the Archery Manitoba Concussion Protocol, please refer to the [Archery Manitoba Sport Concussion Pathway figure](#) at the end of this document.

4. Pre-Season Education

- 4.1 Despite 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, teachers, 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.

- 4.2 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
 - *Return-to-School and Return-to-Sport Strategies*
 - Return to sport medical clearance requirements.

5. Head Injury Recognition

- 5.1 Although the formal diagnosis of concussion should be made following a medical assessment, all sport stakeholders, including athletes, parent, teachers, coaches, officials, and licensed healthcare professionals are responsible for the recognition and reporting of athletes who may demonstrate visual signs of a head injury or who report concussion related symptoms. This is particularly important because many sport and recreation venues will not have access to on-site licensed healthcare professionals.
- 5.2 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](#).
 - 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 as described in the Concussion Recognition Tool 5.
- 5.3 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.

6. Onsite Medical Assessment

- 6.1 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 7 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 8 below).

7. Emergency Medical Assessment

- 7.1 If an athlete is suspected of sustaining a more severe head or spine injury during A game or practice, an ambulance should be called immediately to transfer the patient to the nearest emergency department for further Medical Assessment.
- 7.2 Coaches, parents, teachers, trainers, and officials should not make any effort to remove equipment or move the athlete until an ambulance has arrived and the athlete should not be left alone until the ambulance arrives. After the emergency medical services staff have 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 19 years of age, their emergency contact person should be contacted if one has been provided.

8. Sideline Medical Assessment

- 8.1 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.
- 8.2 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.

- 8.3 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.
- 8.4 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. Players 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.
- 8.5 If *no* licensed healthcare professional is 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. If such a decision is made in practice or in competition, an incident report should be completed and should outline what symptoms were observed, the steps taken on site, and the person who referred the individual for medical assessment.

9. Medical Assessment

- 9.1 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 doctors that are qualified to evaluate patients with a suspected concussion include:
- Pediatricians
 - Family medicine
 - Sports medicine
 - Emergency departments
 - Internal medicine
 - Rehabilitation (physiatrists) physicians
 - Neurologists
 - Neurosurgeons
- 9.2 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.

10. Concussion Management

- 10.1 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.
- 10.2 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 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*.
- 10.3 The stepwise progressions for *Return-to School and Return-to-Sport Strategies* are outlined below.
 - 10.3.1 *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 symptoms present

student-athletes will progress through the following stages at different rates. If the student-athlete experiences new or worsening symptoms at any stage, they should return 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

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

10.3.2 Archery 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 *Archery-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 Archery-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 sport activities.

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 <i>-Light intensity jogging or stationary cycling for 15-20 minutes at sub-symptom threshold intensity</i>	Increase heart rate
3	Sport-specific exercise	Running or skating drills. No head impact activities <i>- Moderate intensity jogging for 30-60 minutes at sub-symptom threshold intensity</i> <i>- Low to moderate impact passing, dribbling, shooting, and agility drills</i>	Add movement
4	Non-contact training drills	Harder training drills, i.e. passing drills. May start progressive resistance training <i>- Participation in high intensity running and drills</i> <i>- Non-contact practice without heading</i> <i>- Participation in resistance training work-outs</i>	Exercise, coordination and increased thinking
5	Full contact practice	Following medical clearance <i>- Participation in full practice without activity restriction</i>	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play	

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

11. Multidisciplinary Concussion Care

- 11.1 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 with 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.
- 11.2 Referral to a multidisciplinary clinic for assessment should be made on an individualized bases 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 should be considered for the purposes of developing an individualized treatment plan. Depending on clinical presentation of the individual, this treatment plan may involved a variety of healthcare professionals with areas of expertise that address the specific needs of the athlete based on the assessment findings.

12. Return to Sport

- 12.1 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 archery 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 judgement 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. Prior to returning to full practice and game play, each athlete that has been diagnosed with a concussion must provide their coach 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 sports. A copy of the *Medical Clearance Letter* should also be submitted to sports organization officials that have injury reporting and surveillance programs where applicable.
- 12.2 Athletes who have been provided with a *Medical Clearance Letter* may return to full sport activities if 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 a new suspected concussion, the Archery Manitoba Concussion protocol should be followed as outlined here.

Adapted from: Parachute. (2017). Canadian Guideline on Concussion in Sport.

www.parachutecanada.org/guideline

13. Approval

- 13.1 The Archery Manitoba Board of Directors and Executive Director shall review this policy every three years.