

## **Pickleball Hamilton Association Concussion Protocol**

This Pickleball Hamilton Association Concussion Protocol is to help guide the management of members who may have a suspected concussion because of participation in Pickleball.

### **Purpose**

This protocol covers the recognition, medical diagnosis, and management of members who may sustain a suspected concussion during pickleball activities. It aims to ensure that members with a suspected concussion receive timely and appropriate care and proper management to allow them to return to pickleball safely. This protocol may not address every possible clinical scenario that can occur during pickleball-related activities but includes critical elements based on the latest evidence and current expert consensus.

### **Who should use this protocol?**

This protocol is intended for use by all individuals who interact with members inside and outside the context of school and non-school based organized sports activity, including members, coaches, officials, trainers, and licensed healthcare professionals.

For a summary of the **Pickleball Hamilton Association Concussion Protocol** please refer to the **Pickleball Hamilton Association 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 sport stakeholders (members, coaches, officials, trainers, licensed healthcare professionals) on current evidence-informed approaches that can prevent concussion and more serious forms of head injury and help identify and manage a member 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 a member has suffered a suspected concussion or more serious head injury,

- what measures should be taken to ensure proper medical assessment,
  - *Return-to-Pickleball Strategies*, and
  - return to sport medical clearance requirements
- **Who:** Members, coaches, officials, and trainers, licensed healthcare professionals
  - **How:** Pre-season Concussion Education Sheet

All members are required to review the *Pre-season Concussion Education Sheet* upon joining Pickleball Hamilton Association each year. Acknowledgement of reading the Pre-season Concussion Education Sheet will be done via annual membership waiver. In addition to reviewing information on concussion, it is also important that all sport stakeholders have a clear understanding of the **Pickleball Hamilton Association Concussion Protocol**. For example, this can be accomplished through pre-season in-person orientation sessions for members, coaches and other sport stakeholders.

## 2. Head Injury Recognition

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

A concussion should be suspected:

- in any member 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, or coaches or if anyone witnesses a member exhibiting any of the visual signs of concussion.

In some cases, a member may demonstrate signs or symptoms of a more severe head or spine injury including convulsions, worsening headaches, vomiting or neck pain. If a member demonstrates any of the 'Red Flags' indicated by the *Concussion Recognition Tool 5*, a more severe head or spine injury should be suspected, and Emergency Medical Assessment should be pursued.

- **Who:** Members, coaches, officials, trainers, and licensed healthcare professionals
- **How:** [Concussion Recognition Tool 5](#)

### **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 a member loses consciousness or it is suspected a member might have a more severe head or spine injury, Emergency Medical Assessment by emergency medical professionals should take place (see 3a below). If a more severe injury is not suspected, the member 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 a member 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.

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

- **Who:** Emergency medical professionals

#### **3b. Sideline Medical Assessment**

If a member 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 courts of play.

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

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

### **4. Medical Assessment**

In order to provide comprehensive evaluation of members 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<sup>1</sup> that are qualified to evaluate patients with a suspected concussion include: pediatricians; family medicine, sports medicine, emergency department, internal medicine, and rehabilitation (physiatrists) physicians; neurologists; and neurosurgeons.

The medical assessment is responsible for determining whether the member has been diagnosed with a concussion or not. Members with a diagnosed concussion should be provided with a *Medical Assessment Letter* indicating a concussion has been diagnosed. Members 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 member can return to school, work and pickleball activities without restriction.

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

## 5. Concussion Management

When a member has been diagnosed with a concussion, it is important that the member's parent/legal guardian or emergency contact is informed. All members diagnosed with a concussion must be provided with a standardized *Medical Assessment Letter* that notifies the member and their parents/legal guardians/emergency contact 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. It is also important for the member to provide this information to Pickleball Hamilton Association Board Members who are responsible for injury reporting and concussion surveillance.

Members 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 pickleball without medical clearance and recommendations regarding a gradual return to school/work and pickleball activities. Members diagnosed with a concussion are to be managed according to their *Return-to-Pickleball Strategy* under the supervision of a medical doctor or nurse practitioner. Once the member has completed their *Return-to-Pickleball Strategy* and are deemed to be clinically recovered from their concussion, the

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<sup>1</sup> Medical doctors and nurse practitioners are the only healthcare professionals in Canada with licensed training and expertise to meet these needs; therefore all members with a suspected concussion should undergo evaluation by one of these professionals.

medical doctor or nurse practitioner can consider the member for a return to full sports activities and issue a *Medical Clearance Letter*.

The stepwise progressions for *Return-to-Pickleball Strategies* are outlined below.

### *Return-to-Pickleball Strategy*

The following is an outline of the Return-to-Pickleball Strategy that should be used to help members, coaches, trainers, and medical professionals to partner in allowing the member to make a gradual return to pickleball activities. An initial period of 24-48 hours of rest is recommended before starting the *Return-to-Pickleball Strategy*. If the member experiences new symptoms or worsening symptoms at any stage, they should go back to the previous stage. It is also important that all members provide Board Members with a *Medical Clearance Letter* prior to returning to full pickleball activities.

<b>Stage</b>	<b>Aim</b>	<b>Activity</b>	<b>Goal of each step</b>
<b>1</b>	Symptom-limiting activity	Daily activities that do not provoke symptoms	Gradual re-introduction of work/home activities
<b>2</b>	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
<b>3</b>	Pickleball-specific exercise	Dinking only. <i>- Moderate intensity dinking for 30-60 minutes at sub-symptom threshold intensity</i>	Add movement
<b>4</b>	Non-partner training drills	Harder training drills, i.e. serves, returns, drives. May start progressive resistance training	Exercise, coordination and increased thinking
<b>5</b>	Full pickleball practice	Following medical clearance <i>- Participation in skinny singles without activity restriction</i>	Restore confidence and assess functional skills a Board Member
<b>6</b>	Return to pickleball	Normal game play	

- **Who:** Medical doctor, nurse practitioner
- **How:** *Return-to Pickleball Strategy, Medical Assessment Letter*

## 6. Multidisciplinary Concussion Care

Most members who sustain a concussion while participating in pickleball will make a complete recovery and be able to return to full work and pickleball 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 members, >2 weeks for adult members) 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 a member'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 member 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

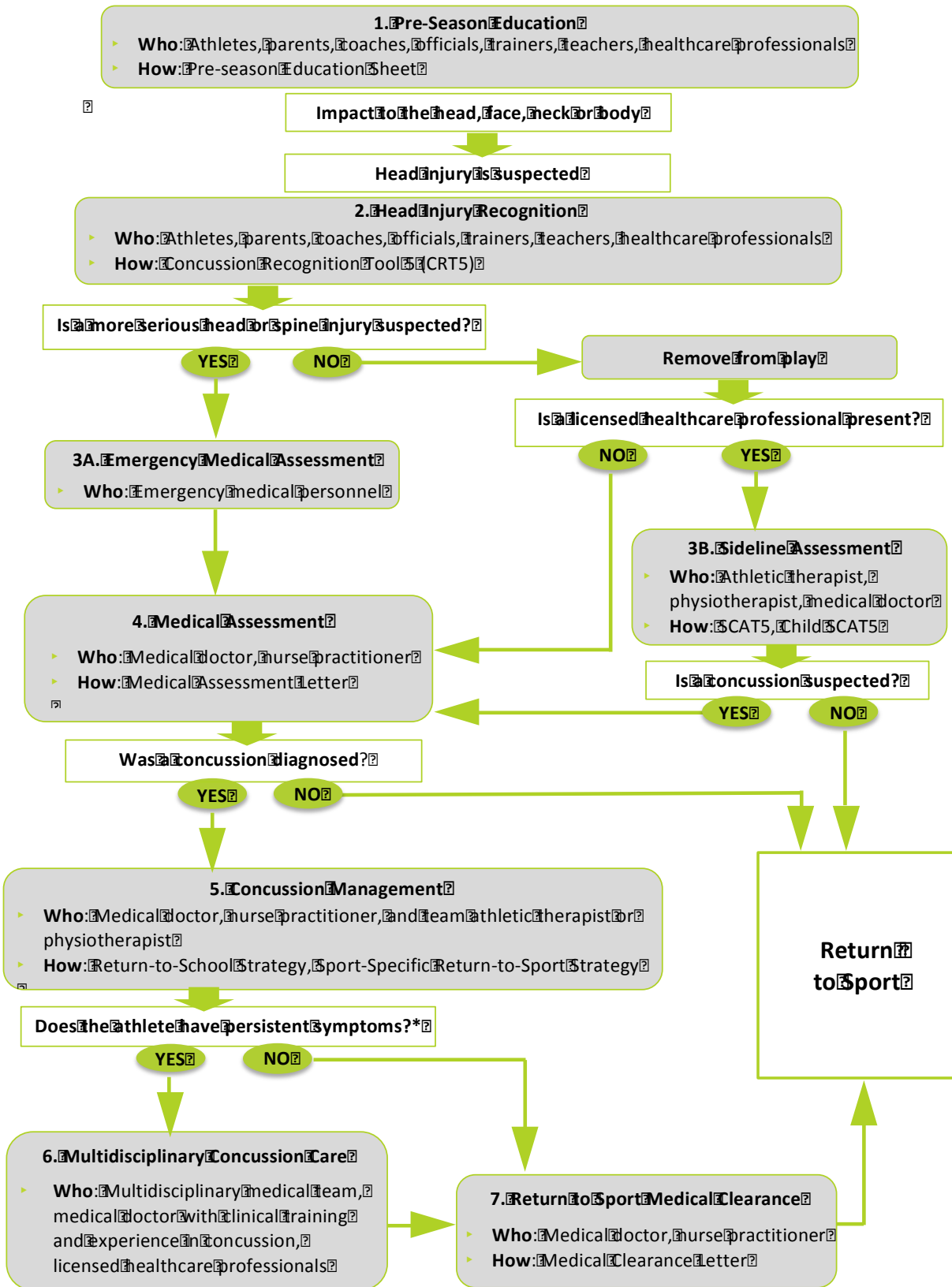
## 7. Return to Sport

Members 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-Pickleball Strategy* can be considered for return to full pickleball activities. The final decision to medically clear a member to return to full game activity should be based on the clinical judgment of the medical doctor or nurse practitioner taking into account the member'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 pickleball play, each member that has been diagnosed with a concussion must provide the Board with a standardized *Medical Clearance Letter* that specifies that a medical doctor or nurse practitioner has personally evaluated the patient and has cleared the member to return to pickleball.

Members who have been provided with a *Medical Clearance Letter* may return to full pickleball activities as tolerated. If the member experiences any new concussion-like symptoms while returning to play, they should be instructed to stop playing immediately, notify the Board and undergo follow-up *Medical Assessment*. In the event that the member sustains a new suspected concussion, the **Pickleball Hamilton Association Concussion Protocol** should be followed as outlined here.

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

# Pickleball Hamilton Association Concussion Pathway



\* Persistent symptoms: Lasting 2-4 weeks in children & youth or 2-4 weeks in adults