



## PICKLEBALL CANADA POLICY – CONCUSSION PROTOCOL

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### 1. POLICY STATEMENT

Pickleball Canada (PCO) aims to reduce the risk of injury from pickleball related concussions by providing information to participants to recognize the signs of a potential concussion and the steps to take when a concussion is suspected.

### 2. CONTEXT/BACKGROUND

This protocol covers the recognition, medical diagnosis, and management of participants who may sustain a suspected concussion while involved in Pickleball Canada activities. It endeavours to ensure that athletes with a suspected concussion receive timely and appropriate care and proper management to allow them to return back to the sport 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. APPLICATION

This protocol applies to all individuals participating in Pickleball Canada sanctioned programs, activities and events.

Given the serious potential for harm from concussions it is recommended that all pickleball players follow this protocol where a concussion is suspected regardless of whether PCO has sanctioned the event or activity. It is also recommended that all pickleball players, parents/guardians review and sign the PCO Concussion Code of Conduct in Appendix II.

### 4. COMING INTO FORCE

May 27, 2020

### 5. RECOGNIZING A CONCUSSION

\*For a summary of this protocol refer to Appendix I – Concussion Awareness Training Tool Pathway\*

#### - WHAT IS A CONCUSSION?

A concussion is a brain injury that can't be seen on X-rays, CT or MRI scans. It affects the way a player thinks and can cause a variety of symptoms.

#### - WHAT CAUSES A CONCUSSION?

Any blow to the head, face or neck, or somewhere else on the body that causes a sudden jarring of the head may cause a concussion. Examples include hitting one's head on the floor or running into a wall or another person.

- **WHEN SHOULD I SUSPECT A CONCUSSION?**

A concussion should be suspected in any athlete who sustains a significant impact to the head, face, neck, or body and reports ANY symptoms or demonstrates ANY visual signs of a concussion. A concussion should also be suspected if 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. 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:

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|-------------------------------------|---------------------------------------|
| ▶ 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    |
| ▶ Not 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:

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|--|---|
| ▶ 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 | ▶ Clutching head  |
| ▶ Facial injury after head trauma  |   |

**6. WHAT TO DO IF A CONCUSSION IS SUSPECTED**

Although the formal diagnosis of concussion should be made following a medical assessment, everyone involved in Pickleball Canada activities including athletes, parents, coaches, teachers, officials, and licensed healthcare professionals are responsible for the recognition and reporting of pickleball participants 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 pickleball player 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 pickleball player reports ANY concussion symptoms to one of their peers, parents, teachers, or coaches or if anyone witnesses a pickleball participant exhibiting any of the visual signs of concussion. In some cases, a pickleball player may demonstrate signs or symptoms of a more severe head or spine injury including convulsions, worsening headaches, vomiting or neck pain. If a pickleball player demonstrates any of the 'Red Flags'<sup>1</sup> indicated by the [Concussion Recognition Tool 5](#), a more severe head or spine injury should be suspected, and Emergency Medical Assessment should be pursued as described in 7(a) below.

If any player is suspected of sustaining a concussion while playing pickleball they should be immediately removed from play.

Any player who is suspected of having sustained a concussion must not be allowed to return to the same game or practice. It is important that ALL players with a suspected concussion undergo medical assessment by a medical doctor or nurse practitioner, as soon as possible. It is also important that ALL athletes with a suspected concussion receive written medical clearance from a medical doctor or nurse practitioner before returning to sport activities.

## 7. 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 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 7a below). If a more severe injury is not suspected, the athlete should undergo Sideline Medical Assessment (see 7b below) or Medical Assessment, depending on if there is a licensed healthcare professional present.

### 7 (a) Emergency Medical Assessment

If an player 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, parents, teachers, trainers and officials should not make any effort to remove equipment or move the player until an ambulance has arrived and the athlete should not be left

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<sup>1</sup> [Concussion Red Flags](#): If a player exhibits or reports any of the following, call an ambulance for emergency medical assessment.

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|---------------------------------|---------------------------------|
| ► Neck pain or tenderness       | ► Severe or increasing headache |
| ► Deteriorating conscious state | ► Double vision                 |
| ► Seizure or convulsion         | ► Loss of consciousness         |

alone until the ambulance arrives. After the emergency medical services staff has completed the Emergency Medical Assessment, the player should be transferred to the nearest hospital for Medical Assessment. In the case of youth (under 19 years of age), the player's parents should be contacted immediately to inform them of the player's injury. For players over 19 years of age, their emergency contact person should be contacted if one has been provided

### **7 (b) Sideline Medical Assessment**

If a player 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 player 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 child/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 child/youth player 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. 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.

#### **Scenario 2: If there is no licensed healthcare professional present**

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

## **8. Medical Assessment**

In order to provide comprehensive evaluation of players 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 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).

In addition to nurse practitioners, medical doctors<sup>2</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.

In geographic regions of Canada with limited access to medical doctors (e.g. rural or northern communities), a licensed healthcare professional (e.g. 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.

## **9. Concussion Management**

When a child/youth player has been diagnosed with a concussion, it is important that the athlete's parent/legal guardian is informed. All players diagnosed with a concussion must be provided with a standardized *Medical Assessment Letter* that notifies the player 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 player or their parent/legal guardian to provide this documentation to the player's coaches, teachers, or employers. It is also important for the player to provide this information to sport organization officials that are responsible for injury reporting and concussion surveillance where applicable.

Players 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/or sport activities. Players 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

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<sup>2</sup> 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.

concussion, the medical doctor or nurse practitioner can consider the player 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.

## **10. 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.

## **11. Return to Sport**

Players 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 Pickleball-Specific Return-to-Sport Strategy* (see Appendix III) 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 player'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 player 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 player 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.

Players who have been provided with a *Medical Clearance Letter* may return to full sport activities as tolerated. If the player 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 player sustains a new suspected concussion, the Pickleball Canada Concussion Protocol should be followed as outlined here.

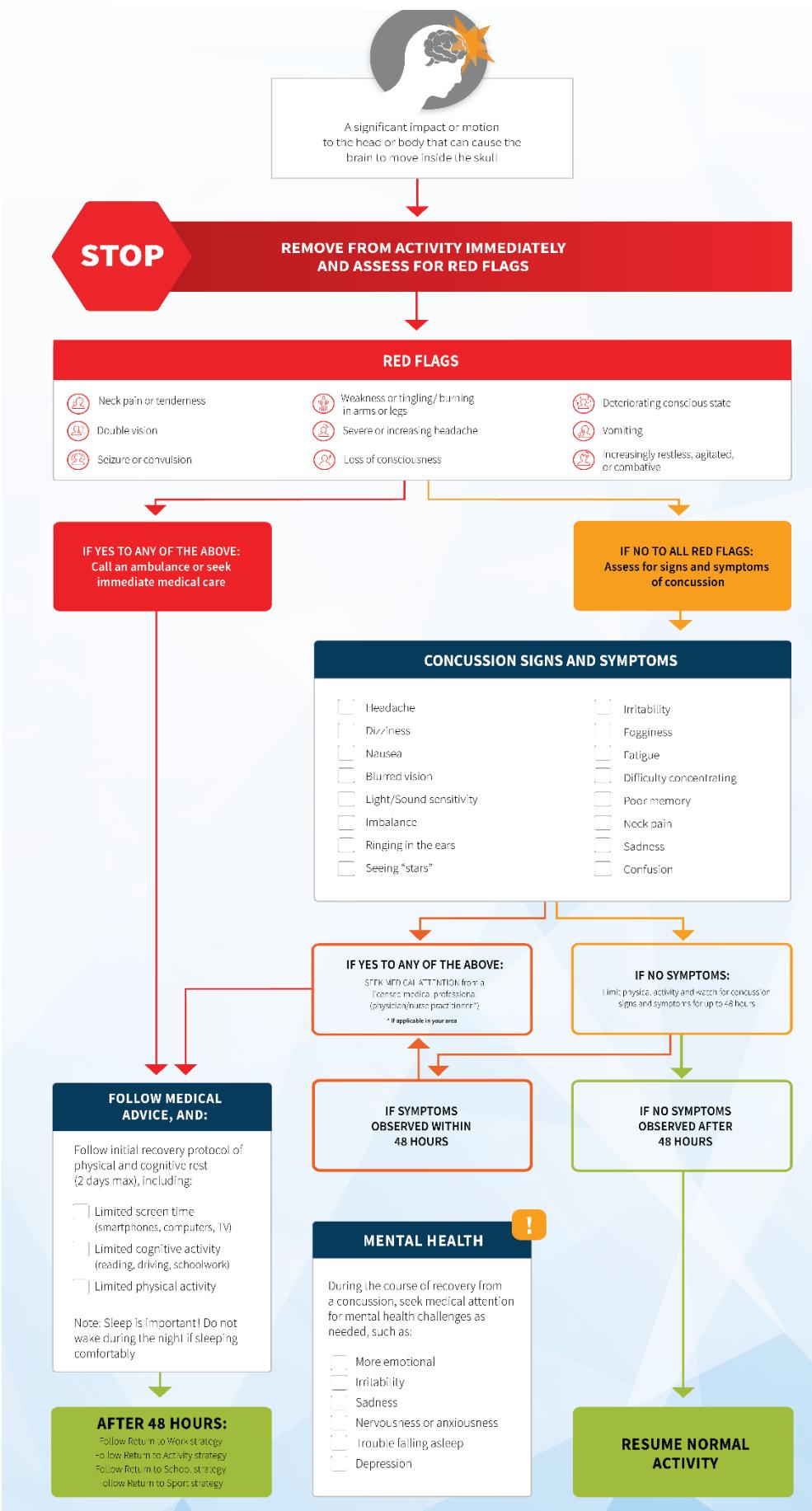
## **12. IMPLEMENTATION**

Pickleball Canada will communicate this protocol to its Board, employee and members.

## **13. RESULTS**

Pickleball Canada, its Board, employees and general membership know when to suspect a concussion and what to do if a concussion is suspected. Athletes, parents and guardians and familiar with and abide by the PCO Concussion Code of Conduct.

## Appendix I – Concussion Awareness Training Tool Pathway



**Appendix II – Pickleball Canada Concussion Code of Conduct for Athletes and Parents/Guardians**

**I will help prevent concussions by:**

- Wearing the proper equipment for my sport, including proper footwear;
- Developing my skills and strength so I can participate to the best of my ability;
- Communicating with my playing partners about risks on the court (e.g. stray ball on the court);
- Checking the playing surface prior to the start of a game to ensure the surface is safe to play on;
- Being aware of my surroundings including any barriers, walls, fences that may restrict the playing area;
- Respecting the rules of my sport, and
- My commitment to fair play and respect for all (including other athletes, coaches, trainers and officials).

**I will care for my health and safety by taking concussions seriously and I understand that:**

- A concussion is a brain injury that can have both short and long-term effects;
- A blow to my head, face or neck or a blow to the body that causes the brain to move around inside the skull may cause a concussion;
- I do not need to lose consciousness to have had a concussion;
- I have a responsibility to stop participating if I think I have a concussion and report it to a responsible adult and
- Continuing to participate in further training practice or competition with a possible concussion increases my risk of more severe, longer lasting symptoms and increases my risk of other injuries.

**I will not hide concussion symptoms. I will speak up for myself and others**

- I will not hide my symptoms. I will tell a coach, official, team trainer, parent or another adult I trust if I experience any symptoms of concussion;
- If someone else tells me about concussion symptoms or I see signs they might have a concussion, I will tell a coach, official, team trainer, parent or another adult I trust so they can help;
- I understand that if I have a suspected concussion I will be removed from sport and I will not be able to return to training, practice or competition until I undergo a medical assessment by a medical doctor or nurse practitioner and have been medically cleared to return to training practice or competition and
- If I am diagnosed with a concussion, I understand that letting all of my other coaches and teachers know about my injury will help them support me while I recover.

**I will take the time I need to recover, because it is important for my health.**

- I understand my commitment to supporting the return to sport process;
- I understand I will have to be medically cleared by a medical doctor or nurse practitioner before returning to training, practice or competition and
- I will respect my coaches, team trainers, parents, health-care professionals and medical doctors and nurse practitioners, regarding my health and safety.

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| <b>By signing here, I acknowledge that I have fully reviewed and commit to the Concussion Code of Conduct.</b> |
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| Athlete: |
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| Parent/Guardian:<br>(of athletes under the age of majority) |
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|-------|
| Date: |
|-------|

Appendix III – Pickleball Canada Return-to-Sport Strategy

| <b>Stage</b> | <b>Aim</b>                  | <b>Activity</b>   | <b>Goal of each step</b>  |
|--------------|-----------------------------|---|---|
| 1            | Symptom limiting activity   | Daily activities that do not provoke symptoms   | Gradual re-introduction of work/school activities                 |
| 2            | Light aerobic activity      | Walking, light jog or stationary cycling at slow to medium pace. No resistance training.<br><br>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. | Increase heart rate   |
| 3            | Sport-specific exercise     | Low intensity practice like soft shots at the non-volley zone.<br><br>The environment should be managed so as to ensure the participant is at minimum risk of falling or colliding with other participants.   | Add movement  |
| 4            | Non-contact training drills | Increase intensity, difficulty and duration of training drills.<br><br>May start progressive resistance training.   | Exercise, coordination and increased thinking                     |
| 5            | Full intensity practice     | Following medical clearance:<br>- Participation in full practice without activity restriction   | Restore confidence and assess functional skills by coaching staff |
| 6            | Return to sport             | Normal game play  |   |