**Summary**

* **Recognise and remove** - learn to recognise the signs and symptoms of concussion and remove a player from the field if ANY doubt.
* **Any player with a head injury should be removed from the pitch for a minimum of 15 minutes.** Head injuries include; superficial injuries to scalp or face such as lacerations and abrasions, subconcussive event (a head impact event that does not cause a concussion), concussion (an injury resulting in a disturbance of brain function), structural brain injury (an injury resulting in damage to a brain structure for example fractured skull or a bleed into or around the brain)
* **After 15 minutes they should be assessed for signs of concussion (as detailed in this protocol).**
* **All players with a diagnosed concussion must be removed from the field of play and not return** **to play or train on the same day**. Players with a diagnosed concussion must go through a graduated return to play program (GRTP), described later in this document.
* **All players with a suspected concussion where no appropriately approved personnel are present must be assumed to have a diagnosed concussion and must be removed from the field of play and not return to play or train on the same day**. In this situation, players must go through a graduated return to play (GRTP) protocol.
* Concussion must be taken extremely seriously to safeguard the long-term welfare of players.
* For an adult player following the GRTP, they should undergo **a minimum of 14 days complete rest**. They should then follow the GRTP stages 2-5, progressing through each level after 24 hours if they remain symptom free. **The earliest return to play should be 19 days post** **injury**
* **PROTECT OUR YOUNG ATHLETES** – England & GB Hockey recommends different return to play protocols for different ages (a minimum 2 week rest period, with each progression along the GRTP lasting 48 hours, i.e. earliest return to play 23 days post injury).

**IF IN DOUBT, SIT THEM OUT**

**What is concussion?**

* Concussion is a brain injury caused by either direct or indirect forces to the head.
* Concussion typically results in the rapid onset of short-lived impairment of brain function.
* Concussions are difficult to diagnose and symptoms may not appear immediately.
* Athletes of any age or level may be reluctant to admit or address the possibility of a concussion, either because the effects are so subtle or because they may want to return to their normal activities as soon as possible.
* CONCUSSION MUST BE TAKEN SERIOUSLY.
* Concussion occurs after a head injury. Head injuries include;
  + Superficial injuries to scalp or face such as lacerations and abrasions
  + Subconcussive event (a head impact event that does not cause a concussion)
  + Concussion (an injury resulting in a disturbance of brain function)
  + Structural brain injury (an injury resulting in damage to a brain structure for example fractured skull or a bleed into or around the brain)

**Signs and Symptoms**

The signs and symptoms of a concussion can be subtle and may not be immediately apparent. Symptoms can last for days, weeks or even longer.

Visible clues of potential concussion - what you see

Any one or more of the following visual clues can indicate a possible concussion:

* Dazed, blank or vacant look
* Lying motionless on ground / Slow to get up
* Unsteady on feet / Balance problems or falling over / Inco-ordination
* Loss of consciousness or responsiveness
* Confused / Not aware of plays or events
* Grabbing / Clutching of head
* Convulsion
* More emotional / Irritable

Symptoms of potential concussion - what you are told

Presence of any one or more of the following signs and symptoms may suggest a concussion:

* Headache
* Dizziness
* Mental clouding, confusion, or feeling slowed down
* Visual problems
* Nausea or vomiting
* Fatigue
* Drowsiness / Feeling like “in a fog“ / difficulty concentrating
* “Pressure in head”
* Sensitivity to light or noise

Questions to ask - what questions to ask

Failure to answer any of these questions correctly may suggest a concussion:

* “What venue are we at today?”
* “Which half is it now?”
* “Who scored last in this game?”
* “What team did you play last week / game?”
* “Did your team win the last game?”

If a player has signs or symptoms of a possible concussion that player must be:

**RECOGNISED AND REMOVED and IF IN DOUBT, SIT THEM OUT.**

N.B: The onset and/or recognition of symptoms may occur days or weeks after the initial injury.

**Post-Concussion syndrome**

Post-concussion syndrome (PCS) is the term used to describe a collection of symptoms that can last for several weeks or months after the concussion.

**Management of concussion**

**Pitch-side management**

* SIT THEM OUT
* Player should be removed from the pitch in a safe manner in accordance with emergency management procedures
* At a minimum, the player should be rested for 15 minutes before a sideline assessment is carried out
* After 15 minutes of complete rest, the player should be analysed for any potential signs of concussion or suspected concussion, as detailed above
* If concussion or suspicion of concussion is present – sit them out and follow the GRTP protocol
* This should be carried out by medically trained staff. Given the likely absence of these professionals, if there is any doubt of concussion, the player should be rested for the entire game

**Removal from play**

All players with a suspected (or diagnosed) concussion must be removed from the field of play and not return to play or train on the same day.

Players with a suspected / diagnosed concussion must go through a graduated return to play protocol (GRTP).

A summary of the minimum rest periods and different length GRTP stages for different ages is shown below:

**Players 18 years or younger**

* Minimum rest period 2 weeks and symptom free
* GRTP to follow rest, with each stage lasting 48 hours
* Earliest return to play - Day 23 post injury

**Adult - 19 years and over**

* Minimum rest period 2 weeks and symptom free
* GRTP to follow rest, with each stage lasting 24 hours
* Earliest return to play - Day 19 post injury

A GRTP should only commence if the player:

* Has completed the minimum rest period for their age
* Is symptom free and off medication that modifies symptoms of concussion.

Under the GRTP Program, the Player can proceed to the next stage if no symptoms of concussion are shown at the current stage (that is, both the periods of rest and exercise during that 24-hour period).

If any symptoms occur while progressing through the GRTP protocol, the player must return to the previous stage and attempt to progress again after a minimum 24-hour period of rest has passed without the appearance of any symptoms

**Return to play progression - GRTP**

***This is currently written for an adult – please adjust the rest period and 24 hour window in each section for the relevant age group***

**Step 1**

**Rest as per prescribed for players age**

**Step 2 (after a minimum of 14 days symptom free from the ‘event’): Light aerobic activity**  
The Goal: Only to increase an athlete’s heart rate.  
The Time: 5 to 10 minutes.  
The Activities: Exercise bike, walking, or light jogging. Heart rate must stay <70% predicted  
Absolutely no weight lifting, jumping or hard running.

**Step 3: (after a minimum of *24 hours* symptom free from step 1) Moderate activity, sport specific**  
The Goal: Limited body and head movement.  
The Time: Reduced from typical routine.  
The Activities: Moderate jogging, brief running, moderate-intensity stationary biking, and moderate-intensity weightlifting. These should include more sport specific exercises.

**Step 4: (after a minimum of *24 hours* symptom free from step 2) Non-contact training**  
The Goal: More intense but non-contact  
The Time: Close to typical routine  
The Activities: Running, high-intensity stationary biking, the player’s regular weightlifting routine, and non-contact sport-specific drills. This stage may add some cognitive component to practice in addition to the aerobic and movement components introduced in Steps 1 and 2.

**Step 5: (after a minimum of *24 hours* symptom free from step 3) Practice & full contact**  
The Goal: Reintegrate in full contact practice.

**Step 6: (after a minimum of *24 hours* symptom free from step 4) Competition**  
The Goal: Return to competition.

The Return to Play Progression process is best conducted through a team approach and by a health professional who knows the athlete’s physical abilities and endurance. By gauging the athlete’s performance on each individual step, a health care professional will be able to determine how far to progress the athlete on a given day. This step-wise approach should take a minimum of a week to complete. However, it may take several weeks to months to work through the entire 5-step progression.

**Recovery from concussion**

Recovery from concussion is spontaneous and typically follows a sequential course. The majority (80–90%) of concussions resolve in a short (7–10 day) period, although the recovery time frame may be longer in children and adolescents.

Players must be honest with themselves and medical staff for their own protection.

**Diagnosing concussion**

SCAT 3 (an online assessment tool) was introduced following the 2012 Concussion Consensus Conference and recommends that players undergo a symptom checklist and cognitive assessment assessed using the SAC system to test memory and balance evaluation.

These will be compared against the baseline for that mode as opposed to a total score comparison. Any variation in one or more mode(s) is strongly in favour of concussion.

**If no baseline data is available, then the presence of symptoms, impaired balance, delayed recall or poor concentration should be considered strongly in favour of a diagnosis of concussion.**

GB & England Hockey recommends the utilization of SCAT 3 for all players 13 years and older if practical.

**In summary, the diagnosis of concussion is a clinical diagnosis supported by a tool such as SCAT 3. Decisions regarding concussion should NOT be based solely on the results of any support tool and remain a clinical decision for team-mates, coaches and doctors.**