

# RECOGNIZE TO RECOVER CONCUSSION: LET'S TAKE BRAIN INJURIES OUT OF PLAY - COACHES

## U.S. SOCCER CONCUSSION INITIATIVE

- Modify substitution rules to allow players who may have suffered a concussion during games to be evaluated without penalty
- Eliminating heading for children 10 and under  
*Please note that U11 is listed in the U.S. Soccer Concussion Initiative document because U11 players can be 10 years old at the beginning of the season*
- Limiting the amount of heading in practice for children between the ages of 11 and 13  
*Please note that U12 and U13 are listed in the U.S. Soccer Concussion Initiative document to account for players who are 11, 12 and 13 years of age participating on those teams*
- Recommend Health Care Professionals (HCP) be on site for major tournaments.

## CONCUSSION DEFINED

Concussion is a brain injury and is defined as a complex pathophysiological process affecting the brain, induced by biomechanical forces. Several common features, incorporating clinical, pathologic and biomechanical injury may be utilized in defining the nature of a concussive head injuries. These include:

Concussion may be caused either by a **direct blow to the head, face, neck or elsewhere on the body** with an 'impulsive' force transmitted to the head.

Concussion typically results in the **rapid onset of short-lived impairment of neurologic function** that resolves spontaneously. However, in some cases, symptoms and signs may evolve over a number of minutes to hours.

Concussion may result in **neuropathological changes**, but the acute clinical symptoms largely reflect a functional disturbance rather than a structural injury and, as such, no abnormality is seen on standard structural neuroimaging studies.

Concussion results in a **graded set of clinical symptoms that may or may not involve loss of consciousness**. Resolution of the clinical and cognitive symptoms typically follows a sequential course. However, it is important to note that in some cases, post-concussive symptoms may be prolonged.

## PREVENTION AND PREPARATION

As a coach, you can play a key role in preventing concussions and responding to them properly when they occur. Here are some steps you can take to ensure the best outcome for your athletes and the team:

Educate athletes and parents about concussion. Talk with athletes and their parents about the dangers and potential long-term consequences of concussion.

Insist that safety comes first.

- Teach athletes safe playing techniques and encourage them to follow the rules of play.
- Encourage athletes to practice good sportsmanship at all times.
- Review the athlete fact sheet with your team to help them recognize the signs and symptoms of a concussion.

## EARLY SIGNS & SYMPTOMS OF CONCUSSION

**Cognitive features:** Unaware of game specifics (opposition colors, score of game, last play); confusion; amnesia (does not recall events prior to the hit or after the hit); alteration in consciousness; not oriented to time, place, or date; Slowed information processing speed; decreased attention and concentration.

**Physical symptoms:** Headache, dizziness, nausea, unsteadiness/loss of balance, feeling "dinged" or stunned or "dazed," seeing stars or flashing lights, ringing in the ears, and double vision.

**Psychological symptoms:** Depression, anxiety, anger, irritability, and difficulty controlling emotions.

**Sleep Disturbance:** Too much sleep, difficulty falling asleep or staying asleep.

## ACTION PLAN - WHAT SHOULD A COACH DO WHEN A CONCUSSION IS SUSPECTED

### REMOVE FROM PLAY

Remove the athlete from play. Look for the signs and symptoms of a concussion if your athlete has experienced a bump or blow to the head or body. Athletes who experience signs or symptoms of concussion should not be allowed to return to play. When in doubt, keep the athlete out of play.

### EVALUATION FROM A HCP

Ensure that the athlete is evaluated right away by an appropriate health care professional with experience in evaluating concussions. Do not try to judge the severity of the injury yourself. Health care professionals have a number of methods that they can use to assess the severity of concussions. As a coach, recording the following information can help health care professionals in assessing the athlete after the injury:

- Cause of the injury and force of the hit or blow to the head
- Any loss of consciousness (passed out/ knocked out) and if so, for how long
- Any memory loss immediately following the injury
- Any seizures immediately following the injury
- Number of previous concussions (if any)

### INFORM PARENTS

Inform the athlete's parents or guardians about the possible concussion and give them the fact sheet on concussion. Make sure they know that the athlete should be seen by a health care professional experienced in evaluating for concussion.

### NO RETURN DAY OF

Keep the athlete out of play the day of the injury. Do not return the athlete to play or practice until a health care professional, experienced in evaluating/managing concussion, has cleared them to do so in writing. A repeat concussion that occurs before the brain recovers from the first may slow recovery or increase the likelihood of having long-term problems. Prevent common long-term problems and the rare second impact syndrome by delaying the athlete's return to the activity until the player receives appropriate medical evaluation and approval for return to play.

**If you think your athlete has sustained a concussion, take him/her out of play and seek the advice of a health care professional experienced in evaluating for concussion. No athlete should return to play the same day if a concussion is suspected.**

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## CONCUSSION TESTING & MANAGEMENT PROCESS

- Consider Baseline Testing All Athletes
- Educate Self on Concussions
- Emergency Assessment of Athlete
- Stabilize Athlete
- Transport Athlete if higher care is indicated
- Evaluation Athlete for Concussion
  - On field – Immediately remove athlete from participation if concussion is suspected.
  - Player should not return to play same day unless cleared by Health Care Provider (HCP)
- Contact Parents
- Evaluation: Consider the use of SCAT3 and concussion evaluation tools
- Graded Return to Play Step 1 – May Begin after athlete has no symptoms for 24 hours
- Concussion Post Injury Test (After symptom free for 24-48 hours): Neurocognitive tests like ImPACT
- Consult Physician
- If evaluation is back to baseline and normal exam: Graded Return to Play – Steps 2-7 (no more than 1 Step in 24 hour period) – under the supervision of a HCP
- Consult physician for final Return To Play Recommendations
- Return To Play

### GRADED RETURN TO PLAY EXAMPLE (PRAGUE MODIFIED)



Typically, progression to the next level only occurs if the player remains back to baseline level of symptoms for 24 hours (time frame may be lessened or lengthened dependent on individual factors). If symptoms re-emerge, the player should begin with the previous step after being back to baseline level of symptoms for 24 hours. Player should only progress to the next level when instructed to do so by the team ATC or Team Physician.

### HEADING TRAINING EXAMPLE

- STEP 1** Partner and player inside 6-yd box. Partner tosses ball softly to player; controlled, straight header, within box, appropriate technique. Five tosses straight ahead, then five to the left, and five to the right. If no symptoms occur then proceed to step 2 the next day.
- STEP 2** Repeat step 1 to start. After an active rest period (run, ball work with feet), partner and player within 18yd box. Partner tosses ball (longer distance, slightly harder), player does controlled header with good technique within box. Five each straight, left, right. If no symptoms occur then proceed to step 3 the next day.
- STEP 3** Same as Step 2 with Partner and Player outside 18yd box (longer distance, harder throw). If player remains symptom-free then move to step 4 the following day.
- STEP 4** Full practice with more dynamic, unpredictable heading.