

AGES 16 / 18 AND UNDER
**Concussions and
Athlete Safety**



LESSON WORKBOOK



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Concussions in Hockey

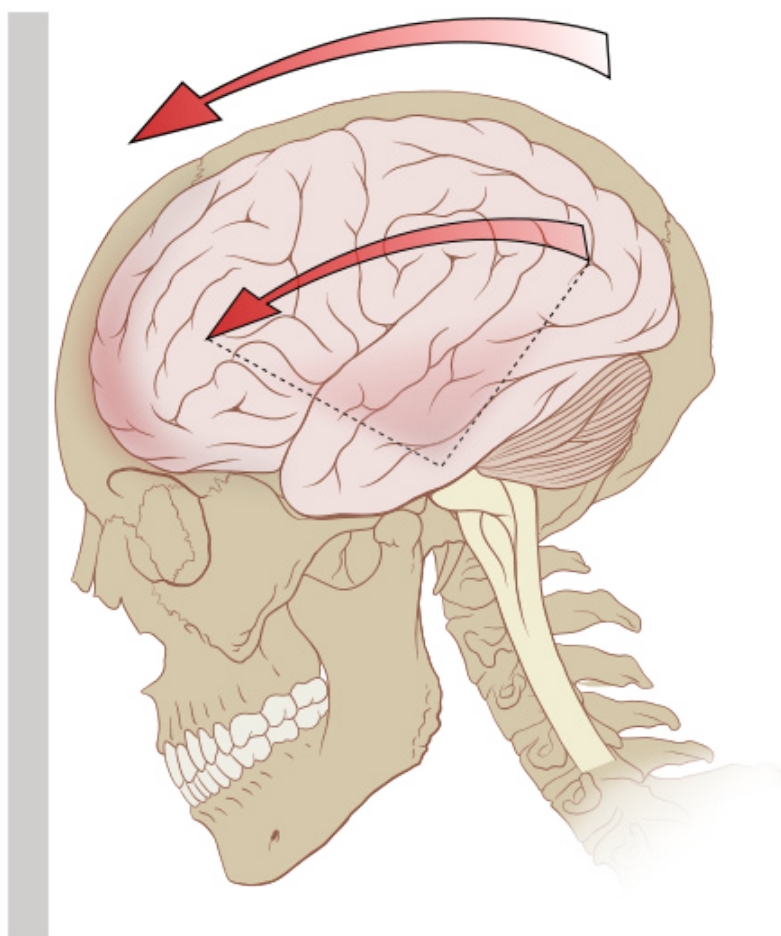
A concussion is a traumatic brain injury. There is no such thing as a minor brain injury. A player does not have to be 'knocked out' to have a concussion. Less than 10% of players actually lose consciousness when they sustain a concussion.

3 Areas of Focus

- 1.) Concussion mechanism, youth vulnerability and prevention
- 2.) Concussion diagnosis and initial management
- 3.) Concussion follow-up evaluation, recovery and return to play.

Concussion Mechanism, Youth Vulnerability & Prevention

- Concussions generally occur because of a blow to the head, neck or body.
- Players often don't have the puck or have just released the puck.
- Many concussions occur because of illegal hits or collisions or from blows from an opponent's shoulder or elbow.
- Concussions often result from open-ice, unanticipated hits.



Youth Vulnerability

The youth hockey player’s brain...

- Is more susceptible to concussion.
- Is harder to diagnose
- Takes longer to recover
- More likely to have a recurrence
- Is vulnerable to long-term effects

Every youth hockey player is a student in addition to an athlete.

Therefore, concussion in a child has additional effects.

- Participation in other sports and athletic activities
- Educational performance
- Social development

Concussion Prevention

- Focus on eliminating behaviors
- Teach players technical skills
- Heighten awareness of collisions
- Athletes / coaches conform to the rules of the game
- Officials need to consistently enforce the rules.
- Rule changes & enforcement
 - o Teach body contact & body checking in practice
 - o Eliminate head contact
 - o Eliminate fighting

Concussion Diagnosis & Initial Management

• **Concussion Symptoms**

- o Headache
- o Nausea
- o Poor balance
- o Dizziness
- o Double vision
- o Blurred vision
- o Decreased concentration
- o Impaired memory
- o Light sensitivity
- o Noise sensitivity
- o Sluggish
- o Foggy
- o Groggy
- o General confusion

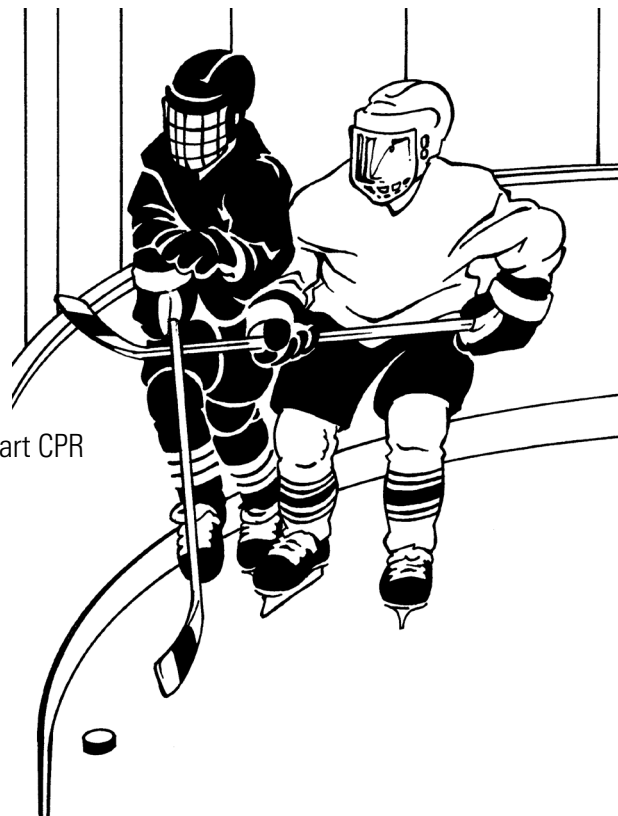


- **Concussion Signs**

- o Player appears dazed or stunned
- o Player is confused about his or her assignment
- o Moves clumsily
- o Answers slowly
- o Behavior or personality changes
- o Unsure of the score or opponent
- o Can't recall events before the injury
- o Can't recall events after the injury

- **Initial Management**

- o If the player is unresponsive – call for help and dial 911
- o Resuscitate as necessary – if the athlete is not breathing – start CPR
- o Do not move the athlete
- o Do not remove the helmet
- o Do not rush the evaluation
- o Assume a neck injury until proven otherwise
- ✓ Do not have the athlete sit up or skate off until you have determined:
 - o No neck pain
 - o No pain, numbness or tingling
 - o No midline neck tenderness
 - o Normal muscle strength
 - o Normal sensation to light touch
 - o If the athlete is conscious and responsive without symptoms or signs of a neck injury.....
 - o Help the player off the ice to the locker room
 - o Perform an evaluation
 - o Do not leave the player alone
 - o Ask the player how he or she feels (keeping concussion symptoms in mind)
 - o Assess his or her orientation (day, score, opponent, period)
 - o Test immediate memory (have them repeat a list of words)
 - o Concentration (for example – list the months of the year in reverse order)
 - o Balance (single, double & tandem stance with eyes closed for 20 seconds)
 - o Delayed Recall (repeat the previous 5 words)



- **Emergency Transport (necessary when...)**

- o Cervical spine injury
- o Prolonged loss of consciousness
- o Focal neurological deficit
- o Decreasing level of consciousness
- o Worsening symptoms
- o Unequal pupil size
- o Uncontrolled vomiting
- o Suspected skull fracture
- o Seizure activity



- **Initial Management**

- 1.) No athlete should return to play
 - 2.) Inform the player's parents
 - 3.) Refer to qualified health-care professional
 - 4.) Medical clearance is required to return to play
- o Concussion symptoms and signs evolve over time – the severity of the injury and estimated time to return to play are unpredictable.
 - o "When in doubt, sit them out."
 - o Observation by family members.
 - o Next day follow-up.

- **Return to play protocol**

After clearance, the student-athlete begins a 6 step process.
Activities are stopped if symptoms appear during any level.
Activities can resume the next day at the previous level if no symptoms exist.
Each phase requires a minimum of 1 day before advancing

Level 1

- Complete physical and cognitive rest.
- No school, exercise, video games or text messaging

Level 2

- Light aerobic exercise
- No resistance training
- Abbreviated school schedule

Level 3

- Sport-specific exercises
- No resistance training
- Part-time school

Level 4

- Non-contact practice
- Light resistance training
- Part-time school

Level 5

- Full contact practice
- Full time school with limitations

Level 6

- Return to unrestricted competition and school activities



Resources

- **USA Hockey**
www.usahockey.com
- **CDC**
www.cdc.gov
- **National Federation of High Schools**
www.nfhslearn.com
- **Heads Up Hockey**
[HUHProgramGuide.pdf](#)

