University of New England Athletic Training
Concussion Management Plan

Updated January 2018
University of New England Athletic Training Concussion Management Plan

Outline

Define Concussion
- Cause of Injury
- Signs and symptoms

Preparation
- Student-athlete education
- Coach and athletic staff education
- Baseline testing of student-athletes
  - ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing)
  - BESS (Balance Error Scoring System)

Immediate Management
- On-the-field
  - Player removal
  - Cervical spine injury
  - Emergency action plans (EAP)
- Coaches guidelines
- Off-the-field / sideline management
- Take-home instructions

Follow-Up & Short Term Management
- Physical and cognitive rest
- ImPACT

Return to Play
- Graded return to activity
- Return to play

Long Term Injury Management
- Referral to medical providers

Appendices
- Pocket Concussion Recognition Tool
- BESS
- VOMS
- Symptom scale
- Take-home instructions
- Student-athlete fact sheet
- Coach fact sheet
Concussion

- Is a brain injury and is defined as a complex pathophysiological process affecting the brain, induced by biomechanical forces.
- May be caused by a direct blow to the head, face, neck, or elsewhere on the body with an “impulsive” force transmitted to the head.
- May result in neuropathological changes, but the acute clinical symptoms largely reflect a functional disturbance rather than a functional injury and, as such, no abnormality is seen on standard structural neuroimaging studies.
- 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 symptoms may be prolonged.
  - McCrory et al., BJSM 2012

Possible causes or mechanisms of injury (MOI) of concussion

- Blow to the head, face, neck, back or jaw.
- Blow to the body, jarring impact, even if the head isn’t immediately impacted. Head may be shaken or jarred violently without impacting the ground or other object.
- Significant whiplash or similar injury to the head/neck/back region.

Common signs and symptoms of sports-related concussion

*Signs* (observed by medical professional, teammates, others):

- Athlete appears dazed or stunned
- Confusion (about instruction, plays, etc.)
- Forgets plays/cannot recall recent events
- Unsure about game details, score, opponent
- Moves clumsily (altered coordination), has balance problems
- Personality change, uncontrolled emotions (crying or angry)
- Responds slowly to questions, has to think about answers
- Forgets events prior to a hit, or after a hit
- Loss of consciousness (any duration)

*Symptoms* (reported by athlete):

- Headache, pressure in the head
- Fatigue, wants to sleep, feels sluggish
- Nausea or vomiting
- Double vision, blurry vision
- Sensitive to light, noise or smells
- Feels dazed or stunned, “foggy”
- Problems concentrating or remembering
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Preparation

Athletes will be educated on the signs and symptoms of a concussion and will sign a contract stating that they will report any signs or symptoms of a concussion to a certified Athletic Trainer on the UNE Athletic Training staff. A copy of the NCAA Concussion Fact Sheet for Athletes is available in the Appendices of this document and will be provided to each student-athlete prior to the start of practice and competition.

A copy of this concussion policy and protocol will be made available to the coaching staff. The NCAA Concussion Fact Sheet for Athletes will be distributed to all UNE head coaches.

Baseline Testing:

Full ImPACT baseline testing will be performed for all student-athletes. Baseline testing should be performed once for each student-athlete as they begin their athletics career at the University of New England. A new baseline test may be performed on a student-athlete six months or later after the clearance of a documented concussion or for a student-athlete with complicated or multiple concussion history.
Management

On-The-Field

All student-athletes who display or report signs or symptoms of a concussion will be removed from the athletics contest and evaluated by an Athletic Training Staff Member before possibly returning. If it is determined that it is likely the athlete is suffering from a concussion, they will **NOT** be allowed to return to play for **AT LEAST** the remainder of that day.

If the student-athlete is conscious, they will be removed from the playing area and may be evaluated. A copy of this is located in the Appendices.

- If the athlete is unconscious, they must be treated as if a cervical spine injury is likely until proven otherwise. The Athletic Training Department EAP (emergency action plan) will be activated at the discretion of the on-site Athletic Training Staff Member.

- The emergency action plans are reviewed annually with the Athletic Training Staff. An EAP is posted at each athletic facility.

Coaches Guidelines

If there is not a UNE Athletic Training Staff Member present, it is the responsibility of the coaching staff to contact a Athletic Training Staff Member to help guide management, seek assistance from the hosting institution’s Athletic Training Staff (during away games or events), or refer to a local hospital emergency department.

- EAP may be activated at the discretion of the coach, but all incidents of possible concussion MUST be reported to the Athletic Training Staff as soon as possible.

- If unsure, coaches and athletic staff are encouraged to act conservatively and activate the facility EAP or call 911.

Off-The-Field

Once a conscious student-athlete is safely removed from the playing area they may initially be evaluated using the Pocket Concussion Recognition Tool and/or the Vestibular Ocular Motor Screening (VOMS). A copy of this is located in the Appendices. At the discretion of the Athletic Training Staff Member, the patient will be immediately referred to a team physician or local emergency department if any of the following symptoms are noted:

- nystagmus (uncontrolled eye movements)
- prolonged loss of consciousness or altered consciousness
- vomiting
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- newly asymmetric or dilated pupils
- tingling/weakness in the arms or legs
- worsening headache
- slurred speech

Take-Home Instructions

Once it is determined that it is safe for the student-athlete to go home, they will be given a UNE Athletic Training Concussion Take Home Sheet. A copy of this is located in the Appendices of this document. Instructions on the sheet will be discussed with the patient, and at the discretion of the staff member, someone with whom the patient is leaving with – coach, teammate, friend, parent, etc.
Follow-Up Care & Management

Physical and Cognitive Rest

While the student-athlete is symptomatic post-trauma it is recommended that they refrain from physical exertion that may increase symptoms. In addition it may be recommended that the student-athlete limit their cognitive exertion as much as possible. Examples of cognitive activities that may need to be modified include:

- work on a computer or video gaming
- text messaging
- reading – text book, newspaper
- test taking – on computer or paper
- driving
- any other non-physical activity that exacerbates symptoms

It is not the role of the medical staff to mandate the removal of the student-athlete from all cognitive activities. However, it is important to work with the student-athlete and others (coaches, student affairs staff, etc.) to decrease cognitive demands as much as possible on the student-athlete.

Athletic Training Staff is encouraged to submit a notification of absence on the Absence Tracker for the semester. This tracker is managed by Student Affairs. Athletic Training Staff will notify the Department of Student Affairs of all known concussions.

ImPACT Testing Post-Injury

The student-athlete may be ImPACT tested post-injury to determine progress or at the request of a physician. Results will be compared to baseline testing scores, if available, and interpreted by team physician and or Athletic Training staff. If there is no baseline data available results can be compared to ImPACT database normative values.

A symptom scale (located in the Appendices) will be administered as needed post-injury to follow symptoms and help decide appropriate care and progress in the concussion management plan.

When the student-athlete exhibits a normal symptom score and ImPACT scores return to baseline, it may be appropriate to begin graduated physical exertion.
Return to Play

Graded Return to Activity Protocol

The following is the suggested graded exercise progression. It is important that each stage is supervised by the Athletic Training Staff so if symptoms do return they can be assessed quickly and referred to team physicians appropriately. There should be a minimum of 24 hours between each stage. If symptoms worsen during exercise, the student-athlete will need to return to the previous stage.

<table>
<thead>
<tr>
<th>Rehabilitation Stage</th>
<th>Functional Exercise at Stage</th>
<th>Objective of Each Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Symptom-limited activity</td>
<td>Daily activities that do not provoke symptoms</td>
<td>Gradual reintroduction of work/school activities</td>
</tr>
<tr>
<td>2. Light aerobic exercise</td>
<td>Walking or stationary cycling at slow to medium pace; no resistance training</td>
<td>Increase heart rate</td>
</tr>
<tr>
<td>3. Sport-specific exercise</td>
<td>Skating drills in ice hockey, running drills in soccer; no head impact activities</td>
<td>Add movement</td>
</tr>
<tr>
<td>4. Non-contact training drills</td>
<td>Progression to more complex training drills, eg, passing drills in football and ice hockey; may start progressive resistance training</td>
<td>Exercise, coordination, and cognitive load</td>
</tr>
<tr>
<td>5. Full-contact practice</td>
<td>Following medical clearance, participate in normal training activities</td>
<td>Restore athlete’s confidence; coaching staff assesses functional skills</td>
</tr>
<tr>
<td>6. Return to play</td>
<td>Normal game play</td>
<td></td>
</tr>
</tbody>
</table>

Return to Play

Once the following have been met, it may be appropriate for the student-athlete to return to play with no restrictions:

- Symptom scale returns to normal
- ImPACT testing return to baseline levels
- Exercise progression has been completed with no increase in symptoms
- BESS testing returns to normal (if available)
- Student-athlete is comfortable and confident in returning to full play, which may include taking another hit during competition

Please note that ImPACT and symptom scores CANNOT take the place of good clinical decision making on the part of the team physicians and Athletic Training Staff. The final return to play decision must be agreed upon by the team physicians, Athletic Training Staff, coaches, parents (when applicable), and most importantly by the student-athlete.
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Long Term Injury Management

Referral to Medical Providers

In the case of an injury that doesn’t improve as expected (i.e. symptoms do not resolve or symptoms return unexpectedly) it may be necessary to refer to one or more of the following health professionals.

- Neuropsychologist
- Psychiatrist
- Neurologist
- Orthopedic spine specialist
- Physical therapist (ex. vestibular rehabilitation)

These referral decisions will be made at the discretion of the team physicians, Athletic Training Staff, coaches, and injured student-athlete.
Appendices

A. Pocket Concussion Recognition Tool
B. BESS – instructions and score sheet
C. VOMS
D. Symptom scale
E. Take-home instructions
F. Student-athlete fact sheet
G. Coach fact sheet
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_Pocket CONCUSSION RECOGNITION TOOL™_
To help identify concussion in children, youth and adults

![FIFA logo](image1)

**RECOGNIZE & REMOVE**
Concussion should be suspected if one or more of the following visible clues, signs, symptoms or errors in memory questions are present.

1. **Visible clues of suspected concussion**
   Any one or more of the following visible clues can indicate a possible concussion:
   - Loss of consciousness or responsiveness
   - Lying motionless on ground/Slow to get up
   - Unsteady on feet / Balance problems or falling over/Incoordination
   - Grabbing/Clothing of head
   - Dazed, blank, or vacant look
   - Confused/Not aware of plays or events

2. **Signs and symptoms of suspected concussion**
   Presence of any one or more of the following signs or symptoms may suggest a concussion:
   - Loss of consciousness
   - Seizure or convulsion
   - Balance problems
   - Nausea or vomiting
   - Drowsiness
   - More emotional
   - Instability
   - Sadness
   - Fatigue or low energy
   - Nervous or anxious
   - “Don’t feel right”
   - Difficulty remembering
   - Headache
   - Dizziness
   - Confusion
   - Feeling slowed down
   - “Pressure in head”
   - Blurred vision
   - Sensitivity to light
   - Amnesia
   - Feeling like “in a fog”
   - Neck Pain
   - Sensitivity to noise
   - Difficulty concentrating

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**3. Memory function**
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?”

Any athlete with a suspected concussion should be IMMEDIATELY REMOVED FROM PLAY, and should not be returned to activity until they are assessed medically. Athletes with a suspected concussion should not be left alone and should not drive a motor vehicle.

It is recommended that, in all cases of suspected concussion, the player is referred to a medical professional for diagnosis and guidance as well as return to play decisions, even if the symptoms resolve.

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**RED FLAGS**
If ANY of the following are reported then the player should be safely and immediately removed from the field. If no qualified medical professional is available, consider transporting by ambulance for urgent medical assessment:

- Athlete complains of neck pain
- Increasing/confusion or irritability
- Repeated vomiting
- Seizure or convulsion
- Weakness or tingling/burning in arms or legs
- Deteriorating conscious state
- Severe or increasing headache
- Unusual behaviour change
- Double vision

Remember:
- In all cases, the basic principles of first aid (dental, response, airway, breathing, circulation) should be followed.
- Do not attempt to move the player (other than required for airway support) unless trained to do so.
- Do not remove helmet (if present) unless trained to do so.


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Score Card

<table>
<thead>
<tr>
<th>Balance Error Scoring System (BESS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Guskiewicz)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Balance Error Scoring System – Types of Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hands lifted off iliac crest</td>
</tr>
<tr>
<td>2. Opening eyes</td>
</tr>
<tr>
<td>3. Step, stumble, or fall</td>
</tr>
<tr>
<td>4. Moving hip into ≥ 30 degrees abduction</td>
</tr>
<tr>
<td>5. Lifting forefoot or heel</td>
</tr>
<tr>
<td>6. Remaining out of test position ≥ 5 sec</td>
</tr>
<tr>
<td>The BESS is calculated by adding one error point for each error during the 6 20-second tests.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCORE CARD: (### errors)</th>
<th>FIRM Surface</th>
<th>FOAM Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Leg Stance (feet together)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Leg Stance (non-dominant foot)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tandem Stance (non-dominant foot in back)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Scores:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BESS TOTAL:**

Which foot was tested: □ Left □ Right
(i.e. which is the non-dominant foot)
### Vestibular/Ocular-Motor Screening (VOMS) for Concussion

<table>
<thead>
<tr>
<th>Vestibular/Ocular Motor Test</th>
<th>Not Tested</th>
<th>Headache 0-10</th>
<th>Dizziness 0-10</th>
<th>Nausea 0-10</th>
<th>Fogginess 0-10</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BASELINE SYMPTOMS:</strong></td>
<td>N/A</td>
<td></td>
<td></td>
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<tr>
<td>Smooth Pursuits</td>
<td></td>
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<tr>
<td>Saccades – Horizontal</td>
<td></td>
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<tr>
<td>Saccades – Vertical</td>
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<td></td>
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<tr>
<td>Convergence (Near Point)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Near Point in cm): Measure 1: ______ Measure 2: ______ Measure 3: ______</td>
</tr>
<tr>
<td>VOR – Horizontal</td>
<td></td>
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<tr>
<td>VOR – Vertical</td>
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<tr>
<td>Visual Motion Sensitivity Test</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Symptom</td>
<td>None</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
<td></td>
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<tr>
<td>Balance Problems</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertigo</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Vision Problems</td>
<td></td>
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</tr>
<tr>
<td>Tinnitus</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Nausea</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headache</td>
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</tr>
</tbody>
</table>

**Post-Concussion Symptom Scale**

**Time:**

**Date:**

**Name:**

**Other:**

**Seizure:**

**Blurred Vision:**

**Dizziness:**

**Vertigo:**

**Motion Sickness:**

**Light Sensitivity:**

**Auditory Sensitivity:**

**Communication Problems:**

**Emotional Problems:**

**Behavioral Problems:**

**Nightmares:**
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Take Home Instructions
I believe that ____________________________ sustained a concussion on _________ to make sure she/he recovers, please follow the following important recommendations:
1. Please REMIND ______________________ to report to the athletic training room tomorrow at__________ for a follow up evaluation.
2. Please REVIEW the items outlined on the enclosed physician referral checklist. If any of these problems develop prior to his/ her visit please call campus safety at: **207-602-366** or contact the local emergency medical system or your family physician. Otherwise you can follow the instructions outlined below.

<table>
<thead>
<tr>
<th>It is OK to:</th>
<th>There is no need to:</th>
<th>Do NOT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Use acetaminophen (Tylenol) for headaches</td>
<td>· Check eyes with flashlight</td>
<td>· Drink alcohol</td>
</tr>
<tr>
<td>· Use Ice pack on head and neck as needed for comfort</td>
<td>· Wake up every hour</td>
<td>· Eat spicy food</td>
</tr>
<tr>
<td>· Go to sleep</td>
<td>· Test reflexes</td>
<td></td>
</tr>
<tr>
<td>· Rest (no strenuous activity or sport)</td>
<td>· Stay in bed</td>
<td></td>
</tr>
</tbody>
</table>

Day-of- injury physician referral
1. Loss of consciousness on the field
2. Amnesia lasting longer than 15min
3. Deterioration of neurologic function
4. Decreasing level of consciousness
5. Decrease or irregular respirations
6. Decrease or irregularity in pulse
7. Increase in blood pressure
8. Unequal, dilated, or un-reactive pupils
9. Cranial nerve deficits
10. Any signs or symptoms of associated injuries, spine or skull fracture or bleeding
11. Mental status changes: lethargy, difficulty maintaining arousal, confusion or agitation
12. Seizure activity
13. Vomiting
14. Motor deficits subsequent to initial on-field assessment
15. Sensory deficits subsequent to initial on field assessment
16. Balance difficulties subsequent to initial on field assessment
17. Cranial nerve deficits subsequent to initial on field assessment
18. Post-concussion symptoms that worsen
19. Additional post-concussion symptoms as compared with those on the field

Delayed physician referral (after the day of injury)
1. Any of the findings in the day-of- injury referral category
2. Post-concussion symptoms worsen or do not improve over time
3. Increase in the number of post-concussion symptoms reported

Specific recommendations:

Recommendations provided by: ____________________________
Date:__________ Time:__________

Athlete signature: __________________________________________ Date:__________
What is a concussion?
A concussion is a type of traumatic brain injury. It follows a force to the head or body and leads to a change in brain function. It is not typically accompanied by loss of consciousness.

How can I keep myself safe?

1. **Know the symptoms.**
   - You may experience ...
     - Headache or head pressure
     - Nausea
     - Balance problems or dizziness
     - Double or blurry vision
     - Sensitivity to light or noise
     - Feeling sluggish, hazy or foggy
     - Confusion, concentration or memory problems

2. **Speak up.**
   - If you think you have a concussion, stop playing and talk to your coach, athletic trainer or team physician immediately.

3. **Take time to recover.**
   - Follow your team physician and athletic trainer's directions during concussion recovery. If left unmanaged, there may be serious consequences.
   - Once you’ve recovered from a concussion, talk with your physician about the risks and benefits of continuing to participate in your sport.

How can I be a good teammate?

1. **Know the symptoms.**
   - You may notice that a teammate ...
     - Appears dazed or stunned
     - Forgets an instruction
     - Is confused about an assignment or position
     - Is unsure of the game, score or opponent
     - Appears less coordinated
     - Answers questions slowly
     - Loses consciousness

2. **Encourage teammates to be safe.**
   - If you think one of your teammates has a concussion, tell your coach, athletic trainer or team physician immediately.
   - Help create a culture of safety by encouraging your teammates to report any concussion symptoms.

3. **Support your injured teammates.**
   - If one of your teammates has a concussion, let him or her know you and the team support playing it safe and following medical advice during recovery.
   - Being unable to practice or join team activities can be isolating. Make sure your teammates know they’re not alone.

No two concussions are the same. New symptoms can appear hours or days after the initial impact. If you are unsure if you have a concussion, talk to your athletic trainer or team physician immediately.
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What happens if I get a concussion and keep practicing or competing?
- Due to brain vulnerability after a concussion, an athlete may be more likely to suffer another concussion while symptomatic from the first one.
- In rare cases, repeat head trauma can result in brain swelling, permanent brain damage or even death.
- Continuing to play after a concussion increases the chance of sustaining other injuries too, not just concussion.
- Athletes with concussion have reduced concentration and slowed reaction time. This means that you won’t be performing at your best.
- Athletes who delay reporting concussion take longer to recover fully.

What are the long-term effects of a concussion?
- We don’t fully understand the long-term effects of a concussion, but ongoing studies raise concerns.
- Athletes who have had multiple concussions may have an increased risk of degenerative brain disease and cognitive and emotional difficulties later in life.

What do I need to know about repetitive head impacts?
- Repetitive head impacts mean that an individual has been exposed to repeated impact forces to the head. These forces may or may not meet the threshold of a concussion.
- Research is ongoing but emerging data suggest that repetitive head impact also may be harmful and place a student-athlete at an increased risk of neurological complications later in life.

Did you know?
- NCAA rules require that team physicians and athletic trainers manage your concussion and injury recovery independent of coaching staff, or other non-medical influence.
- We’re learning more about concussion every day. To find out more about the largest concussion study ever conducted, which is being led by the NCAA and U.S. Department of Defense, visit ncaa.org/concussion.

CONCUSSION TIMELINE

Baseline Testing
Balance, cognitive and neurological tests that help medical staff manage and diagnose a concussion.

Concussion
If you show signs of a concussion, NCAA rules require that you be removed from play and medically evaluated.

Recovery
Your school has a concussion management plan, and team physicians and athletic trainers are required to follow that plan during your recovery.

Return to Learn
Return to school should be done in a step-by-step progression in which adjustments are made as needed to manage your symptoms.

Return to Play
Return to play only happens after you have returned to your preconcussion baseline and you've gone through a step-by-step progression of increasing activity.

For more information, visit ncaa.org/concussion.

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What is a concussion?
A concussion is a type of traumatic brain injury. It follows a force to the head or body and leads to a change in brain function. It is not typically accompanied by loss of consciousness.

How can I tell if an athlete has a concussion?
You may notice the athlete …
- Appears dazed or stunned
- Forgets an instruction
- Is confused about an assignment or position
- Is unsure of the game, score or opponent
- Appears less coordinated
- Answers questions slowly
- Loses consciousness

The athlete may tell you he or she is experiencing …
- A headache, head pressure or that he or she doesn’t feel right following a blow to the head
- Nausea
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light or noise
- Feeling sluggish, hazy or foggy
- Confusion, concentration or memory problems

Note that no two concussions are the same. All possible concussions must be evaluated by an athletic trainer or team physician.

What can I do to keep student-athletes safe?

<table>
<thead>
<tr>
<th>Preseason</th>
<th>In-Season</th>
<th>Time of Injury</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What can I do?</strong></td>
<td>Create a culture in which concussion reporting is encouraged and promoted.</td>
<td>Know the signs and symptoms of concussions.</td>
<td>Remove athletes from play immediately if you think they have a concussion and refer them to the team physician or athletic trainer.</td>
</tr>
<tr>
<td><strong>Why does it matter?</strong></td>
<td>Athletes who don’t immediately seek care for a suspected concussion take longer to recover.</td>
<td>The more people who know what to look for in a concussed athlete, the more likely a concussion will be identified.</td>
<td>Early removal from play can mean a quicker recovery and help avoid serious consequences.</td>
</tr>
<tr>
<td><strong>Tips and strategies</strong></td>
<td>Be present when your team physician or athletic trainer provides concussion education material to your team. Tell your team that this matters to you.</td>
<td>Check in with your team physician or athletic trainer if you want to learn more about concussion safety.</td>
<td>Provide positive reinforcement when an athlete reports a suspected concussion.</td>
</tr>
</tbody>
</table>

You play a powerful role in setting the tone for concussion safety on your team. Let your team know that you take concussion seriously and reporting the symptoms of a suspected concussion is an important part of your team’s values.
What happens if an athlete gets a concussion and keeps practicing or competing?

- Due to brain vulnerability after a concussion, an athlete may be more likely to suffer another concussion while symptomatic from the first one.
- In rare cases, repeat head trauma can result in brain swelling, permanent brain damage or even death.
- Continuing to play after a concussion increases the chance of sustaining other injuries too, not just concussion.
- Athletes with a concussion have reduced concentration and slowed reaction time. This means they won’t be performing at their best.
- Athletes who delay reporting concussion may take longer to recover fully.

What do I need to know about repetitive head impacts?

- Repetitive head impacts mean that an individual has been exposed to repeated impact forces to the head. These forces may or may not meet the threshold of a concussion.
- Research is ongoing but emerging data suggest that repetitive head impact also may be harmful and place a student-athlete at an increased risk of neurological complications later in life.

Did you know?

- Most contact or collision teams have at least one student-athlete diagnosed with a concussion every season.
- Your school has a concussion management plan, and team physicians and athletic trainers are expected to follow that plan during a student-athlete’s recovery.
- NCAA rules require that team physicians and athletic trainers have the unchallengeable authority to make all medical management and return-to-play decisions for student-athletes.
- We’re learning more about concussion every day. To find out more about the largest concussion study ever conducted, which is being led by the NCAA and U.S. Department of Defense, visit ncaa.org/concussion.

For more information, visit ncaa.org/concussion.

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