University of Notre Dame Sports Medicine Department
Intercollegiate Athletics Concussion Management Plan

Purpose:

Head injuries can pose a significant health risk for student-athletes competing in intercollegiate athletics. The University of Notre Dame is committed to promoting the safety of its student-athletes. In light of this commitment and developing research on the symptoms and effects of head injuries, Notre Dame has taken steps to prevent, identify, evaluate, and manage head injuries in a comprehensive and consistent manner.

The Notre Dame Athletic Department, in accordance with NCAA bylaw 3.2.4.17, has implemented this Concussion Management Plan (“the Plan”) to establish guidelines and procedures for assessing intercollegiate student-athletes who have or may have suffered a head injury. The Plan covers the education, recognition, emergency care, long-term care, and return-to-play of student-athletes who exhibit concussion-like symptoms. The Notre Dame Sports Medicine Department recognizes that each head injury and each student-athlete is unique. Therefore, in certain cases, modifications to this protocol may be deemed appropriate by Notre Dame team physicians and sports medicine staff.

Definitions:

Concussions are the most common form of head injury suffered by student-athletes. A uniform definition of a concussion does not exist because of the complexity of concussions. A concussion can be caused by a direct or indirect blow to the head or elsewhere on the body resulting in an impulsive force being transmitted to the head. A concussion may cause impaired neurologic function, which may or may not involve loss of consciousness. The exact recovery periods from these types of head injuries are uncertain timeframes and will often vary from student-athlete to student-athlete.

Throughout this policy, team physician means a university physician with experience in the evaluation and management of concussions.

Signs/Symptoms:

A concussed student-athlete may exhibit a variety of symptoms or very few symptoms. Despite popular belief, most concussions do not involve student-athletes losing consciousness. One
important factor to take into consideration is that, while some symptoms appear immediately, others may take time to appear. Additionally, symptoms and the severity of symptoms will vary among student-athletes. Signs and symptoms of concussions include, but are not limited to:

**Symptoms:**
- Dizziness
- Nausea/Vomiting
- Confusion
- Irritability
- Headaches
- Ringing in ears
- Fatigue
- Light headedness
- Disorientation
- Seeing bright lights/stars
- Depression
- Feeling of being stunned
- Pressure in head
- Neck pain

**Signs:**
- Difficulty concentrating
- Reduced attention
- Decreased playing ability
- Cognitive dysfunction
- Vacant stare
- Personality change
- Loss of consciousness
- Slurred/incoherent speech
- Delayed verbal or motor responses
- Sleep disturbances

**Education/Responsibilities:**

1. Notre Dame student-athletes must be truthful and forthcoming about symptoms of illness and injury, both at the time of an injury as well as upon the emergence of any reoccurring or new symptoms. In conjunction with the annual pre-participation physical, student-athletes will sign a questionnaire in which they acknowledge their responsibility to be truthful and forthcoming about symptoms of illness and injury.

   Each year, the sports medicine staff will educate Notre Dame student-athletes specifically about concussions. As part of that education, each student-athlete will receive the NCAA Concussion Fact Sheet (Appendix A) and will sign the Student-Athlete Concussion Responsibility Form (Appendix B). In signing the form, student-athletes will acknowledge that:

   a. they have received and reviewed the NCAA Concussion Fact Sheet for Student-Athletes and participated in education related thereto; and
   b. they accept the responsibility for truthfully and promptly reporting their illnesses and injuries to the sports medicine staff, including any signs or symptoms of a concussion, regardless of whether any such illnesses, injuries, signs, or symptoms are related to participation in intercollegiate athletics.

2. All Notre Dame coaches will receive the NCAA Concussion Fact Sheet for Coaches (Appendix C) and will sign the Coach’s Concussion Responsibility Form (Appendix D), acknowledging that:

   a. they have received and reviewed the NCAA Concussion Fact Sheet for Coaches and participated in education related thereto;
b. they will encourage their student-athletes to report their illnesses and injuries to sports medicine staff, especially any signs or symptoms of a concussion;

c. they will refer any student-athlete whom they suspect of sustaining a concussion to the proper medical authority; and

d. they have read and understand the Notre Dame Concussion Management Plan, including the fact that team physicians (and, in their absence, athletic trainers) have unchallengeable authority to withhold a student-athlete from practice or competition, and that team physicians have unchallengeable authority to determine concussion management, return-to-play, and medical clearance.

Baseline Assessment:

At the beginning of each new season, Notre Dame sports medicine staff shall administer a baseline assessment for those student-athletes who are at the highest risk of sustaining concussions. At a minimum, student-athletes in the sports of baseball, basketball, cheerleading, diving, football, hockey, lacrosse, pole vaulting, soccer, and softball will be tested. Notre Dame Sports Medicine generally utilizes computerized neuropsychological testing for this baseline assessment.

Recognition and Evaluation:

1. If a student-athlete reports or displays signs, symptoms, or behaviors that a Notre Dame athletics staff member believes are consistent with a concussion, the Notre Dame athletics staff member shall inform the student-athlete’s coach, as well as the student-athlete’s team physician and/or athletic trainer. The student-athlete shall be removed from any practice or competition then underway, and will be evaluated by a team physician or athletic trainer, who will make a determination of whether there is a basis for a suspected concussion.

2. A student-athlete with a suspected concussion shall be withheld from practice or competition and shall not return to athletic activity for the remainder of that day. The team physician or athletic trainer making such decision should notify the coaching staff that the student-athlete will not return to athletic activity for the remainder of the day.

3. A treating athletic trainer or team physician shall have the authority to require that a student-athlete be continuously monitored during a period that the student-athlete, in the judgment of the athletic trainer or team physician, is acutely symptomatic.

4. A student-athlete with a suspected concussion will be evaluated by a team physician for a diagnosis as soon as possible in accordance with the severity of the symptoms. Such evaluation will generally include follow-up testing (which may include but is not limited to neuropsychological, balance, SAC, SCATII and/or SCAT III testing); the timing and nature of any follow-up testing are in the discretion of the treating team physician.

5. Student-athletes and/or sports medicine staff may not be able to recognize the possibility of a concussion until hours or days after the precipitating event. Under these circumstances, once a student-athlete reports or displays signs, symptoms, or behaviors
that a Notre Dame athletics staff member believes are consistent with a concussion, the athletics staff member shall inform the student-athlete’s coach, as well as the student athlete’s team physician and/or athletic trainer, and the team physician or athletic trainer shall initiate normal evaluation and return-to-play procedures.

6. If a student-athlete sustains a potential concussion outside of participation in intercollegiate athletics, the student-athlete is responsible for truthfully and promptly reporting the injury to the sports medicine staff, including any signs or symptoms of a concussion, at which point the potential concussion will be managed in the same manner as potential concussions sustained during participation in intercollegiate athletics.

7. Visiting team student-athletes evaluated by Notre Dame sports medicine staff will be managed under the same guidelines as Notre Dame student-athletes while under the evaluation of Notre Dame sports medicine staff.

8. If a Notre Dame student-athlete reports or displays signs, symptoms, or behaviors that a Notre Dame athletics staff member believes are consistent with a concussion while away from campus in connection with team activities and a team physician is not present, the athletics staff member shall inform the student-athlete’s coach and the student athlete’s athletic trainer. The Notre Dame athletic trainer shall manage the student-athlete under the guidelines set forth in this Plan, and should consult with a local physician experienced in the evaluation and management of concussions, if deemed necessary by the athletic trainer. Regardless, the student-athlete will be evaluated by a team physician as soon as possible upon return to campus.

**Emergency Referrals:**

In the event that a student-athlete displays one or more of the following symptoms during an initial evaluation, a team physician and/or athletic trainer should consider activation of the applicable Medical Emergency Response Procedures and/or immediate referral to the Emergency Room:

- Loss of consciousness
- Deteriorating level of consciousness
- Suspicion of spine or skull injury
- Seizure activity
- Evidence of hemodynamic instability/deteriorating of vital signs

**Monitoring/Follow-Up Care:**

1. Due to the need for ongoing monitoring for deterioration of symptoms, when an athletic trainer or team physician determines that a student-athlete who displays signs, symptoms, or behaviors consistent with a concussion or who is diagnosed with a concussion may be released from immediate care, the student-athlete should be accompanied by an individual who can provide reliable supervision (such as a roommate, parent/guardian, coach, member of residence hall staff or a teammate). In the alternative, such student-
athletes should be liberally referred to University Health Services at Saint Liam’s for observation.

2. Upon release from immediate care, the student-athlete and the individual who accompanies him/her will be provided with verbal or written instructions, which may include monitoring, limitation of certain activity, and additional assessments (see Concussion Take-Home Instructions in Appendix E for an example of information typically provided upon discharge).

3. As appropriate, the sports medicine staff should communicate with Academic Services for Student-Athletes to assist in managing professor notification and class assignments; Residence Hall or other Student Affairs staff to assist in managing supervision and other issues; and coaches and other Notre Dame athletics staff to assist in managing athletics-related issues.

Return to Play Guidelines:

1. When the treating University physician determines that it is appropriate for the student-athlete to be evaluated for return to play, the evaluation will follow the sports medicine staff supervised process set forth below.

2. The following steps are not ALL to be performed on the same day. In some cases, steps 1, 2, 3 (or even 4) may be completed on the same day, but will typically take place over multiple days.

3. If symptoms do arise during the stage-to-stage progression, the student-athlete will return to the previous asymptomatic level.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Requirement</th>
<th>Rehabilitation Stage</th>
<th>Functional Exercise at Each Stage</th>
<th>Stage Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No activity</td>
<td>Complete physical and cognitive rest</td>
<td>Recovery</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Light aerobic exercise</td>
<td>Increase heart rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Completion of Stage 2</td>
<td>Sport-specific exercise (non-contact)</td>
<td>Non-contact simple movement patterns specific to sport</td>
<td>Add movement</td>
</tr>
<tr>
<td>4</td>
<td>Completion of Stage 3</td>
<td>Non-contact training drills</td>
<td>Progression to more complex training drills</td>
<td>Exercise, coordination, and cognitive load</td>
</tr>
<tr>
<td>5</td>
<td>Completion of Stage 4</td>
<td>Full-contact practice</td>
<td>Following medical clearance, participate in normal activities</td>
<td>Restore student-athlete’s confidence and coaching staff assess functional skills</td>
</tr>
<tr>
<td>6</td>
<td>Completion of Stage 5</td>
<td>Return to play</td>
<td>Normal game play</td>
<td></td>
</tr>
</tbody>
</table>
4. No student-athlete can return to full activity, practice or competition until they are medically cleared to do so by a team physician.

5. Team physicians shall have unchallengeable authority to determine concussion management, return-to-play and medical clearance. In the absence of a team physician, athletic trainers have unchallengeable authority to withhold a student-athlete from practice or competition.

6. Any member of the Notre Dame Sports Medicine staff must report any attempt to interfere with proper concussion protocol to a member of the Executive Committee in the Department of Athletics.

The above policy was adopted by the University of Notre Dame Department of Athletics effective July 1, 2014, and is adapted in part from The University of North Carolina at Chapel Hill Sport Concussion Policy.
WHAT IS A CONCUSSION?
A concussion is a brain injury that:
• Is caused by a blow to the head or body.
  – From contact with another player, hitting a hard surface such as the ground, ice or floor, or being hit by a piece of equipment such as a bat, lacrosse stick or field hockey ball.
• Can change the way your brain normally works.
• Can range from mild to severe.
• Presents itself differently for each athlete.
• Can occur during practice or competition in ANY sport.
• Can happen even if you do not lose consciousness.

HOW CAN I PREVENT A CONCUSSION?
Basic steps you can take to protect yourself from concussion:
• Do not initiate contact with your head or helmet. You can still get a concussion if you are wearing a helmet.
• Avoid striking an opponent in the head. Undercutting, flying elbows, stepping on a head, checking an unprotected opponent, and sticks to the head all cause concussions.
• Follow your athletics department’s rules for safety and the rules of the sport.
• Practice good sportsmanship at all times.
• Practice and perfect the skills of the sport.

WHAT ARE THE SYMPTOMS OF A CONCUSSION?
You can't see a concussion, but you might notice some of the symptoms right away. Other symptoms can show up hours or days after the injury. Concussion symptoms include:
• Amnesia.
• Confusion.
• Headache.
• Loss of consciousness.
• Balance problems or dizziness.
• Double or fuzzy vision.
• Sensitivity to light or noise.
• Nausea (feeling that you might vomit).
• Feeling sluggish, foggy or groggy.
• Feeling unusually irritable.
• Concentration or memory problems (forgetting game plays, facts, meeting times).
• Slowed reaction time.

Exercise or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games may cause concussion symptoms (such as headache or tiredness) to reappear or get worse.

WHAT SHOULD I DO IF I THINK I HAVE A CONCUSSION?
Don’t hide it. Tell your athletic trainer and coach. Never ignore a blow to the head. Also, tell your athletic trainer and coach if one of your teammates might have a concussion. Sports have injury timeouts and player substitutions so that you can get checked out.

Report it. Do not return to participation in a game, practice or other activity with symptoms. The sooner you get checked out, the sooner you may be able to return to play.

Get checked out. Your team physician, athletic trainer, or health care professional can tell you if you have had a concussion and when you are cleared to return to play.
A concussion can affect your ability to perform everyday activities, your reaction time, balance, sleep and classroom performance.

Take time to recover. If you have had a concussion, your brain needs time to heal. While your brain is still healing, you are much more likely to have a repeat concussion. In rare cases, repeat concussions can cause permanent brain damage, and even death. Severe brain injury can change your whole life.

IT’S BETTER TO MISS ONE GAME THAN THE WHOLE SEASON.
WHEN IN DOUBT, GET CHECKED OUT.

For more information and resources, visit www.NCAA.org/health-safety and www.CDC.gov/Concussion.

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APPENDIX B
UNIVERSITY OF NOTRE DAME SPORTS MEDICINE
STUDENT-ATHLETE CONCUSSION RESPONSIBILITY FORM

You are hereby advised to read the following language carefully and thoroughly, as it relates to your physical and mental well-being.

- I have received and read the NCAA Concussion Fact Sheet, and have received education related thereto.

- A concussion is a brain injury, and I am aware that I might notice some of the symptoms of a concussion right away while other symptoms can show up hours or days after the injury.

- I am responsible for truthfully and promptly reporting a concussion and any concussion-related symptoms to my athletic trainer and/or team physician.

- If I suspect that a teammate has a concussion, I should promptly report the injury to my athletic trainer and/or team physician.

- I will not return to play in a competition or practice if I have received a blow to the head or body that results in concussion-related symptoms.

- I am aware that concussions constitute a serious injury, which may result in severe and permanent physical and/or mental impairment, and even death.

By signing below, I acknowledge and agree that I have read each of the bulleted items above, that I understand each of the bulleted items, and that I acknowledge and agree to them freely and voluntarily.

____________________________________  ______________
Signature of Student-Athlete            Date

____________________________________  ___________________________
Printed Name of Student-Athlete        Sport
CONCUSSION
A FACT SHEET FOR COACHES

THE FACTS
• A concussion is a brain injury.
• All concussions are serious.
• Concussions can occur without loss of consciousness or other obvious signs.
• Concussions can occur from blows to the body as well as to the head.
• Concussions can occur in any sport.
• Recognition and proper response to concussions when they first occur can help prevent further injury or even death.
• Athletes may not report their symptoms for fear of losing playing time.
• Athletes can still get a concussion even if they are wearing a helmet.
• Data from the NCAA Injury Surveillance System suggests that concussions represent 5 to 18 percent of all reported injuries, depending on the sport.

WHAT IS A CONCUSSION?
A concussion is a brain injury that may be caused by a blow to the head, face, neck or elsewhere on the body with an “impulsive” force transmitted to the head. Concussions can also result from hitting a hard surface such as the ground, ice or floor, from players colliding with each other or being hit by a piece of equipment such as a bat, lacrosse stick or field hockey ball.

RECOGNIZING A POSSIBLE CONCUSSION
To help recognize a concussion, watch for the following two events among your student-athletes during both games and practices:
1. A forceful blow to the head or body that results in rapid movement of the head;
-AND-
2. Any change in the student-athlete’s behavior, thinking or physical functioning (see signs and symptoms).

SIGNS AND SYMPTOMS

Signs Observed By Coaching Staff
• Appears dazed or stunned.
• Is confused about assignment or position.
• Forgets plays.
• Is unsure of game, score or opponent.
• Moves clumsily.
• Answers questions slowly.
• Loses consciousness (even briefly).
• Shows behavior or personality changes.
• Can’t recall events before hit or fall.
• Can’t recall events after hit or fall.

Symptoms Reported By Student-Athlete
• Headache or “pressure” in head.
• Nausea or vomiting.
• Balance problems or dizziness.
• Double or blurry vision.
• Sensitivity to light.
• Sensitivity to noise.
• Feeling sluggish, hazy, foggy or groggy.
• Concentration or memory problems.
• Confusion.
• Does not “feel right.”
PREVENTION AND PREPARATION
As a coach, you 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 student-athletes:

- Educate student-athletes and coaching staff about concussion. Explain your concerns about concussion and your expectations of safe play to student-athletes, athletics staff and assistant coaches. Create an environment that supports reporting, access to proper evaluation and conservative return-to-play.
  - Review and practice your emergency action plan for your facility.
  - Know when you will have sideline medical care and when you will not, both at home and away.
  - Emphasize that protective equipment should fit properly, be well maintained, and be worn consistently and correctly.
  - Review the Concussion Fact Sheet for Student-Athletes with your team to help them recognize the signs of a concussion.
  - Review with your athletics staff the NCAA Sports Medicine Handbook guideline: Concussion or Mild Traumatic Brain Injury (mTBI) in the Athlete.
- Insist that safety comes first.
  - Teach student-athletes safe-play techniques and encourage them to follow the rules of play.
  - Encourage student-athletes to practice good sportsmanship at all times.
  - Encourage student-athletes to immediately report symptoms of concussion.
- Prevent long-term problems. A repeat concussion that occurs before the brain recovers from the previous one (hours, days or weeks) can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in brain swelling, permanent brain damage and even death.

IF YOU THINK YOUR STUDENT-ATHLETE HAS SUSTAINED A CONCUSSION:
Take him/her out of play immediately and allow adequate time for evaluation by a health care professional experienced in evaluating for concussion.

An athlete who exhibits signs, symptoms or behaviors consistent with a concussion, either at rest or during exertion, should be removed immediately from practice or competition and should not return to play until cleared by an appropriate health care professional. Sports have injury timeouts and player substitutions so that student-athletes can get checked out.

IF A CONCUSSION IS SUSPECTED:
1. Remove the student-athlete from play. Look for the signs and symptoms of concussion if your student-athlete has experienced a blow to the head. Do not allow the student-athlete to just "shake it off.” Each individual athlete will respond to concussions differently.
2. Ensure that the student-athlete is evaluated right away by an appropriate health care professional. Do not try to judge the severity of the injury yourself. Immediately refer the student-athlete to the appropriate athletics medical staff, such as a certified athletic trainer, team physician or health care professional experienced in concussion evaluation and management.
3. Allow the student-athlete to return to play only with permission from a health care professional with experience in evaluating for concussion. Allow athletics medical staff to rely on their clinical skills and protocols in evaluating the athlete to establish the appropriate time to return to play. A return-to-play progression should occur in an individualized, step-wise fashion with gradual increments in physical exertion and risk of contact.
4. Develop a game plan. Student-athletes should not return to play until all symptoms have resolved, both at rest and during exertion. Many times, that means they will be out for the remainder of that day. In fact, as concussion management continues to evolve with new science, the care is becoming more conservative and return-to-play time frames are getting longer. Coaches should have a game plan that accounts for this change.

IT’S BETTER THEY MISS ONE GAME THAN THE WHOLE SEASON.
WHEN IN DOUBT, SIT THEM OUT.
For more information and resources, visit www.NCAA.org/health-safety and www.CDC.gov/Concussion.

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APPENDIX D
UNIVERSITY OF NOTRE DAME SPORTS MEDICINE
COACH’S CONCUSSION RESPONSIBILITY FORM

You are hereby advised to read the following language carefully and thoroughly, as it relates to the physical and mental well-being of the student-athletes whom you coach.

- I have received and read the NCAA Concussion Fact Sheet and the Notre Dame Concussion Management Plan, and have received education related thereto.

- A concussion is a brain injury. Student-athletes are responsible for truthfully and promptly reporting a concussion and any concussion-related symptoms to the sports medicine staff. I will encourage my student-athletes to report any suspected injuries and illnesses to the sports medicine staff, especially any signs or symptoms of a concussion. If I suspect that one of my student-athletes has a concussion, it is my responsibility to promptly report that suspicion to the sports medicine staff.

- I will not knowingly allow any student-athlete to return to play in a competition or practice if he/she exhibits concussion-related symptoms.

- Student-athletes shall not return to play in a competition or practice on the same day that they are suspected of having a concussion.

- Team physicians (and, in their absence, athletic trainers) have unchallengeable authority to withhold a student-athlete from practice or competition. Team physicians have unchallengeable authority to determine concussion management, return-to-play, and medical clearance.

By signing below, I acknowledge and agree that I have read each of the bulleted items above, that I understand each of the bulleted items, and that I acknowledge and agree to them freely and voluntarily.

__________________________________  ______________________
Signature of Coach                       Date

__________________________________  ______________________
Printed Name of Coach                   Sport
Concussion Information: Take-Home Instructions

Name ___________________________  Date __________________

You have had a concussion or other head injury, and therefore you need to be watched closely for the next 24-48 hours and follow the instructions contained on this page.

<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 Tylenol (acetaminophen)</td>
<td>• Check eyes with a light</td>
<td>• Drink Alcohol</td>
</tr>
<tr>
<td>• Use an ice pack to head/neck for comfort</td>
<td>• Wake up every hour</td>
<td>• Eat spicy foods</td>
</tr>
<tr>
<td>• Eat a light meal</td>
<td>• Stay in bed</td>
<td>• Drive a car</td>
</tr>
<tr>
<td>• Go to sleep</td>
<td></td>
<td>• Use aspirin, Aleve, Advil or other NSAID products</td>
</tr>
</tbody>
</table>

Special Recommendations:________________________________________________________________________
_________________________________________________________________________________________________________

WATCH FOR ANY OF THE FOLLOWING PROBLEMS:

• Worsening headache
• Stumbling/loss of balance
• Vomiting
• Weakness in one arm/leg
• Decreased level of Consciousness
• Blurred Vision
• Dilated Pupils
• Increased irritability
• Increased Confusion

If any of these problems develop, call your athletic trainer or physician immediately.

Athletic Trainer ___________________________  Phone __________________

Physician ___________________________  Phone __________________

Recommendations provided to ______________________________________________

Recommendation provided by ______________________________________________