University of Minnesota
Intercollegiate Athletics
Mild Traumatic Brain Injury (Concussion) Guidelines

1. **Definition of Concussion**
   - **Concussion is defined as a complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces. (McCrory et al. 2009)**

2. **ImPact Testing.**
   - **Pre-season testing of incoming student athletes in the following sports: Football, Men's Hockey, Women's Hockey, Women's Soccer, and Men's & Women's Diving (baseline score is reliable for 4-5 years).**
   - **Testing is performed when the athlete reports asymptomatic.**
   - **Consider testing the athlete at 7 days if the athlete still reports post-concussive signs and symptoms.**
   - **Further testing as indicated.**

3. **Identify the concussed athlete.**
   - **Symptoms may include: Headache or pressure in the head balance problems or dizziness, nausea, feeling "dinged", "foggy", stunned, or "dazed", visual problems, hearing problems, irritability or emotional changes.**
   - **Any loss of consciousness or amnesia should be considered signs of a concussion.**

4. **Obtain brief history and current symptoms athlete is experiencing.**

5. **Assess cognitive function and coordination.**
   - **Recent memory assessment**
     - **Where are we playing?**
     - **What quarter (period) is it?**
     - **Score?**
     - **Early, mid, or late in game (practice)?**
     - **Who did we play last week?**
     - **Who won last week?**
   - **Cognitive function assessment**
     - **Starting with today, say the days of the week in reverse order.**
     - **Starting with this month, say the months of the year in reverse order.**
     - **Four object recall.**
   - **Coordination assessment**
     - **Romberg**
     - **Single-leg balance test**
     - **Tandem walking (forward and backward)**
   - **Consider further neurological testing to include pupil reactivity, muscle strength, and reflexes.**

7. **Observe and reassess symptomatic athlete at periodic intervals.**

8. **If athlete is symptom-free, reassess cognitive function and coordination. If exam is normal, have athlete perform brief physical activity. Reassess for recurrence of symptoms. If symptomatic with exertion continue sideline reassessments.**

9. **If asymptomatic at rest and with exertion, consider return to play. If uncertain, refer to team physician.**

10. **An athlete who has an *observed* loss of consciousness should be withheld from play and evaluated by a team physician before return to play.**

11. **An athlete whose symptoms of concussion at rest and with exertion persist more than 24 hours, consider evaluation by a team physician before return to play.**

12. **A period of physical and cognitive rest should be considered for the concussed athlete. The athletic trainer should communicate these concerns with the coaching staff and academic services.**

13. **Once evaluated by a physician, progress of the concussed athlete should be communicated between the athletic trainer and physician with follow up as needed.**

14. **After identifying the concussed athlete and deciding on a management plan the following progression for return to activity should be observed.**
    a. **Asymptomatic at rest.**
    b. **Asymptomatic with light exertion (e.g. exercise bike).**
    c. **Asymptomatic with sport specific activity (e.g. lifting, agility drills, skating).**
    d. **Asymptomatic with non-contact drills.**
    e. **Asymptomatic with contact drills.**
    f. **Return to game activity.**

    If symptoms return during any part of the progression, the athlete will drop back to the asymptomatic level for 24hrs and try again.

15. **Each concussion should be managed on an individual basis.**
    - **80-90% of concussions will resolve within 7-10 days**
    - **If a student-athlete concussive symptoms persist for longer than 7 days referral to the team physician is required, if the athlete has not yet been referred.**

16. **"A team approach involving input from the certified athletic trainer, physician, athlete and any referral sources should be used in making return-to-play decisions after concussion." (NCAA News 2004 reflecting views expressed at 2004 NATA Annual Meeting)**

Resources:

University of Minnesota Concussion Home Sheet

ImPACT Symptom Sheet

University of Minnesota Sideline Evaluation Card

Reference:

McCrory P, Meeuwisse W, Johnston K, et al. Consensus statement on Concussion in Sport-The 3rd International Conference on Concussion in Sport held in Zurich, November 2008. *J of Sci Med Sport* 2009; 12: **340-351.**

Guskiewicz K, Bruce S, Cantu R, *et al.* National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion. *J Athl Train* 2004; 39(3)**: 280-297.**

Guskiewicz K. Postural Stability Assessment Following Concussion: One Piece of the Puzzle. *Clin J Sport Med* 2001; 11**: 182-189.**

NCAA Guideline 2i Concussion or Mild Traumatic Brain Injury (mTBI) in the Athlete. July 2004.

Revised 06/2009

University of Minnesota
Athletic Medicine

Head Injury Instructions

At the time of your injury, you were examined for the possibility of a head injury. Based on that examination, we do not, at this time, believe that you have a significant head injury. However, if any of the below listed symptoms occur after leaving the Athletic Training Room, immediately contact a member of the football athletic training staff.

Name: **Office:** **Cell:**

Symptoms:

1. Loss of consciousness
2. Drowsiness or increased irritability
3. Confusion, memory loss, abnormal behavior
4. Change in respiration
5. Fluid or blood coming form the ears or nose
6. Weakness, numbness or loss of function or sensation in arms, legs or face
7. Persistent headache or a headache that worsens
8. Twitching or seizures
9. Difficulty in understanding speech or slurring
10. Blurred or double vision or unequal pupil size
11. Difficulty in walking or keeping your balance
12. Dizziness
13. Nausea, vomiting, fever or stiff neck
14. Burning, tingling, or severe aching in neck or arms

A member of the football athletic training staff may instruct a roommate to check you periodically for the above symptoms following a head injury. Do not take any medications unless you are instructed to do so by a member of the athletic training staff or a physician. If problems or questions arise or exist, please contact a member of the football athletic training staff. If any of the symptoms progress rapidly, contact 911, then contacts a member of the football athletic training staff.