Muhlenberg College Athletic Training

Concussion Management Plan

The purpose of this plan is to make Coaches/Athletes aware of the significance of concussions. Also to inform them of the Muhlenberg College Athletic Training management plan when a concussion is suspected and/or reported.

Concussions and other brain injuries can be serious and potentially life threatening injuries in sports. Research indicates that these injuries can also have serious consequences later in life if not managed properly. In an effort to combat this injury the following concussion management plan will be used for Muhlenberg College student athletes suspected of sustaining a concussion.

A concussion occurs when there is a direct or indirect insult to the brain. As a result, transient impairment of mental functions such as memory, balance/equilibrium, and vision may occur. It is important to recognize that many sport-related concussions do not result in loss of consciousness and, therefore, all suspected head injuries should be taken seriously. Coaches and fellow teammates can be helpful in identifying those who may potentially have a concussion, because a concussed athlete may not be aware of their condition or potentially be trying to hide the injury to stay in the game or practice.

1. Coaches and Student-Athletes will be presented with educational material on concussions and will then sign a statement in which the coach and student-athlete accept the responsibility for reporting the student athlete’s injuries and illnesses to the athletic training staff, including signs and symptoms of concussions. This will be done on an annual basis.

2. Concussion management begins with pre-season baseline testing. All student-athletes will complete the ImPact Concussion Assessment Baseline Exam and Baseline Balance Error Scoring System prior to the first practice in their first semester of participation. This baseline assessment taken will be used post-injury at appropriate time intervals.

Concussion Assessment

1. Upon suspicion of a concussion, the student-athlete shall not return to activity for the remainder of that day and be referred to our athletics healthcare provider as soon as possible or sent to the emergency room for further evaluation and treatment plan. No athlete is permitted to return to play while symptomatic following a concussion.
2. The following protocol is to apply:

   a. **Baseline Testing**: conducted on each student athlete upon entering as a first-year student, transfer or for those student athletes sustaining a concussion the previous season (re-baseline).

   b. **Time of Injury**: clinical evaluation & symptom checklist; referral if necessary

   c. **1-3 hrs post-injury**: symptom checklist; referral if necessary

   d. **Next Day**: follow-up clinical evaluation & symptom checklist

   e. **Follow-up evaluations daily to track symptom recovery**

3. Muhlenberg College’s Team physician or designated healthcare provider or combination of health care provider and athletic trainers will determine return-to-play guidelines when asymptomatic and post-exertion assessments are within normal baseline limits, the return-to-play progression should occur in a medically supervised stepwise fashion with gradual increments in physical exertion and risk of contact. In most cases our team physician will want to see the athlete in the office within 1 week of no improvement.

4. After a period of remaining asymptomatic, the first step is to determine where the student athlete is relative to baseline on the following measures:

   a. **Symptom Assessment**
   b. **Neuropsychological Assessment**
   c. **Balance Assessment**

   If the measures (a-c) listed above are satisfactory to baseline according to the physician and the athlete remains asymptomatic for 1 additional day following these tests, the physician can instruct the athletic trainer to begin a graduated exertional return to play (RTP) protocol with the athlete to assess for increasing signs and symptoms. Symptoms should be reassessed immediately following exertional RTP protocol.
5. The RTP protocol is a 6 step process over no less than one week. (Zurich Conference, 2008)

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<thead>
<tr>
<th>Stage</th>
<th>Activity</th>
<th>Objective</th>
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<tbody>
<tr>
<td>1. No activity</td>
<td>Complete cognitive (e.g. mental) rest (see above)</td>
<td>Recovery</td>
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<tr>
<td>2. Light aerobic exercise</td>
<td>Walking, swimming or stationary bicycle keeping intensity less than 70% of maximum predicted heart rate</td>
<td>Increase heart rate</td>
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<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>
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<td>4. Non-contact training drills</td>
<td>Progression to more complex training drills, e.g. passing drills in football and ice hockey</td>
<td>Exercise, coordination and use of brain</td>
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<td>5. Full contact practice</td>
<td>Following medical clearance, participate in normal training activities</td>
<td>Restore confidence and allow coaching staff to assess functional skills</td>
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<td>6. Return to play</td>
<td>Normal game play</td>
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6. No athlete can return to full activity or competitions until they are asymptomatic in limited, controlled, and full-contact activities, and cleared by the team physician and or their designee.

**IF AT ANY POINT DURING THIS PROCESS THE ATHLETE BECOMES SYMPTOMATIC THE ATHLETE SHOULD BE RE-ASSESSED DAILY UNTIL ASYMPTOMATIC. ONCE ASYMPTOMATIC, THE ATHLETE SHOULD THEN FOLLOW STEPS 1-5 ABOVE.**

7. The athletics medical staff will provide incident documentation, evaluation, continued management, and clearance of the student-athlete with a concussion.

8. Repeat neuro-psychological testing for returning concussed student athlete prior to the following year to establish a new “baseline”.

9. Athletics staff, student-athletes and officials should continue to emphasize that flagrant head or neck contact in any sport should not be permitted and current rules of play be strictly enforced.

9/2010, 3/13, 8/14