



MISSOURI BAPTIST UNIVERSITY ATHLETIC TRAINING

CONCUSSION POLICY AND PROTOCOL

Background:

The University of North Carolina at Chapel Hill has been recognized as a leading institution for the evaluation and treatment of sport-related concussions. This is due in part to the longstanding collaborations between UNC's team physicians, certified athletic trainers, and researchers who are committed to treating this potentially catastrophic brain injury in the safest manner. Their *concussion policy* and *concussion management protocol* have been developed over the past several years, and is derived from the most recent literature on sport-related concussion. Because of this commitment Missouri Baptist University (MBU) has adopted the following concussion policy and concussion management protocol. The adopted material has been modified briefly due to financial restrictions and limited resources.

The UNC-Chapel Hill's clinical research conducted at UNC-Chapel Hill, and corroborated by others, has shown that student-athlete's balance and/or cognitive functioning are often depressed following a concussion—even in the absence of self-reported symptoms. It has been demonstrated that it typically takes anywhere from 3 to 10 days for a student-athlete to return to their normal state following a concussion. However, in some cases (<10%) student-athletes can experience post-concussion syndrome in which the symptoms last beyond 3 weeks.

The MBU Sports Medicine staff utilizes a three-fold approach when determining a student-athlete's readiness to return to play following a concussion. In the event of a suspected concussion, the *concussion management protocol* requires the evaluation of the student-athlete's symptoms, neurocognitive function, and balance which provide the sports medicine staff with the objective information necessary to return the student-athlete to play safely. The findings of these post-injury assessments are then compared to pre-season baseline assessments, conducted on all student-athletes participating in contact sports during their first year. Any student-athlete sustaining a concussion during the previous season is also re-baseline tested at the start of the next season. Student-athletes from the following MBU teams are preseason baseline tested: baseball, basketball (men and women), cheerleading, lacrosse (men and women), soccer (men and women), softball, track and field (pole vaulters only), wrestling (men and women), and any other student-athletes as deemed necessary by the team physicians (i.e. previous history of concussion).

The following *concussion policy* and *concussion management protocol* has been adopted by MBU sports medicine and is to be followed by all teams for managing student-athletes suspected of sustaining a concussion.

MBU Concussion Policy:

- 1) All MBU student-athletes must read the NCAA Concussion Fact Sheet and sign the attached *student-athlete statement* acknowledging that:
 - a. they have read and understand the *NCAA Concussion Fact Sheet*
 - b. they accept the responsibility for reporting their injuries and illnesses to the institutional medical staff, including signs and symptoms of concussions.

- 2) All MBU coaches (head coaches, assistant coaches, and GA's) must read and sign the attached *coaches' statement* acknowledging that they:
 - a. have read and understand the *NCAA Concussion Fact Sheet*
 - b. will encourage their student-athletes to report any suspected injuries and illnesses to the institutional athletic training staff, including signs and symptoms of concussions; and that they accept the responsibility for referring any student-athlete to the athletic training staff suspected of sustaining a concussion.
 - c. have read and understand the *MBU Concussion Management Protocol*

- 3) All MBU team physicians, athletic trainers, and graduate assistant athletic trainers, must read and sign the attached *medical provider statement* acknowledging that they:
 - a. will provide student-athletes with the *NCAA Concussion Fact Sheet* and encourage their student-athletes to report any suspected injuries and illnesses to the institutional athletic training staff, including signs and symptoms of concussions.
 - b. have read, understand, and will follow the *MBU Concussion Management Protocol*

- 4) The Head Athletic Trainer will coordinate the distribution, educational session, signing, and collection of the necessary documents. The athletic trainer training staff will file the signed documents into the student-athlete's medical file located in the athletic training room.

- 5) The Head Athletic Trainer will coordinate the signing of the aforementioned documents on an annual basis for the medical personnel and coaches. The athletic training department will keep the signed documents, along with the established MBU Concussion Policy, on file. A copy of the *MBU Concussion Policy* will also be distributed through the Policies and Procedures manuals for the athletic training facilities and coaches' staff manual.

- 6) The Head Athletic Trainer will coordinate an annual meeting each May to review and update the MBU Concussion Policy with the athletic training staff. Any changes to the policy will be effective August 1 of that year.

MBU Concussion Management Protocol:

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 protocol will be used for MBU 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 student-athlete may not be aware of their condition or potentially be trying to hide the injury to stay in the game or practice.

1) Concussion management begins with **pre-season baseline testing**. Every new (first-year or transfer) student-athlete in the sports of baseball, basketball (men and women), cheerleading, lacrosse (men and women), soccer (men and women), softball, track and field (pole vaulters only), and wrestling (men and women); and any returning student-athlete who sustained a concussion the previous school year must receive a pre-season baseline assessment for concussion involving a graded symptom checklist (GSC), Standard Assessment of Concussion (SAC), and Balance Error Scoring System (BESS). Computerized neuropsychological testing will be used if available. It can be time and cost prohibiting.

- a. A Sports Medicine Staff member will conduct the following assessments for all new and previously concussed student-athletes: GSC, SAC, and BESS.
- b. In the event of a suspected concussion, the student-athlete will be re-assessed and compared to preseason baseline measures according to the outlined protocol below.
- c. The respective team's athletic trainers will keep a copy of baseline GSC, SAC, and BESS scores on file so they can have easy access for away contests and tournaments.

2) A student-athlete suspected of sustaining a concussion will be evaluated by the team's athletic trainer using the Standardized Assessment of Concussion (SAC), Balance Error Scoring System (BESS), and Graded Symptom Checklist (GSC). The team physician's protocol be followed unless circumstances dictate direct contact with the team physician. Ideally, an assessment of symptoms will be performed at the time of the injury and then serially thereafter (i.e. 2-3 hours post-injury, 24 hours, 48 hours, etc). The presence or absence of symptoms will dictate the inclusion of additional neurocognitive and balance testing.

3) Any student-athlete diagnosed with a concussion **shall not return** to activity for the remainder of that day. Medical clearance will be determined by the Sports Medicine Staff involved with management of the concussion.

4) The following assessment and return to play plan will be used for all concussions:

Concussion Assessment:

NO STUDENT-ATHLETE SUSPECTED OF HAVING A CONCUSSION IS PERMITTED TO RETURN TO PLAY THE SAME DAY, AND NO STUDENT-ATHLETE IS PERMITTED TO RETURN TO PLAY WHILE SYMPTOMATIC FOLLOWING A CONCUSSION.

- 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;**
- c. **1-3 hrs post-injury (if possible): symptom checklist; referral if necessary;**
- d. **Next Day: follow-up clinical evaluation & symptom checklist;**
- e. **Regular follow-up evaluations to track symptom recovery: Symptom checklist after a 48 hour period**
- f. **Once student-athlete becomes *asymptomatic*: Clinical evaluation & Symptom checklist**

Following a Concussion:

1. Determine where student-athlete is relative to baseline on the following measures.
 - a. Symptom Assessment (Graded Symptom Checklist)
 - b. Mental Status Assessment (Standardized Assessment of Concussion)
 - c. Balance Assessment (Balance Error Scoring System)

2. If the measures (a-c) listed above are at least 95% of baseline scores and the student-athlete remains asymptomatic for **1 additional day** following these tests, a *5-step graduated exertional return to play (RTP) protocol* (see below) is initiated with the student-athlete to assess for increasing signs and symptoms. Symptoms should be reassessed immediately following exertional activities.
 - a. If the student-athlete remains asymptomatic on the day following the first step(s) of the *graduated exertional RTP protocol*, they may progress to the next step.

3. All scores on the aforementioned assessments or exertional activities below will be recorded in the student-athlete's medical record by the team's athletic trainer.

IF AT ANY POINT DURING THIS PROCESS THE STUDENT-ATHLETE BECOMES SYMPTOMATIC THE STUDENT-ATHLETE WILL PERFORM THE SYMPTOM CHECKLIST UNTIL ASYMPTOMATIC. ONCE ASYMPTOMATIC, THE STUDENT-ATHLETE WILL THEN FOLLOW STEPS 1-4 ABOVE.

5-Step Graduated Exertional Return to Play Protocol

This exertional protocol allows a gradual increase in volume and intensity during the return to play process. The student-athlete is monitored for any concussion-like signs/symptoms during and after each exertional activity. The following steps are not ALL to be performed on the same day. In some cases, steps 1, 2, or 3 (or even 4) may be completed on the same day, but typically will occur over multiple days. Steps 4 and 5 will each be performed on separate and subsequent days.

Exertion Step 1: 20 minute stationary bike ride (10-14 MPH)

Exertion Step 2: Interval bike ride: 30 sec sprint (18-20 MPH/10-14 MPH)/30 sec recovery x 10; and bodyweight circuit: Squats/Push Ups/Situps x 20 sec x 3

Exertion Step 3: 60 yard shuttle run x 10 (40 sec rest); and plyometric workout: 10 yard bounding/10 medicine ball throws/10 vertical jumps x 3; and non-contact, sports-specific drills for approximately 15 minutes

Exertion Step 4: Limited, controlled return to full-contact practice and monitoring for symptoms

Exertion Step 5: Full sport participation in a practice

No student-athlete can return to full activity or competitions until they are asymptomatic in limited, controlled, and full-contact activities, and cleared by the sports medicine team.

The above policy was adopted in part from The University of North Carolina at Chapel Hill Sport Concussion Policy. This policy was developed by the Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center and Division of Sports Medicine *Updated August 1, 2010.*

CONCUSSION

A FACT SHEET FOR STUDENT-ATHLETES

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.

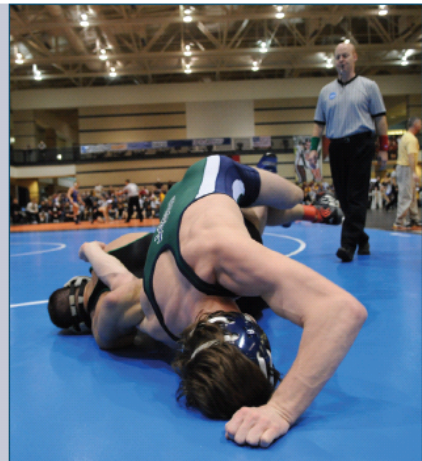
WHAT SHOULD I DO IF I THINK I HAVE A CONCUSSION?

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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**Missouri Baptist University
Student-Athlete Concussion Statement**

I understand that it is my responsibility to report all injuries and illnesses to my athletic trainer.

I have read and understand the *NCAA Concussion Fact Sheet*.

After reading the NCAA Concussion fact sheet, I am aware of the following information:

_____ A concussion is a brain injury, which I am responsible for reporting to my
(Initial) athletic trainer.

_____ A concussion can affect my ability to perform everyday activities, and affect
(Initial) reaction time, balance, sleep, and classroom performance.

_____ You cannot see a concussion, but you might notice some of the symptoms
(Initial) right away. Other symptoms can show up hours or days after the injury.

_____ If I suspect a teammate has a concussion, I am responsible for reporting the
(Initial) injury to my athletic trainer.

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

_____ Following concussion the brain needs time to heal. You are much more likely
(Initial) to have a repeat concussion if you return to play before your symptoms resolve.

_____ In rare cases, repeat concussions can cause permanent brain damage, and even
(Initial) death.

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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**Missouri Baptist University
Coaches Concussion Statement**

- I have read and understand the *MBU Concussion Management Protocol*.
- I have read and understand the *NCAA Concussion Fact Sheet*.

After reading the NCAA Concussion fact sheet and reviewing the MBU Concussion Management Protocol, I am aware of the following information:

_____ A concussion is a brain injury which student-athletes should report to the athletic trainer.
(Initial)

_____ A concussion can affect the student-athlete's ability to perform everyday activities, and
(Initial) affect reaction time, balance, sleep, and classroom performance.

_____ You cannot see a concussion, but you might notice some of the symptoms right away.
(Initial) Other symptoms can show up hours or days after the injury.

_____ I will not knowingly allow the student-athlete to return to play in a game or practice if
(Initial) he/she has received a blow to the head or body that results in concussion related symptoms.

_____ Student-Athletes shall not return to play in a game or practice on the same day that
(Initial) they are suspected of having a concussion.

_____ If I suspect one of my student-athletes has a concussion, it is my responsibility to
(Initial) have that student-athlete see the athletic trainer.

_____ I will encourage my student-athletes to report any suspected injuries and illnesses to
(Initial) the athletic trainer, including signs and symptoms of concussions.

_____ Following concussion the brain needs time to heal. Concussed student-athletes are
(Initial) much more likely to have a repeat concussion if they return to play before their symptoms resolve.

_____ In rare cases, repeat concussions can cause permanent brain damage, and even death.
(Initial)

_____ I am aware that every first-year student-athlete participating on specified
(Initial) MBU teams must be baseline tested prior to participation in sport. These tests allow for comparison of symptoms, neurocognition, and balance if the student-athlete were to become injured.

_____ I am aware that student-athletes diagnosed with a concussion will begin a graduated
(Initial) return to play protocol following full recovery of neurocognition, balance, and asymptomatic.

Signature of Coach

Date

Printed name of Coach

**Missouri Baptist University
Medical Provider Concussion Statement**

I have read and understand the *MBU Concussion Management Protocol*.

I have read and understand the *NCAA Concussion Fact Sheet*.

After reading the NCAA Concussion Fact Sheet and reviewing the MBU Concussion Management Protocol, I am aware of the following information:

_____ A concussion is a brain injury which student-athletes should report to the medical
(Initial) staff.

_____ A concussion can affect the student-athlete's ability to perform everyday activities, and
(Initial) affect reaction time, balance, sleep, and classroom performance.

_____ You cannot see a concussion, but you might notice some of the symptoms right
(Initial) away. Other symptoms can show up hours or days after the injury.

_____ I will not knowingly allow the student-athlete to return to play in a game or practice if
(Initial) he/she has received a blow to the head or body that results in concussion related symptoms.

_____ If I suspect the student-athlete has a concussion, it is my responsibility to refer that
(Initial) student-athlete to the appropriate medical staff.

_____ I will encourage the student-athlete to report any suspected injuries and illnesses to
(Initial) the medical staff, including signs and symptoms of concussions.

_____ Following concussion the brain needs time to heal. Concussed student-athletes are much
(Initial) more likely to have a repeat concussion if they return to play before their symptoms resolve. In rare cases, repeat concussions can cause permanent brain damage, and even death.

_____ I am aware that every first-year student-athlete participating on specified MBU teams
(Initial) must be baseline tested prior to participation in sport. These tests allow for comparison of symptoms, neurocognition, and balance if the student-athlete were to become injured.

_____ I am aware that student-athletes diagnosed with a concussion will be assessed once
(Initial) symptoms have resolved. Student-athletes will begin a graduated return to play protocol following full recovery of neurocognition and balance.

Signature of Medical Provider

Date

Printed name of Medical Provider