

West Virginia University Intercollegiate Athletics

Concussion Management Plan

I. Purpose

The West Virginia University Department of Intercollegiate Athletics (Department of Intercollegiate Athletics) is committed to the safety and well-being of its student-athletes. It is committed to the prevention, identification, evaluation and management of concussions.

Therefore, the Department of Intercollegiate Athletics, in accordance with the *NCAA Interassociation Consensus: Diagnosis and Management of Sports-Related Concussion Best Practices* and the Big 12 Conference Concussion and Management Policy, has adopted a team physician-directed Concussion Management Plan for its student-athletes who exhibit signs, symptoms or behaviors consistent with a concussion. The plan addresses the removal from practice and/or competition, evaluation by an experienced healthcare provider, and the criteria for medical clearance to return to activity.

II. Responsibility

Department of Athletics administration, team physicians, athletic trainers, coaches, and support staff collaboratively share responsibility in the proper execution of this plan.

III. Definition of Sport-Related Concussion (SRC)

In accordance with the 5th International Conference on Concussion in Sport (2016), a cerebral concussion is defined as a complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces. Common elements of concussions include:

- SRC may be caused by a direct blow to the head or elsewhere on the body with an 'impulsive' force transmitted to the head.
- SRC typically results in a rapid onset of short-lived impairment of neurologic function that resolves spontaneously.
- SRC may result in neuropathological changes, but the acute clinical signs and symptoms largely reflect a functional disturbance rather than a structural injury and, as such, no abnormality is seen on standard structural neuroimaging studies.
- SRC results in a range of clinical signs and symptoms that may or may not involve loss of consciousness. Resolution of the clinical and cognitive features typically follows a sequential course. However, in some cases, symptoms may be prolonged.

IV. Education

The medical staff will annually educate student-athletes, coaches, and administrators on the recognition, management, and reporting of concussions. During this period, the

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Department of Intercollegiate Athletics Concussion Management plan will be reviewed and the NCAA Concussion Fact Sheet will be distributed to all parties (Appendix).

Coaches will sign a statement confirming receipt of the educational material and acknowledgement of their responsibilities in reporting concussions to the medical staff (Appendix). Student-athletes will sign the WVU Notice of Risk, which includes a statement of their injury reporting responsibilities in addition to a listing of the common signs and symptoms of concussion (Appendix).

The Department Intercollegiate Athletics medical staff (team physicians, staff athletic trainers, graduate assistant athletic trainers) and department administrators (Athletics Director and associates) will meet annually for education on the recognition and management of concussions within the department. Signed attendance at this education session will be mandatory. The Concussion Management Plan will be updated as appropriate based on this review process.

V. Pre-participation Assessment

All student-athletes will undergo a baseline concussion assessment utilizing a standardized concussion assessment (currently, the department uses C3Logix) that includes a concussion history, symptom checklist, cognitive assessment, and balance evaluation, etc.

The team physician will determine pre-participation clearance and/or the need for additional consultation or testing.

VI. Recognition, Diagnosis, and Management of Concussions

Team physicians and/or certified athletic trainers will be on site at the campus or arena of competition for all varsity competitions in basketball, football, pole vault, soccer, and wrestling.

Team physicians and/or certified athletic trainers will be available for contact via immediate communication means (e.g. telephone, messaging, pager) for all varsity practices in basketball, football, pole vault, soccer, and wrestling. Individual cases will be discussed through such communication and immediate arrangements made for the appropriate evaluation of student-athletes.

Concussions may cause abnormalities in clinical symptoms, physical signs, behavior, balance, cognition, and/or sleep (Table 1).

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Table 1. Signs and Symptoms of Concussion

Physical	Cognitive	Emotional	Sleep
Headache	Feeling “in a fog”	Irritable	Drowsiness
Nausea or vomiting	Amnesia	Nervous	Sleep more
Balance disturbance	Confusion	Sad/depressed	Sleep less
Sensitivity to light or noise	Disorientation	Emotional lability	
Dazed or vacant stare	Difficulty concentrating		
Loss of consciousness	Delayed verbal responses		

Any student-athlete exhibiting signs and symptoms of a concussion will be immediately removed from play and evaluated by a physician or certified athletic trainer. A complete examination - including symptom and cognitive assessments, physical and neurological exams, balance testing, and trauma assessment - will be performed by the athletics healthcare provider with the results compared to the student-athlete’s measurements in the standardized concussion assessment baseline (currently C3Logix).

Any student-athlete diagnosed with a concussion shall not return to activity for the remainder of that calendar day. The student-athlete will be serially monitored by an athletics healthcare provider for deterioration and will be provided with written instructions if discharged home after suffering a concussion (Appendix).

Activation of the on-site Department of Intercollegiate Athletics Emergency Action Plan will occur for any student-athlete exhibiting a Glasgow Coma Scale <13, prolonged loss of consciousness, repetitive emesis, focal neurological deficits, progressive or worsening signs and symptoms, and/or signs and symptoms of associated injuries (e.g. neck injury).

Student-athletes who experience a concussion associated with loss of consciousness, worsening signs/symptoms, and/or post-concussive signs/symptoms lasting greater than 24 hours will be referred to a physician and will not be allowed to return to activity until cleared by the physician.

VII. Return to Activity

Any student-athlete suffering a concussion must have returned to his/her baseline level of symptoms, cognitive function, and balance before starting any exertional activity.

Student-athletes who have returned to baseline status must complete a return-to-play activity progression before returning to full, unrestricted activity (Table 2).

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Step 1: Light aerobic exercise. No resistance training.

Step 2: Increased intensity of exertive activity.

Step 3: Sport specific activity/drills with no head contact. Progressive resistance training.

Step 4: Full competitive practice.

Step 5: Return to game/competition.

The student-athlete must remain at his/her baseline status during each activity and for 24 hours following the step before progressing to the next level. If signs/symptoms occur during a step, the student-athlete will revert back to the previous level for a minimum of 24 hours before attempting the progression again.

Post-concussion neuropsychological testing using the standardized concussion assessment testing system (currently, C3Logix) will be performed as appropriate prior to the final step to aid in clearance decisions.

In highly select settings, the return-to-play progression may need to be modified in a more individualized approach under the guidance of the team physician. Early, graded, monitored aerobic activity has been shown to decrease recovery times and may be used in cases to be determined by the team physician.

Medical clearance following a concussion will be determined by the team physician or athletic trainer in consultation with the team physician. The Department of Intercollegiate Athletics team physician will have the final and unchallengeable authority to determine management and return to play for a concussed student-athlete.

VIII. Multiple Concussions

Any student-athlete suffering two or more concussions within the same calendar year will not be eligible to return to activity until evaluated and cleared by the team physician.

Psychological consultation and counseling will be obtained on a case-by-case basis as deemed appropriate by the team physician.

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IX. Return to Academics

Concussed student-athletes will complete a return to academics progression in parallel with his/her return to activity program.

Relative cognitive rest through the minimizing of stressors such as video games, reading, texting, watching television, and listening to music through headphones should begin immediately following the diagnosis of a concussion, including no classroom activity on the day of injury.

Student-athletes who cannot tolerate light cognitive activity will remain at home or in the residence hall. Attendance at sport practices and/or meetings should not be expected.

Student-athletes who tolerate light cognitive activity without symptoms can return to the classroom in graduated increments while working closely with an advisor in the Department of Intercollegiate Athletics Office of Academic Services. Those experiencing an increase in post-concussion symptoms during academic challenges will be reevaluated by the team physician.

The amount of time needed for a student-athlete to avoid class or homework will be individualized. A multi-disciplinary team that may include the team physician, athletic trainer, psychologists, academic advisors, and coach will be utilized as appropriate to determine the extent of academic adjustments.

Student-athletes experiencing cognitive difficulties for longer than two weeks post-concussion will be medically re-evaluated and may need more extensive academic accommodations. In such cases, a referral will be made to the WVU Office of Accessibility Services (OAS) in conjunction with the student-athlete's continued interaction with the Office of Academic Services. OAS will ensure management is in compliance with the Americans with Disabilities Act Amendments Act of 2008 (ADAAA).

X. Concussion Prevention and Head Trauma Reduction

Although complete elimination of concussion risk in collegiate athletics is impossible, the Department of Intercollegiate Athletics is committed to the practicable minimizing of exposure to head trauma through adherence with the NCAA Year-Round Football Practice Contact Guidelines and Big 12 Conference Policy for Football Practice Contact.

A conservative "safety-first" approach will be followed in all sports when any significant abnormality is detected following a head injury.

APPENDIX

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:

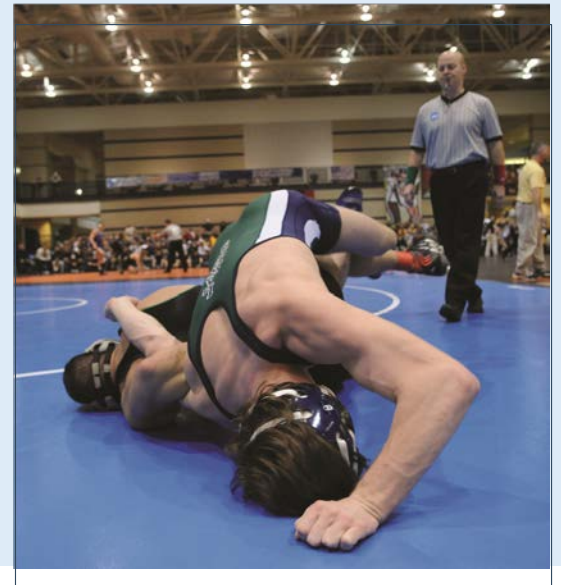
- Amnesia.
- Confusion.
- Headache.
- Loss of consciousness.
- Balance problems or dizziness.
- Double or fuzzy vision.
- Sensitivity to light or noise.
- Nausea (feeling that you might vomit).
- Feeling sluggish, foggy or groggy.
- Feeling unusually irritable.
- Concentration or memory problems (forgetting 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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Coach Acknowledgement of Education and Reporting

I have reviewed the WVU Department of Intercollegiate Athletics Concussion Management Plan and have been provided with the NCAA Concussion Fact Sheet. I understand the importance of proper recognition and management of concussions and will not knowingly allow a student-athlete to return to play in a game or practice if he/she has received an injury that results in concussion-related symptoms. I further acknowledge that should I recognize one of my student-athletes exhibiting any behaviors consistent with a concussion, it is my responsibility to have that student-athlete evaluated by the medical staff. I am aware that student-athletes with a concussion must be cleared by an athletic trainer or physician prior to returning to active sports participation. Further, I acknowledge and agree that the concealment of a concussion or concussion related symptoms is unacceptable and may be punishable if such concealment is later revealed or determined to have occurred.

Signature of Coach

Date

Printed Name of Coach

Sport

WVU INTERCOLLEGIATE ATHLETICS

I. NOTICE OF RISK & POTENTIAL CONSEQUENCES

I, _____ (print name), verify that I have been informed that I may be injured while participating in intercollegiate athletic practice or competition. I understand that it is possible that I may sustain an injury which may result in permanent disability, paralysis, or possibly death. I understand that paralysis may include loss of movement, feeling, and use of my arms, legs, and trunk. I further understand that paralysis may involve complete loss of sexual function, and/or bowel and bladder control which would require the use of external aids, attached or inserted into my body for the collection and removal of body wastes. I understand that paralysis and its effects could last my entire lifetime.

In addition, I understand that an injury to any of my body joints (i.e. ankle, knee, hip, spine, shoulder) may result in disfigurement, loss of movement, strength or feeling which may last my entire lifetime.

I understand that it is my responsibility to adhere to all rules and regulations of my chosen sport and to follow the West Virginia University Department of Intercollegiate Concussion Management Plan ("CMP"). I understand that infraction of the rules or violating the CMP may result in injury to me or my opponent. I also understand that no modification of protective equipment or uniform should be made.

In addition, I understand that it is my responsibility to report faulty or poor-fitting equipment immediately to the coach, equipment manager, or athletic trainer. I understand that **all injuries are to be reported** to the athletic trainer and that I am responsible for the follow-up care and treatment of my injuries under the athletic trainer's supervision. Under no circumstances should injuries be concealed. This includes signs/symptoms associated with cerebral concussion. These signs and symptoms can include loss of consciousness (getting 'knocked-out'), headache/pressure in head, sensitivity to light, visual disturbances, amnesia/difficulty with memory, confusion/difficulty in concentrating, fatigue/feeling slowed-down/or "in a fog", dizziness, nausea/vomiting, sleep disturbances, irritability, mood changes/more emotional, or nervousness.

I accept these risks of participation in _____ (sport) during the 20____ -20____ season.

II. CONSENT TO EXAMINATION AND TREATMENT

I, _____ (print name), consent to the examination and treatment by health care providers of the West Virginia University Department of Intercollegiate Athletics. I realize that students who are supervised by other health care providers may perform my treatment.

I authorize West Virginia University Department of Intercollegiate Athletics to release my medical records and any other information relating to my care (specifically including information related to psychiatric, substance abuse, or HIV treatment) to any person, company or agency who may need them for treatment, payment, or other health care operations as outlined in the West Virginia University Department of Intercollegiate Notice of Privacy Practices.

By signing below, I declare that I have read and understand this NOTICE OF RISK & POTENTIAL CONSEQUENCES and CONSENT TO EXAMINATION AND TREATMENT document. I also acknowledge that I have been given opportunity to ask questions about this document.

Student-Athlete Signature

Date

West Virginia University Department of Intercollegiate Athletics

Concussion Home Instruction Sheet

You have experienced a concussion or head injury and need to be watched closely for the next 24-48 hours.

Symptoms of a concussion often appear immediately, but some may not be noticed for hours or days following the injury.

Watch for any of the following problems:

- Repeated vomiting
- Headache that gets worse or does not go away
- Loss of consciousness or unable to stay awake during times you would normally be awake
- Becoming more confused, restless, or agitated
- Convulsions or seizures
- Difficulty walking or difficulty with balance
- Weakness or numbness
- Difficulty with your vision

If you experience any of these symptoms contact the athletic training room or go to an emergency room immediately.

While at home it is safe to:

- Take Tylenol
- Go to sleep
- Eat a light meal

DO NOT:

- **Drink Alcohol**
- **Take aspirin, ibuprofen, naproxen or similar products**

Getting plenty of rest helps the brain to heal. While at home avoid activities that are physically demanding or require a lot of thinking or concentration, such as playing video games. You should also avoid places with loud noises.

Contact your athletic trainer tomorrow and update him/her on your current status:

Name: _____ Phone Number: _____