

Concussion Management

CEDARVILLE UNIVERSITY CONCUSSION MANAGEMENT GUIDELINES

Aug. 2015

1. Cedarville University will require all student-athletes to sign a statement in which student-athletes accept the responsibility for reporting their injuries and illnesses to the athletic training department; this includes signs and symptoms of concussions. Student-athletes will be provided educational material on concussions.
2. Cedarville University will have on file and annually update an emergency action plan for each athletic venue to respond to student-athlete catastrophic injuries and illnesses, including but not limited to concussions, heat illness, spine injury, cardiac arrest, and respiratory distress. All athletics healthcare providers and coaches shall review the plan annually.
3. Cedarville University athletic training staff members shall hold all return-to-play decisions and management of any ill or injured student athletes, as they deem appropriate. **Return-to-learn decisions will be made utilizing a multi-disciplinary team as identified in the return-to-learn protocol.**
4. Cedarville University will have on file a written team-physician directed concussion management plan that specifically outlines the roles of the athletic healthcare staff. In addition, the following components have been specifically identified for the collegiate environment:
 - a. Cedarville University coaches will receive a copy of the concussion management plan, a fact sheet on concussions in sport, and view a video on concussions annually.
 - b. Cedarville University will record a neuropsychological baseline assessment for each student athlete in the sports of baseball, basketball, pole vaulting, soccer, softball and volleyball at a minimum. These tests and the post-injury tests will be reviewed by the Team Physician prior to any return to play decision. However, neuropsychological testing should not be used as a standalone measure to diagnose the presence or absence of a concussion. Cedarville University will use a balance assessment as well as symptom checklist as a comprehensive assessment by its athletic training staff.
 - c. When a student athlete shows any signs, symptoms or behaviors consistent with a concussion, the student athlete will be removed from practice or competition, by either a member of the coaching staff or athletic training staff. If removed by a coaching staff member, the coach will refer the student athlete for evaluation by a member of the athletic training staff. Visiting sport team members evaluated by a Cedarville University athletic training staff member will be managed in the same manner as Cedarville University student athletes.
 - d. A student athlete diagnosed with a concussion will be withheld from the competition or practice and not return to activity until asymptomatic and having completed the return to play protocol. **Student's will be held from academic responsibilities for at least 24 hours as will return based on graduated return to learn guidelines.** Student athletes that sustain a concussion outside of their sport will be managed in the same manner as those sustained during sport activity.
 - e. The student athlete will receive serial monitoring for deterioration. Athletes will be provided with written home instructions upon discharge; preferably with a roommate or guardian.
 - f. The student athlete will be evaluated by the team physician as outlined in the concussion management plan. Once asymptomatic and post-exertion assessments are within normal baseline limits, return to play shall follow a medically supervised stepwise process.

- g. The student athlete must be symptoms free, off of all pain medications, **and cleared for academic participation**, prior to beginning exertional testing protocol.
 - h. Final authority for return-to-play and **return-to learn** shall reside with the team physician or the physician's designee.
5. Athletics staff, student athletes and officials will continue to emphasize that purposeful or flagrant head or neck contact in any sport is not permitted.

Approved by: _____ **Team Physician**
Date: _____

Approved by: _____ **Head Athletic Trainer**
Date _____

Approved by: _____ **Athletic Director**
Date: _____



Cedarville University Athletic Training

Concussion Management Plan

Obtain Baseline Testing: Impact symptom score and neuropsychological testing obtained for athletes in high-risk sports for concussions (baseball, basketball, pole vaulting, soccer, softball and volleyball) or with pertinent medical history of concussion.



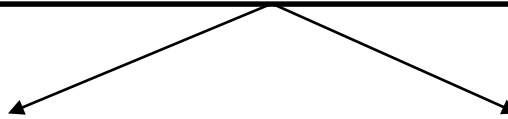
Concussion Identified and Assessed: Physical examination and assessment of concussion symptoms by medical staff (athletic trainer or physician); athlete held from all physical activity; given concussion information home instruction sheet; and **instructed to begin cognitive rest for at least 24 hours**, Athlete repeats baseline testing of symptoms and IMPACT (Within 24-48 hours); performance of Romberg test



Concussion Management: Athlete held from all physical activity **and provided with mandatory 24hrs of cognitive rest**, re-assessed athlete daily by medical staff; continue to monitor concussion symptoms; notify Cedarville University academic enrichment center (consideration of academic modification/restrictions)



Athlete Asymptomatic: Athlete repeat baseline testing with IMPACT (unless directed otherwise by physician); Repeat Romberg test; athlete symptom free and off of all pain medications



Test Results Return to Baseline:

Perform exertional testing as per protocol; re-evaluation by physician for return to play decision

Test Result NOT Returned to baseline:

When medically cleared by physician repeat test battery; consider neurophysiological consult with more detailed test battery.
When medically cleared by physician, repeat exertional testing; re-evaluation by physician for return to play decision.

Romberg Test Application

Upon removing an athlete from practice or competition based on suspicion of a concussion the Cedarville University athletic training staff will perform a Romberg test.

This test should be performed within the first 15 minutes post injury and repeated at regular intervals during the day of injury and on subsequent days. All results should be noted and are based on the athletes' ability to complete both eyes open (EO) and eyes closed (EC) exams. If unable to complete either or both tests the athlete is considered to be symptomatic for a closed head injury. This test is only one portion of a clinical examination for a concussion. All components of the head injury evaluation tool should be noted and referred to an appropriate medical professional as the Certified Athletic Trainer deems necessary.

Testing Procedure:

The athlete should be upright with feet together, arms at the side, head erect and eyes open. The patient will remain in this position for at least 30 seconds. The examiner will observe this position noting any visible sway or inability to complete the 30 second test. A normal (EO) Romberg denotes that cerebellar function is intact. Next the athlete will remain in this position with the eyes closed (EC) for 30 seconds. Again, the examiner will note any visible sway or inability to maintain an upright position. If the athlete can maintain the (EC) position then the affected athlete has a negative Romberg test, therefore determining that position (proprioception) sense is intact.

(Test Modification) Test may be performed with arms extended to the side or placed in full extension in front of the body with the palms facing upward (pronator drift) to determine mild hemiparesis.

Interpretation:

Positive Test: The Athlete can complete the (EO) portion but cannot complete the (EC) portion is determined to have a positive Romberg test.

Negative Test: The athlete can complete both the (EO) and the (EC) exams with minimal sway.

CEDARVILLE UNIVERSITY

Exertional Testing Protocol Following Concussion

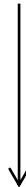
Balance Testing and IMPACT testing WNL



Exertional Testing Protocol

1. 10 min on stationary bike; exercise intensity <70% maximum predicted HR
2. 10 min continuous jogging on treadmill; exercise intensity <70% maximum predicted HR
3. Sport specific exercise: (i.e., running in soccer basketball; no head impact activities)
4. Advanced cardiovascular training: sprint activities
5. Sport Specific training drills (no contact), may start progressive resistance training

If no change in symptoms, move to next step, student-athlete will matriculate through progression minimally over a 48 hour period. If SA experiences any symptoms, they must remain at current step for 24 hours. SA may resume protocol once symptom-free.



Non-contact practice following completion of exertional protocol

If no change in symptoms for a 24 hour period, move to next step



Limited to full contact practice

If no change or increase in symptoms for 24 hour period, final return to play decision made by medical staff



Cedarville University Athletic Training

Concussion Information: Home Instruction Sheet

Name _____

Date _____

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

<u>It is OK to:</u>	<u>There is no need to:</u>	<u>DO NOT:</u>
Use Tylenol (acetaminophen)	Check eyes with a light	Drink alcohol
Use an ice pack on head/neck for comfort	Wake up every hour	Eat spicy foods
Eat a light meal	Stay in bed	Drive a car
Go to sleep		Use aspirin, Aleve, Advil, Ibuprofen, or other NSAIDs

Special Recommendations _____

WATCH FOR ANY OF THE FOLLOWING PROBLEMS:	
Worsening headache	Stumbling/loss of balance
Vomiting	Weakness in one arm/let
Decreased level of Consciousness	Blurred vision or dilated pupils
Increased irritability	Increased confusion

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

Athletic Trainer _____ Phone _____

Physician _____ Phone _____

You need to be seen for a follow-up examination at _____ AM/PM at: _____

Day of Testing: _____ Baseline _____

SRS: Day 1 2 3 4 5 6 7 _____

Name _____ Date _____
5 6 7 _____

SRA: Day 1 2 3 4

Symptom Checklist: Circle “**YES**” if you have experienced the symptom within the last 24 hours or “**NO**” if you have not experienced the symptom over the last 24 hours.

1. Have you had a **headache** in the last 24 hours? YES / NO
2. Have you experience **nausea** in the last 24 hours? YES / NO
3. Have you had any **difficulty balancing** in the last 24 hours? YES / NO
4. Have you experienced **fatigue** in the last 24 hours? YES / NO
5. Have you experienced **drowsiness** in the last 24 hours? YES / NO
6. Have you experienced **sleep disturbances** in the last 24 hours? YES / NO
7. Have you had **difficulty concentrating** in the last 24 hours? YES / NO
8. In the last 24 hours have you felt like you are “**in a fog**”? YES / NO
9. In the last 24 hours have you felt “**slowed down**”? YES / NO
10. Have your eyes been **sensitive to light** in the last 24 hours? YES / NO
11. Have you felt **sadness** in the last 24 hours? YES / NO
12. Have you experienced **vomiting** in the last 24 hours? YES / NO
13. Have your ears been **sensitive to noise** in the last 24 hours? YES / NO
14. Have you experienced **nervousness** in the last 24 hours? YES / NO
15. Have you had **difficulty remembering** things in the last 24 hours? YES / NO
16. Have you experienced **numbness** in the last 24 hours? YES / NO
17. Have you experienced any **tingling** sensations in the last 24 hours? YES / NO
18. Have you experienced **dizziness** in the last 24 hours? YES / NO
19. Have you experienced any **neck pain** in the last 24 hours? YES / NO
20. Have you been **irritable** in the last 24 hours? YES / NO
21. Have you experienced feelings of **depression** in the last 24 hours? YES / NO
22. Have you experienced **blurred vision** in the last 24 hours? YES / NO

DURATION**SEVERITY**

	1-Briefly						2-Sometimes						3-Always						4-Not Severe						6-As Severe as Possible					
1) Headache	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
2) Nausea	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
3) Difficulty balancing	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
4) Fatigue	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
5) Drowsiness	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
6) Sleep Disturbances	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
7) Difficulty Concentrating	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
8) Feeling —in a fog	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
9) Feeling —slowed down	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
10) Sensitive to Light	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
11) Sadness	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
12) Vomiting	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
13) Sensitive to Noise	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
14) Nervousness	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
15) Difficulty Remembering	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
16) Numbness	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
17) Tingling	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
18) Dizziness	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
19) Neck Pain	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
20) Irritable	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
21) Depression	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			
22) Blurred Vision	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6	0	1	2	3	4	5	6			

**Cedarville University Athletic Training
Student-Athlete Concussion Statement**

- I understand that it is my responsibility to report all injuries and illnesses to my athletic trainer and/or team physician
- 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 team physician or athletic trainer.

Initial

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

Initial

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

Initial

_____ If I suspect a teammate has a concussion, I am responsible for reporting the injury to my team physician or athletic trainer.

Initial

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

Initial

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

Initial

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

Initial

Signature of Student-Athlete

Date

Printed name of Student-Athlete