

Athletic Training Concussion Protocol

DEFINITION:

Trauma-induced alteration in mental status may or may not involve loss of consciousness.

1. Defining nature of concussion

- Concussion may be caused either by a direct blow to the head, face, neck, or elsewhere on the body with an “impulsive” force transmitted to the head.
- Concussion typically results in the rapid onset of short-lived impairment of neurological function that is resolved spontaneously. However, in some cases, symptoms and signs may evolve over several minutes to hours.
- Concussion may result in neuropathological changes, but the acute clinical symptoms largely reflect a functional disturbance rather than a structural injury and, as such, no abnormality is seen on standard structural neuroimaging studies.
- Concussion results in a graded set of clinical symptoms that may or may not involve a loss of consciousness. Resolution of the clinical and cognitive symptoms typically follows a sequential course. However, it is important to note that in some cases symptoms may be prolonged.

BASELINE TESTING:

Baseline Testing

- a. A new baseline examination should be completed yearly for athletes or those with a recent concussion.
- b. Baselines are conducted before the sports season begins using the SWAY medical assessment tool.
- c. Athletes only need 1 baseline test per year, no matter the number of sports the athlete is participating in for the year.

HOME CARE:

1. After a diagnosis of a concussion, the patient should be instructed to avoid medications other than acetaminophen. All current medications should be reviewed by a physician.
2. After a concussion diagnosis, the patient should be instructed to avoid ingesting alcohol, illicit drugs, or other substances that might interfere with cognitive function and neurologic recovery.
3. Cognitive rest refers to daily living and school activities while the patient recovers from the concussion. Activities that require concentration and attention (i.e., scholastic work, video games, text messaging) may exacerbate symptoms and possibly delay recovery.
4. Rest
 - a. The student athlete does not need to be awakened during the night unless he or she experiences loss of consciousness, prolonged periods of amnesia, or significant symptoms before going to bed.
 - b. During the acute stage of injury, the patient should be instructed to avoid any physical or mental exertion that exacerbates symptoms.
5. The student athlete should not drive when symptomatic.

EVALUATION:

On-field Assessment

SWAY Testing

*All tests should be compared to baseline and on-field evaluation if applicable.

Concussion Clinic Testing/Assessment

**The athlete should be re-assessed by the ATC between 24-72 hours of injury in the clinic and the following will be completed:*

*Cognitive and physical assessments

*Education (Provide parent and/or the athlete with paperwork, if necessary)

*Documentation (Provide parent and/or athlete with paperwork, if necessary)

RETURN TO PLAY:

Step	Activity	Goal
Step 1 (approx. 24-48 hours after injury) Symptom limited activity	Daily activities that do not exacerbate symptoms (e.g walking, more controlled environment)*	Gradual re-introduction to school and work
Step 2: Aerobic Exercise • 2a Light Exercise (up to 55% maxHR) • 2b moderate exercise (up to 70% maxHR)	Stationary cycle or walking at slow-medium pace at 55% to 70% of Maximum heart rate. * Light resistance training if more than mild/brief increase in symptom severity *	Increase heart rate
Step 3 Individual sport specific exercise	Sport specific training away from team environment (running, individual skill drills). No activities at risk of head impact*	Add movement, change direction
*Steps 1-3 may be completed while symptomatic with no more than 0-2 point increase in symptoms on a 10 point scale for less than an hour Steps 4-6 can be done only if no concussion related symptoms are present and the student has returned to pre-injury cognitive activities and school without accommodations		
Step 4 Non-contact training drills	Exercise to high intensity including more challenging drills (passing, multiplayer training). This can be integrated into a team environment	Usual intensity of exercise, coordination and thinking
Step 5 Unrestricted contact practice	Participate in normal training activities (e.g contact practice)	Restore confidence and assess functional skills
Step 6 Return to sport	Normal game play	

RETURN TO LEARN:

Graduated return to learn protocol

- Progression is demonstrated in Table 2.
- The ATC determines the appropriate Zone after performing the concussion exams
- The ATC will communicate with the school, so all appropriate individuals know of their return to learn plan.

Table 2			
Zone	Definition	Instructional Strategies	Definition
1- Red	No School Symptomatic at Rest	• Not attending school	This student has suffered a concussion and is currently resting both cognitively and physically at home. This student has been instructed to avoid all academic work and to avoid any symptom exacerbation. Upon their return to your class, they may not have all assignments up to date and also will probably need to reduce the pace or quantity of work for several days. We will provide an update following their next clinical evaluation. Upon return to school, the student and teacher will need to discuss any missed work and upcoming assignments to develop a plan that encourages gradual completion of assignments as recovery progresses.
2- Orange	Limited School Day Limited Physical Class Attendance	• Student class attendance limited • Clear desk, meaning no written desk work (auditory only) • Limited Classwork • Peer note taking • Student may benefit from periodic breaks from active classroom participation (head down on desk)	This student is under continued monitoring for a concussion by the athletic training staff. They may be attending partial school days and/or need to limit the amount of time in a particular class and will most likely not have completed some assignments. Students in this recovery zone may benefit from the following instructional strategies: ▪ Rest breaks during class ◦ Head down in class or seated with eyes closed not actively working, but actively listening ▪ Rest in quiet room for up to 20 minutes ▪ Limited classwork/testing ◦ Less reading, more listening ◦ Utilize teacher or peer notes ▪ Develop and maintain a schedule for completing assignments Please be observant of any changes in the student's physical or cognitive activity when they return to your class and share any concerns with appropriate staff members (athletic trainer, counselor, administrator, etc). In addition, please communicate with the student about their progress so they can feel comfortable and confident about returning to school, participating in class, completing assignments and sharing information with you related to their recovery.
3- Yellow	Student attends full day of school Limited class time with possible partial mental class attendance	• Clear desk • Classroom participation as tolerated • Limited Classwork • Student may need period of mental and/or physical rest within the classroom (head down on desk)	This student will be attempting to complete a full school day, but may need to limit time attending any class that causes concussion symptoms to resurface and /or intensify. Depending on the class content, time of day, and method of instruction, the following instructional strategies may provide the greatest benefit to the student: ▪ Rest breaks during class ◦ Head down in class or seated with eyes closed not actively working, but actively listening ▪ Rest in quiet room for up to 20 minutes ▪ Increasing amounts of classwork/testing ◦ Emphasis on formative rather than summative assessments ◦ Develop and maintain a schedule for completing assignments Please continue communicating with the student regarding assignments, class participation and their overall recovery. Please contact the counselor and/or athletic training staff if you have any questions.

4- Blue	Full Class Attendance (both mental and physical) with instructional strategies	▪ Student attends full class ▪ Instructional strategies in use (relevance of instructional strategies to be determined by the teacher as appropriate for each individual student's needs)	This student should be attending a full school day and be in attendance for and participating in the entire class period with minimal instructional strategies in place, including: ▪ Increasing amounts of classwork/testing, including summative assessments ▪ Actively working on completing missed assignments These instructional strategies may be utilized to reduce any residual concussion symptoms and foster the most appropriate learning environment during the final stages of the student's recovery. Please alert the counselor and/or athletic training staff if the student is not able to maintain classroom attendance due to concussion symptoms.
5- Green	Full class without instructional strategies	▪ No instructional strategies needed	This student should be participating fully in class at this time and is scheduled to begin a return to athletic participation/increased physical activity. Before we do, we are asking for any input or concern that you as the teacher might have about this student based on your classroom observation as they have progressed through the concussion recovery. Please alert the athletic training staff if the student continues to utilize any instructional strategies to minimize concussion symptom exacerbation. The student should be actively working on, or have completed any make up work as appropriate.
Post	Follow-up 1-3 weeks post return to unrestricted activity	▪ Verification that student is performing at pre-concussion level cognitively in classroom	This student has recently recovered from a concussion and has returned to unrestricted cognitive and physical activity. We would like to verify that this student has returned to their pre-concussion academic ability in <u>your</u> class.

I hereby acknowledge that by signing this form my child will abide by all concussion procedures and protocols that ensure the safety of West Central student-Athletes.

Parent / Guardian

Date

Student Athlete

Date
