

Concussion Management Policy and Procedure

Coe-Brown Northwood Academy

A **concussion** is complex pathophysiological process affecting the brain induced by traumatic biomechanical forces. (Defined by 3rd International Conference on Concussion in Sport Zurich, 2008)

Management of Concussion

Identifying a suspected concussion is the first step in ensuring appropriate student-athlete healthcare. A concussion may be recognized through observation, symptom reporting, or mechanism of injury. See table below for signs observed and symptoms reported to indicate a possible concussion.

Step 1: Assess consciousness

If at any time an athlete is unconscious (unable to readily respond to outside stimulus) the athlete should remain in position and EMS should be activated.

Step 2: Remove athlete from activity

If a concussion is suspected, the athlete needs to be removed from activity. Continuing to participate may lead to worsening symptoms and increase the risk of a more serious injury. “When in doubt, sit them out!” If athlete complains of any pain in neck or back, numbness or inability to move extremities, do NOT move athlete. Contact medical personnel to further evaluate or support injured area.

Step 3: Athlete should be evaluated by an appropriate health-care professional

Each individual will be assessed through clinical symptoms (somatic, cognitive, emotional), physical signs, behavior, balance, sleep and cognition during the assessment and management of a possible concussion. If no health-care professional is on-site, follow Physician Referral Guidelines in table below to recommend EMS transportation or parent transportation for physician follow-up.

Step 4: Communication

Any head injury or suspected concussion sustained during athletic activity should be communicated with the parents of the athlete, physician, school nurse, coach, and athletic trainer. Any accommodations needed during the school day will be organized by the school nurse and guidance counselor. Any athlete diagnosed with a concussion will need a physician’s note with a date that activity may be resumed.

Step 4: Return to activity

If any concussion symptoms are detected, the athlete should not return to play on the day of the injury.

Once an athlete no longer has symptoms of a concussion (must be without headache medications), is no longer in need of academic accommodations, and is cleared to return to activity by health-care professional knowledgeable in the care of sports concussions, he or she should proceed with activity in a step-wise fashion (see table below) to allow the brain to re-adjust to exertion. The athlete must discontinue activity immediately if signs or symptoms of a concussion return at any time and be re-evaluated by health-care professional.

Signs observed by others:	Symptoms reported by athlete:
• Appears dazed or stunned • Is confused about what to do • Forgets plays • Is unsure of game, score, or opponent • Moves clumsily • Answers questions slowly • Loss of Consciousness • Shows behavior or personality changes • Can't recall events prior to hit • Can't recall events after hit	• Headache • Nausea • Balance problems or dizziness • Double or fuzzy vision • Sensitivity to light or noise • Feeling sluggish • Feeling foggy or groggy • Concentration or memory problems • Confusion

Physician Referral Guidelines:	
Immediate Transportation to Emergency Department	Day of Injury Referral
• Loss of Consciousness • Deterioration of neurological function • Decreasing level of consciousness • Decreased or irregular respirations • Decrease or irregularity in pulse • Unequal, dilated, or unreactive pupils • Signs and symptoms of associated injuries, spine or skull fracture, or bleeding • Mental status changes: lethargy, difficulty maintaining arousal, confusion or agitation • Seizure activity	• Amnesia lasting longer than 15 minutes • Increase blood pressure • Cranial nerve deficits • Vomiting • Motor deficits • Sensory deficits • Balance deficits • Worsening or additional symptoms • Athlete has symptoms at end of practice/ game

Step-wise progression of return to activity protocol:
1- Light aerobic exercise, 5-10 minutes on an exercise bike or light jog (no resistance training) 2- Moderate aerobic exercise, 15-20 minutes of running as a moderate intensity

- 3- Non-contact training drills in full equipment (may begin resistance training)
- 4- Full contact practice or training session
- 5- Full game play

References:

Koester, Michael C. "Concussion." Sports Medicine Handbook. 4th ed. National Federation of State High School Associations, 2011.

Decoster, Laura C. "Sport-Related Concussion: Consensus Statement." NH State Advisory Council on Sport-Related Concussion, January 2011.

Guskiewicz, Kevin M. and others. "National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion." Journal of Athletic Training, 2004; 39(3): 280-297.