



Outlaws Academy Protocol and Procedures for Management of Sports-Related Concussion

Given the incidence and importance of head injury in the sport of lacrosse, Denver Outlaws Lacrosse Club (Outlaws) has established this protocol to address the issue of the identification and management of concussions for athletes who partake in any Outlaws Academy activity or event. This protocol outlines procedures for staff to follow in managing head injuries, and outlines the policy as it pertains to return to play issues after concussion.

Outlaws Academy seeks to provide a safe return to activity for all athletes after injury, particularly after a concussion. In order to effectively and consistently manage these injuries, procedures have been developed to aid in insuring that concussed athletes are identified, treated and referred appropriately, receive appropriate follow-up medical care, and are fully recovered prior to returning to activity.

In addition to recent research, two (2) primary documents were consulted in developing this protocol. The "Summary and Agreement Statement of the 2nd International Conference on Concussion in Sport, Prague 2004"¹ (referred to in this document as the Prague Statement), and the "National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion"² (referred to in this document as the NATA Statement).

This protocol will be reviewed on a yearly basis, by the Denver Outlaws medical staff.

Any changes or modifications will be reviewed and given to staff and appropriate organization personnel in writing.

All organization staff will attend a yearly in-service meeting in which procedures for managing sports-related concussion are discussed.

Contents:

- I. Recognition of concussion
- II. Management and referral guidelines for all staff
- III. Procedures for the Certified Athletic Trainer (ATC)
- IV. Guidelines and procedures for coaches
- V. Return to play procedures

I. Recognition of concussion

A. Common signs and symptoms of sports-related concussion

1. Signs (observed by others):

- Athlete appears dazed or stunned
- Confusion (about assignment, plays, etc.)
- Forgets plays
- Unsure about game, score, opponent
- Moves clumsily (altered coordination)
- Balance problems
- Personality change
- Responds slowly to questions
- Forgets events prior to hit
- Forgets events after the hit
- Loss of consciousness (any duration)

2. Symptoms (reported by athlete):

- Headache
- Fatigue
- Nausea or vomiting
- Double vision, blurry vision
- Sensitive to light or noise
- Feels sluggish
- Feels “foggy”
- Problems concentrating
- Problems remembering

3. These signs and symptoms are indicative of probable concussion. Other causes for symptoms should also be considered.

B. Cognitive impairment (altered or diminished cognitive function)

1. General cognitive status can be determined by simple sideline cognitive testing.

- a. AT may utilize SCAT (Sports Concussion Assessment Tool)³, SAC, sideline ImPACT, or other standard tool for sideline cognitive testing.
- b. Coaches should utilize the basic UPMC cognitive testing form.

II. Management and Referral Guidelines for All Staff

A. Suggested Guidelines for Management of Sports-Related Concussion⁴

1. Any athlete with a witnessed loss of consciousness (LOC) of any duration should seek medical attention at the AT and /or parents discretion.
2. Any athlete who has symptoms of a concussion, and who is not stable (i.e., condition is changing or deteriorating), should seek medical attention at the AT and /or parents discretion.
3. An athlete who exhibits any of the following symptoms should seek medical attention at the AT and /or parents discretion.
 - a. deterioration of neurological function
 - b. decreasing level of consciousness
 - c. decrease or irregularity in respirations
 - d. decrease or irregularity in pulse
 - e. unequal, dilated, or unreactive pupils
 - f. any signs or symptoms of associated injuries, spine or skull fracture, or bleeding

 - g. mental status changes: lethargy, difficulty maintaining arousal, confusion or agitation
 - h. seizure activity
 - i. cranial nerve deficits
4. An athlete who is symptomatic but stable, may be transported by his or her parents. The parents should be advised to contact the athlete's primary care physician, or seek care at the nearest emergency department, if symptoms change or become worse.
 - a. ALWAYS give parents the option of emergency transportation, even if you do not feel it is necessary. Please note that emergency transportation will not be onsite for Outlaws Academy events.

III. Procedures for the Certified Athletic Trainer (AT)

- A. The AT will assess the injury, or provide guidance to the coach if unable to personally attend to the athlete.
 1. Immediate referral to the athlete's primary care physician or to the hospital will be made when medically appropriate (see section II).
 2. The AT will perform serial assessments following recommendations in the NATA Statement, and utilize the SCAT (Sport Concussion Assessment Tool), as recommended by the Prague Statement, or sideline ImPACT, if available.
 - a. The Athletic Trainer will notify the athlete's parents and give written and verbal home and follow-up care instructions.

IV. Guidelines and procedures for coaches:

RECOGNIZE, REMOVE, REFER

A. **Recognize** concussion

1. All coaches should become familiar with the signs and symptoms of concussion that are described in section I.
2. Very basic cognitive testing should be performed to determine cognitive deficits.
 - a. See appendix E.

B. **Remove** from activity

1. If a coach suspects the athlete has sustained a concussion, the athlete should be removed from activity until evaluated medically.
 - a. **Any athlete who exhibits signs or symptoms of a concussion should be removed immediately, assessed, and should not be allowed to return to activity that day.**

C. **Refer** the athlete for medical evaluation

1. Coaches should report all head injuries to the Certified Athletic Trainer (AT), as soon as possible, for medical assessment and management, and for coordination of home instructions and follow-up care.
 - a. The AT will be responsible for contacting the athlete's parents and providing follow-up instructions.
2. In the event that an athlete's parents cannot be reached, and the athlete is able to be sent home (rather than directly to MD):
 - a. The Coach or AT should insure that the athlete will be with a responsible individual, who is capable of monitoring the athlete and understanding the home care instructions, before allowing the athlete to go home.
 - b. The Coach or AT should continue efforts to reach the parent.

Procedures for Coaches, cont'd.

- c. If there is any question about the status of the athlete, or if the athlete is not able to be monitored appropriately, the athlete should be referred to the emergency department for evaluation. A coach or AT should accompany the athlete and remain with the athlete until the parents arrive.

V. RETURN TO PLAY (RTP) PROCEDURES AFTER CONCUSSION

A. Returning to participate on the same day of injury

1. As previously discussed in this document, an athlete who exhibits signs or symptoms of concussion, or has abnormal cognitive testing, should not be permitted to return to play on the day of the injury. Any athlete who denies symptoms but has abnormal sideline cognitive testing should be held out of activity.

2. "When in doubt, hold them out."

B. Return to play after concussion

1. The athlete must meet all of the following criteria in order to progress to activity:
 - a. Asymptomatic at rest and with exertion (including mental exertion in school)
AND:
 - b. Have written clearance from primary care physician or specialist (athlete must be cleared for progression to activity by a physician other than an Emergency Room physician).
2. Once the above criteria are met, the athlete will be progressed back to full activity following a stepwise process, (as recommended by both the Prague and NATA Statements).
3. Progression is individualized, and will be determined on a case by case basis. Factors that may affect the rate of progression include: previous history of concussion, duration and type of symptoms, age of the athlete, and sport/activity in which the athlete participates. An athlete with a prior history of concussion, one who has had an extended duration of symptoms, or one who is participating in a collision or contact sport should be progressed more slowly.
4. Stepwise progression as described in the Prague Statement:
 - a) No activity – do not progress to step 2 until asymptomatic
 - b) Light aerobic exercise – walking, stationary bike
 - c) Sport-specific training (e.g., skating in hockey, running in soccer)
 - d) Non-contact training drills
 - e) Full-contact training after medical clearance
 - f) Game play

Note: If the athlete experiences post-concussion symptoms during any phase, the athlete should drop back to the previous asymptomatic level and resume the progression after 24 hours.

¹ McCrory P, et al. Summary and Agreement Statement of the 2nd International Conference on Concussion in Sport, Prague 2004. *Clin J Sports Med.* 2005; 15(2):48-55.

² Guskiewicz KM, et al. National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion. *J Athl Train.* 2004;39(3):280-297.

³ McCrory P, et al

⁴ Guskiewicz KM, et al