

Gilbert Public Schools (High School)

“Athletic Department Protocol and Procedures for Management of Sports-Related Concussion”

Medical management of sports-related concussion is evolving. In recent years, there has been a significant amount of research into sports-related concussion in high school athletes. GPS High School has established this protocol to provide education about concussion for athletic department staff and other school personnel. This protocol outlines procedures for staff to follow in managing head injuries, and outlines school guidelines as it pertains to return to play issues after concussion.

GPS High School 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 during the school day, including academic assistance, 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 “Consensus Statement on Concussion in Sport 3rd International Conference on Concussion in Sport, Held in Zurich, November 2008”¹(referred to in this document as the Zurich 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 GPS sports medicine staff with input from the team physician. Any changes or modifications will be reviewed and given to athletic department staff and appropriate school personnel in writing.

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

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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. Days of the week in reverse
 - b. 100 – 3
 - c. Months in reverse
 - d. Addition of money

II. Management and Referral Guidelines for Coaching Staff

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

B. **Remove** from activity

1. If a coach suspects the athlete has sustained a concussion, the athlete should be removed from activity until evaluated by a medical professional.

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. Any athlete with a witnessed loss of consciousness (LOC) of any duration should be spine boarded and transported immediately to nearest emergency department by EMS personnel.
2. Any athlete who has symptoms of a concussion, and who is not stable (i.e., condition is changing or deteriorating), is to be transported immediately to the nearest emergency department by EMS personnel.
3. An athlete who exhibits any of the following symptoms should be transported immediately to the nearest emergency department, by EMS personnel.
 - 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 team physician (Sports & Orthopedic Specialist Dr. J. Todd Davis, MD 480-222-5601) or the athlete's primary care physician, or seek care at the nearest emergency department, on the day of the injury.
 - a. **ALWAYS** give parents the option of emergency transportation, even if you do not feel it is necessary.

(Management and Referral Guidelines for Coaching Staff cont'd.)

5. Coaches should report all head injuries to the GPS Certified Athletic Trainer (AT), and/or physician as soon as possible, for medical assessment and management, and for coordination of home instructions and follow-up care.
 - a. The AT can be reached at: Cell:.
 - b. Team Physician can be reached at Sports Orthopedic Specialist, Dr. J. Todd Davis, MD 480-222-5601
6. Coaches should seek assistance from the host site AT if at an away contest.
7. If the GPS AT is unavailable, or the athlete is injured at an away event w/ out access to an AT, the coach is responsible for notifying the athlete's parents of the injury.
 - a. Contact the parents to inform them of the injury and make arrangements for them to pick the athlete up at school.
 - b. Contact the AT at the above number so that follow-up can be initiated.
 - c. Remind the athlete to report directly to the school nurse before school starts and see the AT after school before sport session on the day he or she returns to school after the injury.
8. 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.
 - 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.
 - d. Athletes with suspected head injuries should not be permitted to drive home.

III. Procedures for the Certified Athletic Trainer (AT)

- A. The AT will assess the injury.
 - 1. Immediate referral to the team physician (Sports & Orthopedic Specialist Dr. J. Todd Davis, MD 480-222-5601) or the athlete's primary care physician or to the hospital will be made when medically appropriate (see section II).
 - 2. Without immediate referral action taken, the Athletic Trainer will notify the athlete's parents and give written and verbal home and follow-up care instructions.
- B. The AT will notify the school nurse of the injury, prior to the next school day, so that the school RN can initiate appropriate follow-up in school immediately upon the athlete's return to school.
 - 1. The AT will continue to provide coordinated care with the school RN, for the duration of the injury, if needed.
 - 2. The AT will communicate with the athlete's parents to contact the guidance counselor regarding the athlete's neurocognitive and recovery status, if needed.
- C. The AT or team physician have the option to utilize neuropsychological testing for post concussion assessment.
 - 1. If neuropsychological testing is used, repeat post-concussion tests will be given at appropriate intervals, dependent upon clinical presentation.
 - 2. Team Physician or AT will review neuropsychological scores and consultation.
 - 3. The AT will monitor the athlete during the recovery time. (Athlete attendance is required for this)
 - 4. The AT and treating physician are responsible for monitoring recovery & coordinating the appropriate return to play activity progression.
 - 5. The AT will maintain appropriate documentation regarding assessment and management of the injury.

IV. FOLLOW-UP CARE OF THE ATHLETE DURING THE SCHOOL DAY

A. Responsibilities of the school nurse after notification of student's concussion

1. The athlete will be instructed to report to the school nurse upon his or her return to school. At that point, the school nurse will:
 - a. Re-evaluate the athlete.
 - b. Then the nurse will provide a treatment protocol that is needed for school day.
2. Notify the student's teachers that the athlete has sustained a concussion.
3. If the school RN receives notification of a student-athlete who has sustained a concussion from someone other than the AT (athlete's parent, athlete, physician note), the AT should be notified as soon as possible, for further follow-up.

B. Responsibilities of the student's guidance counselor

1. Monitor the student closely and recommend appropriate academic accommodations for students who are exhibiting symptoms of post-concussion syndrome.

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, will not be permitted to return to play on the day of the injury. Any athlete who denies symptoms but has abnormal sideline cognitive testing will 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 physical exertion (including mental exertion in school) AND:
 - b. Within neuropsychological test reliable change methodology from baseline to post-concussion testing AND (If neuropsychological testing is used and baseline is available):
 - c. If student-athlete has been evaluated by a physician or AT has referred the athlete to a physician, they must have written clearance. (It is recommended an athlete be cleared for progression to activity by a physician knowledgeable in sport related concussions).
 - d. Team Physician for GPS High School has final decision on all return to play
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 Zurich and NATA Statements), under the supervision of the AT.
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. The athlete should see the AT daily for re-assessment and instructions until athlete has progressed to unrestricted activity.

VI. GPS High School Compliance Signatures

Approved by _____ Date _____
GPS High School Medical Director

Approved by _____ Date _____
GPS High School Principal

Approved by _____ Date _____
GPS High School Athletic Director

Approved by _____ Date _____
GPS High School Head Athletic Trainer

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.