

## Management of Sports-Related Concussions

### Model Local Education Agency Concussion and Head Injury Policy

Medical management of sports-related concussion continues to evolve. Recently, there has been a significant amount of new research regarding sports-related concussions in high school athletes. Model Local Education Agency (hereafter “LEA”) has established this protocol to provide education about concussion for coaches, school personnel, parents, and students. LEAs include local boards of education, local charter boards, as well as miscellaneous special programs. This protocol outlines procedures for staff to follow in managing concussions, and outlines school policy as it pertains to return to play issues following a concussion.

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

County or State Health Department employees and Physical Education specialists shall review this protocol annually. Any changes or modifications will be reviewed and given to athletic department staff, including coaches and other appropriate school personnel in writing.

All appropriate staff shall attend a yearly in-service meeting in which procedures for managing sporting event-related concussions are discussed.

Local education agencies should note that the Utah State Board of Education passed R277-614 on August 6, 2011. The Rule directs LEAs to develop a policy using this, the USOE/Risk Management’s model policy, to provide training to appropriate personnel, to provide notice to parents of the LEA’s policy, to post a copy of the LEA’s policy, and to use model parent acknowledgement and permission forms.

### Recognition of Concussion

What is a concussion? A concussion is type of traumatic brain injury that interferes with normal function of the brain. It occurs when the brain is rocked back and forth or twisted inside the skull as a result of a blow to the head or body. What may appear to be only a mild jolt or blow to the head or body can result in a concussion. A concussion can occur even if a player or student in an activity is not knocked out or loses consciousness. (NFHS “Suggested Guidelines for Management of Concussion in Sports.”)

Common signs and symptoms of sports-related concussion

**Signs** (observed by others):

- Student appears dazed or stunned
- Confusion
- 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)

**Symptoms** (reported by student):

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

These signs and symptoms following a witnessed or suspected blow to the head or body are indicative of probable concussion. Any student who exhibits signs, symptoms, or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the contest, game, or practice and shall not return to play until cleared by an appropriate health care professional.

**Management and Referral Guidelines for All Staff**

1. The following situations indicate a medical emergency and require activation of the Emergency Medical System:
  - ❖ Any student with a witnessed loss of consciousness (LOC) of any duration should be spine boarded and transported immediately to nearest emergency department via emergency vehicle.
  - ❖ Any student who has symptoms of a concussion, and who is not stable (i.e., condition is worsening), is to be transported immediately to the nearest emergency department via emergency vehicle.
  - ❖ A student who exhibits any of the following symptoms should be transported immediately to the nearest emergency department, via emergency vehicle.
    - Deterioration of neurological function
    - Decreasing level of consciousness
    - Decrease or irregularity in respirations
    - Any signs or symptoms of associated injuries, spine or skull fracture, or bleeding
    - Mental status changes: lethargy, difficulty maintaining arousal, confusion or agitation
    - Seizure activity
2. A student who is symptomatic but stable, may be transported by his or her parents. The parents should be advised to contact the student’s primary care provider, or seek care at the nearest emergency department, on the day of the injury.

**Guidelines and Procedures for Coaches and Teachers Supervising Contests and Games:**

**RECOGNIZE, REMOVE, REFER**

*Recognize concussion*

1. All educators and agents of the LEA should become familiar with the signs and symptoms of concussion that are described above.
2. Educators and agents of LEAs shall have appropriate training about recognizing and responding to traumatic head injuries, consistent with the employees' responsibilities for supervising students and athletes.

*Remove from activity*

Any student who exhibits signs, symptoms, or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the sporting event and shall not return to play until cleared by an appropriate health care professional.

**When in doubt, sit 'em out**

*Refer the athlete/student for medical evaluation*

1. The agent of the LEA is responsible for notifying the student's parent(s) of the injury.
  - a. Contact the parent(s) to inform a parent of the injury. Depending on the injury, either an emergency vehicle will transport or parent(s) will pick the student up at the event for transport. (see Section II).
  - b. A medical evaluation is required before returning to play.
2. In the event that a student's parent(s) cannot be reached, and the student is able to be sent home (rather than directly to MD):
  - The LEA's agent should insure that the student will be with a responsible individual, who is capable of monitoring the student and understanding the home care instructions, before allowing the student to go home.
  - The LEA agent should continue efforts to reach a parent.
  - If there is any question about the status of the student, or if the student cannot be monitored appropriately, the student should be referred to an Emergency Department for evaluation. An LEA's agent should accompany the student and remain with the student until a parent arrives.
  - The LEA's agent shall provide for supervision of other students for whom he or she is responsible when accompanying the injured student.

**Students with suspected head injuries should not be permitted to drive home.**

3. LEA agents should seek assistance from the host site certified athletic trainer (ATC) or team physician, if available, at an away contest if the injury occurs at a formal athletic contest.

**Return to Play (RTP) Procedures After Concussion**

1. Return to activity and play is a medical decision. The student 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 the student's primary care provider or concussion specialist (student must be cleared for progression to activity by a physician other than an Emergency Room physician, if diagnosed with a concussion).
2. Once the above criteria are met, the student will be progressed back to full activity following the step-wise process detailed below. (This progression must be closely supervised by an LEA agent. If your school does not have an athletic trainer, then the coach must have a very specific plan to follow as directed by the athlete's physician).
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 student, and sport/activity in which the student participates. An athlete/student 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 may be progressed more slowly.

4. Stepwise progression as described below:

**Step 1.** Complete cognitive rest. This may include staying home from school or limiting school hours (and studying) for several days. Activities requiring concentration and attention may worsen symptoms and delay recovery.

**Step 2.** Return to school full-time.

**Step 3.** Light exercise. This step cannot begin until the student is no longer having concussion symptoms and is cleared by a physician for further activity. At this point the athlete may begin walking or riding an exercise bike. No weight lifting.

**Step 4.** Running in the gym or on the field. No helmet or other equipment.

**Step 5.** Non-contact training drills in full equipment. Weight training can begin.

**Step 6.** Full contact practice or training.

**Step 7.** Play in game. Must be cleared by physician before returning to play.

- The student should spend 1 to 2 days at each step before advancing to the next. If post concussion symptoms occur at any step, student must stop the activity and the treating physician must be contacted. Depending upon the specific type and severity of the symptoms, the student may be told to rest for 24 hours and then resume activity at a level one step below where he or she was at when the symptoms occurred. This resumption of activity could be considerably simplified for a student injured during recess compared to a student injured at a game or formal practice.

## Potential Problem Areas

While current Utah law designates that a student may be returned to play by “an appropriate health care provider” it is the prerogative of each LEA to designate the credentials of the providers from whom they will accept clearance. This is a very important decision and should be made after careful consideration by the athletic director, principal, superintendent, teacher (elementary), and parent(s). The school district’s liability carrier may also be consulted.

For students injured during formal competitions, serious consideration must also be given as to what the school will do in the case where an athlete is clearly still having concussion symptoms, yet given return to play clearance by a health care provider. A formal policy should be developed which designates a specific individual (preferably an expert in the field of concussion management- typically a physician or neuropsychologist) who shall evaluate the athlete and make the final decision regarding return to play.