

**Celina ISD Athletic Department  
Guidelines for Concussion Management**

Approved by Concussion Management Team

Team Physician \_\_\_\_\_ Date \_\_\_\_\_

Athletic Trainer \_\_\_\_\_ Date \_\_\_\_\_

# **Celina ISD Athletic Department**

## **Guidelines for Concussion Management**

### **Introduction**

The Centers for Disease Control (CDC) estimates that there are approximately 300,000 cases of mild traumatic brain injury (MTBI) or concussions annually in the United States as the result of participation in sports. The Sports Concussion Institute estimates that 10 percent of athletes in contact sports suffer a concussion during a season. A 2006 report estimated that there were 92,000 cases of concussions in American high school sports annually, and that these rates seem to be increasing. Also of concern is the risk of repeated concussions and second impact syndrome to our young athletes. These two problems can have long lasting, and even terminal effects, on the individual. In order to have a standard method of managing concussions to CISD athletes and to conform to SB835, the following guidelines are intended to serve as a written protocol for concussion management.

### **Definitions**

**Concussion or Mild Traumatic Brain Injury (MTBI)** - A concussion or MTBI is the common result of a blow to the head or body, which causes the brain to move rapidly within the skull. This injury causes brain function to change which results in an altered mental state (either temporary or prolonged). Physiologic and/or anatomic disruptions of connections between some nerve cells in the brain occur. Concussions can have serious and long-term health effects, even from a mild bump on the head. Symptoms include, but are not limited to, brief loss of consciousness, headache, amnesia, nausea, dizziness, confusion, blurred vision, ringing in the ears, loss of balance, moodiness, poor concentration or mentally slow, lethargy, photosensitivity, sensitivity to noise, and a change in sleeping patterns. These symptoms may be temporary or long lasting.

**Second Impact Syndrome** - Second impact syndrome (SIS) refers to catastrophic events, which may occur when a second concussion occurs while the athlete is still symptomatic and healing from a previous concussion. The second injury may occur within days or weeks following the first injury. Loss of consciousness is not required. The second impact is more likely to cause brain swelling with other widespread damage to the brain. This can be fatal. Most often SIS occurs when an athlete returns to activity without being symptom free from the previous concussion.

**Concussion Management Team** - As a result of HB2038 - "Natasha's Law", the Concussion Management Team will oversee all concussion or MTBI cases. The team consists of the Licensed Athletic Trainer employed by CISD and the Volunteer Team Doctor.

## Prevention Strategies

1. All headgear must be NOCSAE certified.
2. Make sure the headgear fits the individual.
3. For all sports that require headgear, a coach or appropriate designate should check headgear before use to make sure air bladders work and are appropriately filled. Padding should be checked to make sure they are in proper working condition.
4. Make sure helmets are secured properly at all times.
5. Mouth guards should fit and be used at all times.
6. Neuro-psychology testing on students that participate in contact sports prior to season (high school only).

## Evaluation for Concussion/MTBI

1. At time of injury administer one of these assessment tests:
  - a. Sports Concussion Assessment Tool 2 (SCAT 2) – Appendix A
  - b. Graded Symptom Checklist (GSC) – Appendix B
  - c. On-field Cognitive Testing – Appendix C
2. Observe athlete 15 to 20 minutes and re-evaluate.
3. **Athlete does not return to a game or practice if he/she has any form of amnesia or loss of consciousness.**
4. Doctor Referral – Appendix D
5. Home Instructions – Appendix E
6. Return to Play Guidelines for Parents – Appendix F
7. ImPact retest 48 hours after injury (high school only).
8. **Note - If in doubt, athlete is referred to doctor and does not return to play.**

## Concussion Management

1. School modifications
  - a. Notify school nurse and all classroom teachers of the student that he/she has MTBI
  - b. Notify teachers of post concussion symptoms
  - c. Student may need special accommodations such as limited computer work, reading activities, testing, assistance to class, etc. until symptoms subside
2. Student must be symptom free for one week before begin return to play protocol

## Return to Play Guidelines

1. Activity progressions
  - a. No activity for one week
  - b. Athlete must be symptom free

- c. Light aerobic exercise with no resistance training
  - d. Sport specific activity
  - e. Non-contact training drills with resistance training
  - f. Full contact training drills (must have physician clearance)
  - g. **Note – Athlete progression continues as long as athlete is asymptomatic at current level. If the athlete experiences any post concussion symptoms, you wait 24 hours and start the progressions again at the beginning.**
2. Component scores of ImPact test normal (High School Only)
  3. Physician clearance
  4. Athletic Trainer clearance

## References

1. McCrory, Paul, et al. Summary & Agreement Statement of the 2<sup>nd</sup> International Conference on Concussion in Sport, Prague 2004; Clinical Journal of Sports Medicine, March 2005
2. Guskiewicz, Kevin M, et al. National Athletic Trainers Association Position Statement: Management of Sport-Related Concussion; Journal of Athletic Training, Sept. 2004
3. [www.ImPacttest.com](http://www.ImPacttest.com)
4. [www.healthsystem.virginia.edu/internet/neurogram](http://www.healthsystem.virginia.edu/internet/neurogram)
5. [www.cdc.org](http://www.cdc.org)
6. [www.brainline.org](http://www.brainline.org)
7. [www.momsteam.com./healthsafety/concussion](http://www.momsteam.com./healthsafety/concussion)
8. Presbyterian Sports Network, Sports Concussion Management Protocol

**Appendix A**  
**SCAT 2**

**Appendix B**  
**Graded Symptom Checklist**

## **Appendix C**

### **On-field Cognitive Testing**

#### **Orientation**

**Ask the athlete the following questions.**

What stadium is this? What month is it?

What city is this? What day is it?

Who is the opposing team?

#### **Anterograde amnesia**

**Ask the athlete to repeat the following words.**

Girl, dog, green

#### **Retrograde amnesia**

**Ask the athlete the following questions.**

What happened in the prior quarter/period?

What do you remember just prior to the hit?

What was the score of the game prior to the hit?

Do you remember the hit?

#### **Concentration**

**Ask the athlete to do the following.**

Repeat the days of the week backward (starting with today).

Repeat these numbers backward:

63 (36 is correct) 419 (914 is correct)

#### **Word list memory**

**Ask the athlete to repeat the three words from earlier.**

**(Girl, dog, green)**

**Any failure should be considered abnormal.**

**Consult a physician following a suspected concussion.**

## **Appendix D Doctor Referral**

### **Day of Injury Referral**

1. Loss of consciousness on the field
2. Amnesia
3. Increase in blood pressure
4. Cranial nerve deficits
5. Vomiting
6. Motor deficits subsequent to initial on-field exam
7. Sensory deficits subsequent to initial on-field exam
8. Balance deficits subsequent to initial on-field exam
9. Cranial nerve deficits subsequent to initial on-field exam
10. Post-concussion symptoms that worsen
11. Additional post-concussion symptoms as compared with those on the field
12. Athlete is symptomatic at the end of the game
13. Deterioration of neurologic function\*
14. Decreasing level of consciousness\*
15. Decrease or irregularity in respiration\*
16. Decrease or irregularity in pulse\*
17. Unequal, dilated or unreactive pupils\*
18. Any signs or symptoms of associated injuries, spine or skull fracture or bleeding\*
19. Mental status changes: lethargy, difficulty maintaining arousal, confusion, or agitation\*
20. Seizure activity\*

**Note: \* indicates that the athlete needs to be transported immediately to the nearest emergency department.**

### **Delayed Referral (after the day of the injury)**

1. Any of the findings in the day of injury referral category
2. Post-concussion symptoms worsen or do not improve over time
3. Increase in the number of post-concussion symptoms reported
4. Post-concussion symptoms begin to interfere with the athlete's daily activities (ie. sleep, cognition, depression, aggression, etc.)



**Appendix E**  
**Home Instructions**

\_\_\_\_\_ has sustained a concussion during \_\_\_\_\_ today.  
To make sure he/she recovers please follow the following important recommendations:

1. Please review the items outlined on the **Physician Referral Checklist**. If any of these problems develop, please call 911 or your family physician.
2. Things that are OK to do:
  - a. Take acetaminophen (Tylenol)
  - b. Use ice packs on head or neck as needed for comfort
  - c. Eat a light diet
  - d. Go to sleep (rest is very important)
  - e. No strenuous activity or sports
  - f. Return to school
3. Things that should not be allowed:
  - a. Eat spicy foods
  - b. Watch TV
  - c. Listen to ipod or talk on telephone
  - d. Read
  - e. Use a computer
  - f. Bright lights
  - g. Loud noise
  - h. Drink alcohol
4. Things there is no need to do:
  - a. Check eyes with a flashlight
  - b. Wake up every hour
  - c. Test reflexes
5. Have student report to athletic training room at 8 AM tomorrow morning for a follow-up exam

Further recommendations:

Instructions provided to: \_\_\_\_\_

Signature: \_\_\_\_\_

Instructions provided by: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Contact Number: \_\_\_\_\_

## **Appendix F**

### **Return to Play Guidelines for Parents**

Celina ISD has developed a protocol for managing concussions. This policy includes a multidiscipline approach involving neuropsychological testing, athletic trainer clearance, physician referral and clearance, and successful completion of activity progressions related to their sport. The following is an outline of this procedure. Your son/daughter must pass all of these tests in order to return to sport activity after having a concussion.

1. All athletes who sustain head injuries are required to be evaluated by their primary care physician. They must have a normal physical and neurological exam prior to being permitted to progress to activity. This includes athletes who were initially referred to an emergency department.
2. The student will be monitored daily at school by the athletic trainer and school nurse. His/her teachers will be notified of their injury and what to expect. Accommodations may need to be given according to physician recommendations and observations.
3. The student must be asymptomatic at rest and exertion.
4. Once cleared to begin activity, the student will start a progressive step-by-step procedure outlined in the Prague statement. These progressions are:
  - a. No activity for one week after injury & athlete is symptom free
  - b. Physician clearance to begin activity
  - c. Light aerobic exercise with no resistance training
  - d. Sport specific activity
  - e. Non-contact training drills with resistance training
  - f. Full contact training drills
  - g. **Note - Athlete progression continues as long as athlete is asymptomatic at current activity level. If the athlete experiences any post concussion symptoms, he/she will wait 24 hours and start the progressions again at the beginning.**
5. Once the student has completed steps 1 through 5, he/she may return to their sport activity with no restrictions.