

Mesquite ISD Protocol for Sports Concussion Management With Neurocognitive Testing (High School)

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 MISD athletes, the following guidelines are intended to serve as a written protocol for concussion management.

What is a Concussion?

Concussion - A concussion is a type of traumatic brain injury (TBI). Concussions are 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.

Prevention Strategies

1. Insist that safety comes first.
2. Teach and practice safe playing techniques.
3. Teach athletes the dangers of playing with a concussion.
4. Encourage athletes to follow the rules of play and to practice good sportsmanship at all times.
5. Make sure athletes wear the right protective equipment for their activity (such as helmets, padding, shin guards, and eye and mouth guards).
6. All headgear must be NOCSAE certified.
7. Make sure the headgear fits the individual, and are secured properly to the individual.
8. 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.
9. Neuro-psychology testing (ImPact) on students that participate in sports prior to the season.

HB 2038 – Natasha’s Law

HB 2038 was signed into law by Governor Rick Perry on June 17, 2011. This law establishes means of prevention, treatment, and oversight of concussions affecting student athletes within the state of Texas. The law requires school districts to have a **Concussion Oversight Team (COT)**. The purpose of the COT is to establish the concussion protocol to be followed by the school district. The COT must be chaired by a licensed physician. If a school district employs an athletic trainer, the athletic trainer must be included on the team. The law also specifies other licensed health care professionals that can be included on the team. All health care providers on the COT must have training in concussion management.

MISD COT

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Why Concussions are Dangerous

A concussion is an injury to the brain. It is caused by a bump, blow, or jolt to either the head or the body that causes the brain to move rapidly within the skull. The resulting injury to the brain changes how the brain functions in a normal manner. The signs and symptoms of a concussion can show up immediately after the injury or may not appear for hours or days after the injury. Concussions can have serious long-term health effects, and even a seemingly mild injury can be serious. A major concern with any concussion is returning to play too soon. Having a second concussion before healing can take place from the initial or previous concussion can lead to serious and potentially fatal health conditions.

What are the symptoms of a concussion?

Signs and symptoms of a concussion are typically noticed right after the injury, but some might not be recognized until days after the injury. Common symptoms include: headache, dizziness, amnesia, fatigue, confusion, mood changes, depression, poor vision, sensitivity to light or noise, lethargy, poor attention or concentration, sleep disturbances, and aggression. The individual may or may not have lost consciousness.

What should be done if a concussion is suspected?

1. Immediately remove student from practice or game
2. Seek medical attention right away
3. Do not allow the student to return to play until proper medical clearance and return to play guidelines have been followed. The permission for return to play will come from the appropriate health care professional or professionals.

If you have any questions concerning concussions or the return to play policy, you may contact the athletic administrator at your school.

Evaluation for Concussion

1. At time of injury administer one of these assessment tests:
 - a. Sports Concussion Assessment Tool (SCAT) – Appendix A
 - b. Graded Symptom Checklist (GSC) – Appendix B
 - c. Sideline Functional & Visual Assessments - Appendix A or B
 - d. On-field Cognitive Testing – Appendix A or B
2. **Athlete does not return to a game or practice if he/she has any symptoms that would indicate the possibility of suffering a concussion.**
3. Doctor Referral
4. Home Instructions
5. Return to Play Guidelines for Parents
6. Parent Informed Consent and Athlete's Participation Form
7. Neuro-psychology testing 48 hours after injury, and as needed in the post injury evaluations.
8. **Note - If in doubt, athlete is referred to doctor and does not return to play.**

Concussion Management

1. The high school athletic trainer will administer the program
2. School modifications
 - a. Notify school nurse and all classroom teachers of the student that he/she has a concussion.
 - 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.
 - d. Student may only be able to attend school for half days or may need daily rest periods until symptoms subside.
3. Student must be symptom free for one week before begin return to play protocol.

Return to Play Guidelines

1. Early Activity prior to RTP progressions
 - a. Controlled activity can begin 72 hours after injury with minor symptoms
 - b. Refer to Appendix D and E (Controlled Exercise in Concussion Management and Buffalo Concussion Treadmill Test)
2. Activity progressions for RTP
 - a. No sport related 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.**
3. Normal neurocognitive exam scores

4. Physician clearance
5. Athletic Trainer clearance

Please refer to Appendices A & B (separate documents) for symptom assessment.

Mesquite ISD Preseason Parental Information and Consent Form for Concussions

What should the athlete know about playing with a concussion?

Teach athletes it's not smart to play with a concussion. Rest is the key after a concussion. Sometimes athletes, parents, and other school or league officials wrongly believe that it shows strength and courage to play injured. Discourage others from pressuring injured athletes to play. Don't let your athlete convince you that they're "just fine."

What are the risks of returning to activity too soon after sustaining a concussion?

Prevent long-term problems. If an athlete has a concussion, their brain needs time to heal. Don't let them return to play the day of the injury and until a health care professional, experienced in evaluating for concussion, says they are symptom-free and it's OK to return to play. A repeat concussion that occurs before the brain recovers from the first—usually within a short time period (hours, days, weeks)—can slow recovery or increase the chances for long-term problems.

What can happen if my child keeps on playing with a concussion?

Athletes with the signs and symptoms of concussion should be removed from play immediately. Continuing to play with the signs and symptoms of a concussion leaves the young athlete especially vulnerable to greater injury. There is an increased risk of significant damage from a concussion for a period of time after that concussion occurs, particularly if the athlete suffers another concussion before completely recovering from the first one. This can lead to prolonged recovery, or even to severe brain swelling (second impact syndrome) with devastating and even fatal consequences. It is well known that adolescent or teenage athletes will often under report symptoms of injuries. And concussions are no different. As a result, education of administrators, coaches, parents and students is the key for student-athlete's safety.

Liability Provisions

The student and the student's parent or guardian or another person with legal authority to make medical decisions for the student understands this policy does not:

1. waive any immunity from liability of a school district or open-enrollment charter school or of district of charter school officers or employees;
2. create any liability for a cause of action against a school district or open-enrollment charter school or against district or charter school officers or employees;
3. waive any immunity from liability under Section 74.151, Civil Practice and Remedies Code;
4. create any liability for a member of a concussion oversight team arising from the injury or death of a student participating in an interscholastic athletics practice of competition, based only on service on the concussion oversight team.

Parental Consent

By signing this form, I understand the risks and dangers related with returning to play too soon after a concussion. Furthermore, in the event that my son/daughter is diagnosed with a concussion, I give my consent for my son/daughter to participate in and comply with the Mesquite ISD return to play protocol. The undersigned, being a parent, guardian, or another person with legal authority, grants this permission.

Athlete's Name (print) _____

Parent's or Guardian's Name (print) _____

Parent's or Guardian's Signature _____

Date: _____

MISD Return to Play Protocol for Parents

General Information for Parents

Teach it's not smart to play with a concussion. Rest is the key after a concussion. Sometimes athletes, parents, and other school or league officials wrongly believe that it shows strength and courage to play injured. Discourage others from pressuring injured athletes to play. Don't let your athlete convince you that they're "just fine."

Prevent long-term problems. If an athlete has a concussion, their brain needs time to heal. Don't let them return to play the day of the injury and until a health care professional, experienced in evaluating for concussion, says they are symptom-free and it's OK to return to play. A repeat concussion that occurs before the brain recovers from the first—usually within a short time period (hours, days, weeks)—can slow recovery or increase the chances for long-term problems.

Mesquite ISD has developed a protocol for managing concussions. This policy includes a multidiscipline approach involving 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/or 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 will be given a neurocognitive test 48 hours after the concussion. All athletes in contact sports will have this assessment prior to their season to form a baseline. Mesquite ISD utilizes the ImPact software program for this assessment. **The athlete's post-injury testing data must be within normal limits before he/she is release to activity.**
4. The student must be asymptomatic at rest and exertion.
5. Once cleared to begin activity, the student will start a progressive step-by-step procedure outlined in the following steps. The progressions will advance at the rate of one step per day. The 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.**

6. **Upon completion of the return to play protocol, the physician of record must provide a written statement that in the physician's professional judgment it is safe for the athlete to return to play.**
7. Once the student has completed steps 1 through 6, he/she may return to their sport activity with no restrictions.

The athlete named below has completed the required return to play protocol for a concussion. By signing this form, I understand the dangers related with returning to play too soon after a concussion. Furthermore, I certify that my son/daughter has successfully completed the MISD return to play protocol and I give my permission for him/her to return to sport activity. The undersigned, being a parent, guardian, or another person with legal authority, grants this permission.

Athlete's Name _____

Athlete's Signature _____

Parent of Guardian's Name _____

Parent or Guardian's Signature _____

Date _____

MISD Return to Play Protocol

Information for Treating Physician

Mesquite ISD has developed a protocol for managing concussions. This policy includes a multidiscipline approach involving 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. The injured athlete must complete and successfully 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/or 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 will be given a neurocognitive test 48 hours after the concussion. All athletes in contact sports will have this assessment prior to their season to form a baseline. Mesquite ISD utilizes the ImPact software program for this assessment. **The athlete's post-injury testing data must be within normal limits before he/she is released to begin activity.**
4. The student must be asymptomatic at rest and exertion.
5. Once cleared to begin activity, the student will start a progressive step-by-step procedure outlined in the Prague statement. The progressions will advance at the rate of one step per day. The 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.**
6. **Upon completion of the return to play protocol, the physician of record must provide a written statement that in the physician's professional judgment it is safe for the athlete to return to play.**
7. Once the student has completed steps 1 through 6, he/she may return to their sport activity with no restrictions.

Mesquite ISD
Authorization for the Release of Medical Information

The Family Educational Right to Privacy Act Of 1974 (FERPA) is a federal law that governs the release of a student's educational records, including personal identifiable information (name, address, social security number, etc.) from those records. Medical information is considered a part of a student athlete's educational record. Also, the Health Insurance Portability and Accounting Act of 1996 (HIPAA) allows the disclosure of information from treating physicians.

This authorization permits the athletic trainers and team physicians of the Mesquite ISD to obtain and disclose information concerning my medical status, medical condition, injuries, prognosis, diagnosis, and related personal identifiable health information to the authorized parties listed below. This information includes injuries or illnesses relevant to past, present, or future participation in athletics.

The purpose of a disclosure is to inform the authorized parties of the nature, diagnosis, prognosis or treatment concerning my medical condition and any injuries or illnesses. I understand once the information is disclosed it is subject to re-disclosure and is no longer protected.

I understand that the Mesquite ISD will not receive compensation for its disclosure of the information. I understand that I may refuse to sign this authorization and that my refusal to sign will not affect my ability to obtain treatment. I may inspect or copy any information disclosed under this authorization.

I understand that I may revoke this authorization at any time by providing written notification to the head athletic trainer at the respective high school. I understand revocation will not have any effect on actions Mesquite ISD has taken in reliance on this authorization prior to receiving the revocation. This authorization expires six years from the date it is signed.

Student ID# _____

Printed Name of Student _____

Student Signature _____

Printed Name of Parent _____

Parent Signature _____

Symptoms for Concussion 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 neurological 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.)

Home Instructions for Concussions

_____ 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 clinic or athletic training room at _____ tomorrow for a follow-up exam

Further recommendations:

Instructions provided to: _____

Signature: _____

Instructions provided by: _____

Signature: _____

Date: _____ Time: _____

Contact Number: _____

Insert Date

Dear Teacher,

_____, is returning to school after having sustained a concussion. A concussion is a complex injury to the brain caused by movement of the brain within the skull. Please observe this student during class. He/she may still be suffering from post concussion syndrome and may not be able to participate at their normal level. Some things you may notice are headaches, dizziness, nausea, lethargy, moodiness, blurred vision, poor concentration, mentally slow, depression, or aggression. These symptoms may be temporary or long lasting.

Because these symptoms may linger for an unspecified period of time, you may need to modify school work until he/she is symptom free. Also, if you see anything unusual, please notify me as soon as possible, or contact the school nurse. I will keep you informed of any medical updates that are pertinent to the classroom. The school nurse is aware of the injury, and you may consult with her at any time. Also his/her counselors and the appropriate administrators are aware of the injury.

You are an important member of the team that is treating _____ for their head injury. The physician and I only get a small snapshot of his daily activity. Therefore, any information that you can pass along to us is both appreciated and necessary to the successful recovery from the concussion.

If you have any further questions, please contact me.

Name
Athletic Trainer
Telephone Number
[Email](#)

MISD RTP Documentation Form

Athlete's Name _____

Athletic Trainer's Name _____

Concussion Return-to-Play Check List

This form is to be initialed and dated by both the athlete and the school district personnel (can be a coach) tasked with implementing the Return-to-Play (RTP) Protocol under HB 2038. On the day following the completion of each level, the athlete is to be assessed by the superintendent's designee responsible for compliance for the athlete's RTP (Athletic Trainer). Athlete and designee will then initial and date that level to indicate that it was completed without any return in symptoms.

The athletic trainer may begin light physical activity on a treadmill, exercise bike, or walking 72 hours post-concussion if symptoms are minor.

____ Athlete's Initials ____ Athletic Trainer's Initials Date: _____

The athlete denies any symptoms concerning a concussion/MTBI. No symptoms are noted by the Healthcare professional /designee. The athlete is ready to proceed with the RTP.

____ Athlete's Initials ____ Athletic Trainer's Initials Date: _____

Level 1 completed (light aerobic activity): The athlete denies any symptoms concerning a concussion/MTBI. No symptoms are noted by the health care professional / designee.

____ Athlete's Initials ____ Athletic Trainer's Initials Date: _____

Level 2 completed (sport specific activities): The athlete denies any symptoms concerning a concussion/MTBI. No symptoms are noted by the health care professional / designee.

____ Athlete's Initials ____ Athletic Trainer's Initials Date: _____

Level 3 completed (non-contact training drills & resistance training): The athlete denies any symptoms concerning a concussion/MTBI. No symptoms are noted by the health care professional / designee.

____ Athlete's Initials ____ Athletic Trainer's Initials Date: _____

Level 4 completed (full contact training drills): The athlete denies any symptoms concerning a concussion/MTBI. No symptoms are noted by the health care professional / designee.

____ Athlete's Initials ____ Athletic Trainer's Initials Date: _____

Signature of the Athletic Trainer indicating the Return to Play Progression has been completed:

References

1. McCrory, Paul, et al. Summary & Agreement Statement of the 2nd 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
4. www.healthsystem.virginia.edu/internet/neurogram
5. www.cdc.org
6. www.brainline.org
7. www.momsteam.com/healthsafety/concussion
8. Presbyterian Sports Network, Sports Concussion Management Protocol