

Presbyterian School
of Houston
Athletic Department
Concussion Management Protocol



OFFICIAL HEALTH CARE PROVIDER

Presbyterian School of Houston Athletic Department Concussion Management Protocol

Introduction and Overview

Concussion or Mild Traumatic Brain Injury (MTBI) -

A concussion or MTBI is type of traumatic brain injury that interferes with normal function of the brain. A concussion is caused by a bump, blow, or jolt to the head or body. Basically, any force that is transmitted to the head causes the brain to literally bounce around or twist within the skull, potentially resulting in a concussion. What may appear to be only a mild jolt or blow to the head or body can result in a concussion. You've probably heard the terms "ding" and "bell-ringer." These terms were once used to refer to minor head injuries and thought to be a normal part of sports. There is no such thing as a minor brain injury. Any suspected concussion must be taken seriously.

What exactly happens to the brain during a concussion is not entirely understood. It appears to be a very complex injury affecting both the structure and function of the brain. The sudden movement of the brain causes stretching and tearing of brain cells, damaging the cells and creating chemical and blood flow changes in the brain. Once this injury occurs, the brain is vulnerable to further injury and very sensitive to any increased stress until it fully recovers.

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.

A concussion, however, is primarily an injury that interferes with how the brain works. While there is damage to brain cells, the damage is at a microscopic level and cannot be seen on MRI or CT scans. Therefore, the brain looks normal on these tests, even though it has been seriously injured.

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. Symptoms include, but are not limited to, 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.

Symptoms can also include a loss of consciousness but many do not. These symptoms may be temporary or long lasting.

Approximately 10 percent of all athletes involved in contact sports suffer a Mild Traumatic Brain Injury (concussion) each season; some estimates are as high as 19 percent. Because many mild concussions can go undiagnosed and unreported, it is difficult to estimate precisely the rate of concussion in any sport. Symptoms are not always definite, and knowing when it is safe for an athlete to return to play is not always clear.

Post-concussion symptoms can be quite subtle and may go unnoticed by the athlete, team medical staff, or coaches. Many coaches and other team personnel may have limited training in recognizing signs of concussions and therefore may not accurately diagnose the injury when it has occurred. Players may be reluctant to report concussive symptoms for fear that they will be removed from the game, and this may jeopardize their status on the team, or their athletic careers.

Presbyterian School of Houston is in compliance with HB 2038, 82(R). A student may not participate in an interscholastic athletic activity (practice or competition) for a school year until both the student and the student's parent or guardian or another person with legal authority to make medical decisions for the student have signed a form for that school year that acknowledges receiving and reading written information that explains concussion prevention, symptoms, treatment, and oversight and that includes guidelines for safely resuming participation in an athletic activity following a concussion. The form must be approved by the University Interscholastic League (***Section 6 Appendix A - UIL Concussion Acknowledgment Form***).

A student shall be removed from practice or competition immediately if one of the following persons believes the student might have sustained a concussion:

- Athlete's Coach
- Parent/Guardian
- Licensed Health Care Professional

A student that is removed from an athletic practice or competition will not be permitted to practice or compete again until the student has been evaluated and cleared to begin the districts return-to-play protocol through a written statement by a physician. The student's parent or guardian and student will have to return the physician's statement and complete a consent form (***Section 6 Appendix B – UIL Concussion Management Protocol Return to Play Form***) indicating that they have been informed and consent to the policies established under the return-to-play concussion protocol; understands the risks associated with the student's returning to play and will comply with any ongoing requirements outlined by the concussion policy; consented to the physician's disclosure of health information that was related to the concussion treatments; and understands the district or school's immunity from liability provisions.

The Presbyterian School of Houston Concussion Oversight Team consists of:

Vijay Jotwani, MD – Primary Care Sports Medicine – Houston Methodist Hospital
Kenneth Podell, Ph.D., FACPN – Neuropsychologist – Houston Methodist Hospital
Samantha Baker, MS, LAT, ATC – Outreach Athletic Trainer – Houston Methodist Hospital
Deidre Duke, LAT, ATC – Athletic Trainer – Houston Methodist Hospital

Recovery and safe return-to-play

It is crucial to allow enough healing and recovery time following a concussion to prevent further damage. Research suggests that the effects of repeated concussions are cumulative over time.

Most athletes who experience an initial concussion can recover completely as long as they do not return to contact sports too soon. Following a concussion, there is a period of change in brain function that may last anywhere from 24 hours to 10 days and in some cases longer. During this time, the brain may be vulnerable to more severe or permanent injury. If the athlete sustains a second concussion during this time period, the risk of permanent brain injury increases.

The first step in recovering from a concussion is rest. Rest is essential to help the brain heal. Students with a concussion need rest from physical and mental activities that require concentration and attention as these activities may worsen symptoms and delay recovery. Exposure to loud noises, bright lights, computers, video games, television and phones (including texting) all may worsen the symptoms of concussion. As the symptoms lessen, increased use of computers, phone, video games, etc., may be allowed.

Prevention Strategies

Helmets, headgear, and mouth guards do not prevent concussions, but are recommended to prevent skull and facial fractures as well as dental injuries.

1. Insist that safety comes first.
2. Incorporate neck/upper back strengthen into workouts.
3. Teach athletes the dangers of playing with a concussion.
4. All headgear must be NOCSAE certified.
5. Make sure the headgear fits the individual.
6. 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.
7. Make sure athletes wear the right protective equipment for their activity (such as helmets, padding and mouth guards).

Evaluation and Management for Concussion

- 1.** At time of injury administer one of these assessment tests:
 - a. Sports Concussion Assessment Tool (SCAT5) – Athletic Trainers
 - b. Concussion Recognition Tool – Coaches
- 2.** Athlete does not return to a game or practice if he/she has any signs or symptoms of Mild Traumatic Brain Injury (Concussion)
- 3.** Observe athlete for status changes every 15 to 20 minutes
- 4.** Parent/Guardian is notified of injury & athlete is referred to a physician
- 5.** Provide home instructions
- 6.** Do not allow athlete to drive
- 7.** Recommended school modifications
 - a. Athletic staff will notify school administrators/teachers of the student that he/she has a concussion
 - b. Student may need special accommodations such as limited computer work, reading activities, testing, assistance to class, etc. until symptoms subside
 - c. Student may only be able to attend school for half days or may need daily rest periods until symptoms subside with physician authorization
- 8.** Student must show no signs of post-concussion symptoms before return to play protocol begins.
- 9.** The return to play may only be done under the supervision of an athletic trainer or coach.
- 10.** The treating physician must provide a written statement to the parent and athletic trainer indicating that, in the physician's professional judgment, it is safe for the student to return to play.
- 11.** Student athlete and the parent/guardian have signed the form (Appendix B) acknowledging the completion of the return to play guidelines which includes understanding the risks associated with the student athlete's return to play.
- 12.** Athletes that have a history of multiple concussions or that have persistent symptoms or indicating cognitive difficulties following concussion will be referred for neurocognitive assessment with a concussion specialist.

Return to Play Guidelines

Athlete must show no signs of post-concussion symptoms for 1-3 consecutive days without medication before return to play protocol begins. The athlete will progress only one phase each day.

The return to play may only be done under the supervision of an athletic trainer or coach.

Stage 1 - Light aerobic exercise with no resistance training (50-60% of MHR)
10-15 minutes (e.g., walking, stationary bike, and hand bike low intensity setting)

Stage 2 - Moderate aerobic activity with resistance training (60% - 70% of MHR)
20-25 minutes (e.g., running, light weights – No squat, dead lift or bench press)

Stage 3 – Sport specific activity and non-contact training drills. Heavy exertion (70%-80% of MHR) 25-30 minutes (non-contact training or non-contact practice.

Stage 4 - Full practice including light contact activities (e.g., head balls in soccer, sleds football)

Stage 5 - Full Practice – Full Contact

Stage 6 - Return to full participation (pending physician clearance)

MHR (Maximum Heart Rate) = 220 – Athlete’s age

****If concussive symptoms occur during or after activity, the athlete should stop all activity until symptom free for 24 hours. Athlete may resume with phase in which they were previously symptom free.***

Please note if a physician note is received that requires the athlete to be in a stage longer than one day that must be followed.

INFORMATION DISCLOSURE

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 (Appendix B) permits the licensed health professionals working with (Presbyterian School of Houston) ISD to obtain and disclose information concerning medical status, medical condition, injuries, prognosis, diagnosis, and related personal identifiable health information. This information includes injuries or illnesses relevant to past, present, or future participation in athletics. I understand that I may revoke this authorization at any time by providing written notification.

IMMUNITY PROVISION

By signing the UIL Return to Play documentation form (Appendix B) I do hereby agree to indemnify and save harmless the Presbyterian School of Houston and any school representative from any claim by any person whomsoever on account of such care and treatment of said student.

Furthermore, the student/ parent/guardian understands this policy does not:

1. Waive any immunity from liability of a school district or open-enrollment charter school or of district or 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.