

Fort Worth ISD Protocol For the Management of Sports-Related Concussion

In 2011, the Texas Legislature passed HB 2038, “Natasha’s Law”, which made changes to the Texas Education Code Chapter 38, Subchapter D which sets forth requirements for school districts in the prevention, treatment, and oversight of concussions in athletics. Fort Worth ISD has established this document to provide information on recognition of a possible concussion and procedures for management, including Return to Learn and Graduated Return to Sport Strategy.

Fort Worth ISD desires to return concussed student-athletes to academics and athletics in a safe and methodical way. This protocol applies to all students who are participating in those sports and activities that are listed in the FWISD Sports Medicine Policies and Procedures Manual. In order to effectively and consistently manage these injuries, the following procedures have been developed. The goal is to ensure that the concussed student-athlete is identified, referred, and treated appropriately; including appropriate follow-up medical care as it pertains to academic accommodation and return to athletics.

In addition to recent research, three (3) primary documents were consulted in developing this protocol. Section 38 of the Texas Education Code, the “Consensus statement on concussion in sport- the 6th international conference on concussion in sport held in Amsterdam, October 2022”, and the “National Athletic Trainers’ Association Position Statement: Management of Sport-Related Concussion”.

This protocol will be reviewed on a yearly basis, by the Fort Worth ISD Concussion Oversight Team. Any changes or modifications will be reviewed and given to Athletic Department staff and appropriate school personnel in writing.

Concussion Oversight Team (C.O.T.)

This team is required by Section 38.153 of the Texas Education Code (TEC) and is responsible for establishing a Graduated Return-to-Sport strategy based on peer-reviewed scientific evidence, for a student’s return to interscholastic athletics practice or competition following the force or impact believed to have caused a concussion. The C.O.T. consists of a physician who is trained in the evaluation, treatment and oversight of concussions (Dr. Karen M. Kirk, MD) and each of the athletic trainers employed by Fort Worth ISD.

The C.O.T. has the final decision as to whether a student involved in FWISD athletics has a concussion and must comply with the protocol and procedures outlined.

Continuing Education for C.O.T. Members and Coaches

Each physician serving as a member of the C.O.T. must attend a course concerning the subject matter of concussions that has been approved for continuing education credit by the appropriate licensing authority for the profession. Each athletic trainer serving as a member of the C.O.T. must attend a course concerning the subject matter of concussions that has been approved for continuing education credit by the Texas Department of Licensing and Regulation for athletic trainers. All coaches must take a course approved by the University Interscholastic League that includes the subject matter of concussions, including evaluation, prevention, symptoms, risks, and long-term effects. Each member must complete the equivalent of 2 hours of training every 2 years. Each member must submit proof of timely completion of an approved course to the athletic department designee.

Public Concussion Information and Acknowledgment

In accordance with Texas Senate Bill 82, all student-athletes will be provided training in recognizing symptoms of catastrophic injuries, including head and neck injuries, and concussions. This training is included in the Rank One documentation that is required each school year, as well as the UIL safety training power point which will be shown by each school’s coaching staff on an annual basis. Each campus will be responsible for documenting the student-athlete’s participation in the training.

Pre-Participation Cognitive Baseline

Fort Worth ISD requires all student-athletes in grades 9-12 to complete a cognitive baseline exam using Concussion Vital Signs, a web-based service. The student must complete a valid baseline test and be cleared by their school athletic trainer before they can participate in any contact or potential contact activity. This baseline will be retaken every 2 years.

The school athletic trainer(s) or designee will oversee the administration of this cognitive baseline and the student must make every attempt to do their best to achieve accurate results. The completion date for “valid” baselines will be recorded in Rank One. Students will repeat the baseline at least once if the results are marked “invalid”. The school athletic trainer(s) will evaluate the case individually to determine if further attempts are necessary for a second “invalid”. Some students, for a variety of reasons, may never achieve a “valid” score. Further attempts should be supervised directly by the school athletic trainer(s) in a quiet, isolated environment. If it is determined that a “valid” mark may never be achieved, then the student will be marked as having completed the cognitive baseline in Rank One (date will be the last attempt to complete the baseline) and a note will be added in their file explaining why they were marked as completed with an “invalid” baseline. This test may still be useful in assessing the students’ post-concussion recovery progress.

Student-athletes starting football prior to the first day of classes must have a “valid” baseline completed before they may wear full pads and start contact. Student-athletes starting another sport (tennis, volleyball, cross country) prior to the first day of classes year must have a “valid” baseline completed before the first scrimmage. All student-athletes starting an in-season or off-season sport on or after the first day of classes must have a “valid” baseline completed before they may participate in any sport related activity.

If a student-athlete sustains or is suspected to have sustained a concussion, a post-injury assessment will be conducted using the Concussion Vital Signs service as part of the graduated Return to Learn and Return to Sport Strategy. The results of this test will be available for treating physicians to assist in evaluation of the concussion.

***A student-athlete that is diagnosed with a concussion and completes all steps of this protocol will not require a new baseline unless it is directed by the treating physician or the C.O.T.

Rank One Sport and Documentation Process

The athletic trainer(s) supervising a student-athlete with a concussion (including those suffered in non-school related incidents) is/are responsible for documenting any concussion using Rank One Sport.

All FWISD athletic trainers will follow the procedure for using Rank One Sports to document any concussion injuries. All information and updates should be recorded in the injury report.

At the end of the Graduated Return to Sport Strategy the supervising athletic trainer(s) will have the following on file:

1. “Concussion Daily Symptom Checklist” or equivalent record of symptom scores
2. Any doctor’s notes, Return to Learn orders, or other documentation related to this concussion injury
3. Physician release to begin the Graduated Return to Sport Strategy
4. UIL Concussion Management Protocol Return to Sport Form – signed by parent and athletic trainer

Recognition of a Concussion

A concussion is defined in Section 38.151 of the Texas Education Code as “a complex pathophysiological process affecting the brain caused by a traumatic physical force or impact to the head or body, which may include temporary or prolonged altered brain function resulting in physical, cognitive, or emotional symptoms, altered sleep patterns, or loss of consciousness”.

Common signs and symptoms of sports-related concussion

Signs – things which are observed

Student-athlete appears dazed or stunned
Confusion (about assignments, Sports, etc.)
Forgets Sports
Unsure about game, score, opponent
Moves clumsily (altered coordination)
Balance problems
Personality change
Responds slowly to questions
Forgets events prior to the hit
Forgets events after the hit
Loss of consciousness (any duration)

Symptoms – things or conditions which the student-athlete feels and reports

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

***Note that this is not an all-inclusive list. Signs and symptoms may vary greatly between individuals.**

Management Strategy for Concussions

A student-athlete will be immediately removed from practice or competition if any one of the following persons believes the student might have sustained a concussion during the practice or competition:

1. a coach
2. a physician
3. a licensed health care professional (APRN, LAT, PA, Neuropsychologist)
4. a person licensed under Chapter 201 (Chiropractors), Occupations Code
5. the school nurse
6. the student’s parent or guardian or another person with legal authority to make medical decisions for the student

The student-athlete must be evaluated as soon as possible by the school athletic trainer or the licensed athletic trainer on-site, if available. FWISD athletic trainers will assess suspected concussions using one or more of the following: SCAT6 (Sport Concussion Assessment Tool) form, symptom scale, balance assessment, VOMS, and clinical judgement. If a licensed athletic trainer is not available at the time of injury, the FWISD coach is responsible for determining which management strategy applies (not stable or stable) and for taking appropriate action. They must also contact the school athletic trainer(s) to notify them of the suspected injury and determine the best course of action.

If a concussion is suspected, the athletic trainer(s) (or the coach in the absence of the athletic trainer(s)) will notify the student-athlete’s parent/guardian and give written and verbal home and follow-up care instructions, as well as contact information so the parent/guardian can get in contact with the school athletic trainer(s).

On-Site Injury Management Process

If the student-athlete has symptoms of a concussion and is not stable (i.e. condition is changing or deteriorating):

- Deterioration of neurological function
- Decreasing level of consciousness or any loss of consciousness
- Decrease or irregularity in respirations
- Decrease or irregularity in pulse
- Unequal, dilated or nonreactive pupils
- Vomiting
- 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
- Neurological deficits (for example cranial nerve deficits)

Action: Activate the Emergency Action Plan (EAP) for that venue so the student-athlete can be transported to the nearest trauma-qualified emergency department.

If the student-athlete is symptomatic but stable:

1. The student-athlete does not need to go immediately to a trauma-qualified emergency department or concussion-trained physician, although the parent/guardian may not be denied the option of emergency transportation. CT scans and standard neuroimaging studies show structural injuries and not the functional disturbances associated with sports related concussions.
2. Give and discuss with the parent/guardian the home care instructions with contact information for the athletic trainer(s) for their school (“Concussion Information for Student-athlete and Parent/Guardian”). This includes red flag signs and symptoms to watch for that may indicate further injuries that necessitate being taken to a trauma-qualified emergency department immediately.
3. Recommend to the parent/guardian to take the student-athlete home and follow the activity restrictions on the home care instructions for at least 24 hours.
4. The parent/guardian needs to communicate with the school athletic trainer **before** the student-athlete returns to attending any classes or school activities to do a follow-up assessment and review any treatment/care that may have occurred. They should bring any paperwork from the emergency department or any physician that has treated the student-athlete.

FWISD student-athletes who suffer a concussion in non-school related activities (i.e. vehicle accident, non-school sports activity, accident, etc.) must still complete the Return to Learn and Graduated Return to Sport Strategy

Follow-up Care

Before the student-athlete returns to classes or school activity

The student-athlete's parent/guardian and athletic trainer(s) will communicate prior to the student-athlete returning to school to discuss the next steps in return to learn and sport protocols. A follow up assessment will be completed and documented at this time. Any documentation from care provided since the injury (i.e. ER paperwork or physician visit notes) should be shared with the athletic trainer(s) and documented in the student-athletes Rank One injury report. The athletic trainer(s) will give the parent/guardian referral information for evaluation by a physician, preferably one trained in evaluation, treatment and management of concussions, as well as a school claim form (if one has not already been provided). The parent/guardian will also be provided with the FWISD Concussion Management Step-by-Step information sheet.

Student-athletes who suffer a non-school related concussion (i.e. vehicle accident, non-school sports activity, etc.) must also complete the Return to Learn and Graduated Return to Sport Protocol

Follow Up Assessment

The athletic trainer(s) will use the follow up assessment results and clinical judgement to make recommendations regarding the student-athlete's attendance during the initial recovery phase. Student-athletes with few symptoms, or low symptom severity scores may be able to attend classes with short term accommodations, as tolerated. These student-athletes will monitor symptoms closely with the athletic trainer(s). More formal accommodations may be recommended once the student-athlete has been evaluated by a physician.

Student-athletes who are experiencing multiple symptoms, high symptom severity scores, and/or easily exacerbated symptoms may benefit from 24-48 hours of relative cognitive rest, gradual return to daily activities, or shortened school days.

The athletic trainer(s) will notify the student-athlete's teachers, counselor, attendance clerk, testing coordinator, school nurse, and school administrator of the current return to learn status, including temporary accommodations prior to physician evaluation and accommodations written by the treating physician.

*Middle school student-athletes will follow a plan created by their pyramid high school athletic trainer(s) to monitor for return or development of symptoms. The pyramid high school athletic trainer(s) will meet with the student or designate an individual on-campus (i.e. school nurse, administrator, a coach not from the student-athlete's current sport) for the student-athlete to meet with daily.

Physician Evaluation and Clearance

In accordance with Texas H.B. No. 2038 (Natasha's Law) any athlete removed from play or practice due to a concussion must be evaluated by a treating physician, preferably trained in the recognition, evaluation, and management of sport related concussions. The athletic trainer(s) may recommend a specific physician, but ultimately the parent/guardian may use the physician of their choosing. The athletic trainer(s) will collaborate with the treating physician to assess and monitor symptoms, conduct appropriate rehabilitative exercises, and communicate accommodations with the school staff. The student-athlete must be cleared by the treating physician in order to begin the Return to Sport progression.

*Return to Sport may not be completed prior to Return to Learn.

Return to Learn and Return to Sport

Fort Worth ISD strives to remember that our student-athletes are students first and student-athletes second. A key ingredient to recovery is a return to full academic participation before returning to participation in athletic activities. If a student is symptomatic and it is affecting their academics, the school will take appropriate action to provide academic accommodations as needed. The school athletic trainer(s) will work with the parent/guardian, treating physician, and the appropriate school committee (SPED, 504, RTI) if formal accommodations are required and/or ordered by the treating physician.

Prolonged cognitive and physical rest has not been proven to be helpful in recovery from a concussion. Due to this an athletic trainer may oversee Stage 1 of the management strategy prior to a student-athlete being seen by a physician since some student-athletes may have significant symptomatic improvement before they can be scheduled in a physician's office. These activities may be coordinated with the physician on the COT, or other designated physician, as needed. Activities should stay below both cognitive and physical exacerbation threshold, meaning they do not provoke an increase in symptom severity by more than 2 points (on a 10-point scale). Concussion symptoms and severity will be reported by student-athlete input during the activity. Activities may include walking, cycling, and other normal daily activities.

Not all student-athletes will need specialized academic support following a concussion, and most (93%) will have a complete return to learn within 10 days of injury. If symptom exacerbation occurs with increased cognitive activity or environmental factors associated with being at school (screens, lights, sounds, etc.), or difficulty with reading, concentration, and memory are reported, basic academic supports may be implemented to minimize academic interruption. These academic supports include, but are not limited to:

- Modified school attendance
- Frequent rest breaks from cognitive activity
- Limited screen time
- Extra time on assignments or reduction in workload
- Pre-printed/prepared class notes
- Delaying tests/quizzes

Return to learn recommendations may follow this pattern and utilize academic supports as needed:

Step	Mental activity	Activity at each step	Goal
1	Daily activities that do not result in more than a mild exacerbation* of symptoms related to the current concussion	Typical activities during the day (eg, reading) while minimising screen time. Start with 5–15 min at a time and increase gradually.	Gradual return to typical activities
2	School activities	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work
3	Return to school part time	Gradual introduction of schoolwork. May need to start with a partial school day or with greater access to rest breaks during the day.	Increase academic activities
4	Return to school full time	Gradually progress in school activities until a full day can be tolerated without more than mild* symptom exacerbation.	Return to full academic activities and catch up on missed work

Following an initial period of relative rest (24–48 hours following an injury at Step 1), athletes can begin a gradual and incremental increase in their cognitive load. Progression through the strategy for students should be slowed when there is more than a mild and brief symptom exacerbation.
 *Mild and brief exacerbation of symptoms is defined as an increase of no more than 2 points on a 0–10 point scale (with 0 representing no symptoms and 10 the worst symptoms imaginable) for less than an hour when compared with the baseline value reported prior to cognitive activity.

Graduated Return to Sport Strategy (RTS)

FWISD will be following the latest guidelines from the 6th International Conference on Concussion in Sport held in Amsterdam, October 2022. These guidelines are listed below.

The following criteria must be met for a student-athlete to begin and progress through the RTS (Stages 2-5):

1. Athlete must be cleared by the treating physician before beginning stage 2 of the RTS strategy.
2. All athletes diagnosed with a concussion, who also have a valid baseline test, must complete post-injury testing and must return to within the percentage of baseline specified by the testing company (ex: Concussion Vital Signs) prior to beginning stage 4.
 - a. This percentage may be overridden and RTP progressed at the discretion of the treating physician.

Graduated Return to Sport Strategy Stages

Stage	Aim	Activity	Goal of Each Step
1	Symptom-limited activity (may begin as initial symptoms start to improve)	Daily activities that do not provoke symptoms (light walk, gradual return to reading, activities of daily living)	Gradual reintroduction of work/school activities
2a	Light aerobic exercise (10 minutes)	Walking or stationary bike at slow to medium pace.	Increase heart rate
2b	Moderate aerobic exercise (15-20 minutes)	Alternating walk/jog pattern, light resistance training.	
3	Sport-specific exercise	Running, change of direction, individual training drills away from team environment.	Add movement and change of direction
Prior to advancing to stage 4, athlete must be symptom free and have returned to pre-injury cognitive function, based on valid CVS testing. Cognitive testing may be overridden at the treating physician's discretion.			
4	Non-contact training drills	Higher intensity, non-contact training drills. May include multi-player drills in a team environment.	Resume regular training intensity, coordination and increased thinking
5	Full contact practice	Normal training activities	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play	

Only one stage of the RTS may be completed each day, though stages may be extended at the athletic trainer or student-athlete's discretion. Mild and brief exacerbation of symptoms (severity increase of ≤ 2 points overall) during a stage will be tolerated. If symptom exacerbation is greater than 2 points in stages 1-3, the athlete will stop for the day and repeat the current stage the following day, until they are able to successfully complete the stage. If concussion-related symptoms are experienced during stages 4-6, student-athlete will return to stage 3 until full resolution of symptoms is achieved.

Middle School Graduated Return to Sport Strategy:

Stage 2 – should be done at the High School with the athletic trainer(s)

Stages 3-5 – daily activity will be supervised by middle school campus designee and student-athlete will complete Concussion Daily Symptom Checklist after activity each day. Each stage must be reviewed by the pyramid athletic trainer(s) before they can continue to the next stage. At the completion of stage 5, the UIL Concussion Management Return to Sport Form will be sent home with student-athlete.

Stage 6 – Return to Sport for all student-athletes

The UIL Concussion Management Return to Sport Form will be sent home after completion of Stage 5 and must be returned to the high school/pyramid athletic trainer(s) before they return to game play/competition.