

Tolland High School

# Concussion Procedure Manual

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## Concussion Procedure Manual

This policy is a research based manual on how concussions will be managed in the Tolland School District. The purpose of this policy is to educate school officials (teachers, administration, and guidance counselors) and parents on the effects of concussion, how to treat them effectively and school policies.

The procedures set forth in this manual are based on the recommendations of the National Athletic Trainers Association, the American Orthopedic Society for Sports Medicine and the Consensus Statement on Concussion in Sport. This Policy is in accordance of the Public Act No. 10-62.

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## About Concussions

What is a concussion?

Definition: A transient alteration in brain function caused by trauma. Several key factors are used in defining the nature of concussion. Concussions are also known as Mild Traumatic Brain Injuries (mTBI).

- Concussions can be caused by a direct blow to the head or an indirect blow to the body that transmits a force to the brain.
- Concussion symptoms may result in pathophysiologic changes, but acute clinical symptoms reflect a functional disturbance rather than a structural injury.
- Neuroimaging studies (CT scan) are negative.
- There is no bleeding associated with a concussion so therefore, it is not a bruise to the brain. The injury is at the cellular level.

Signs of Concussion: (visible to others)

- Nausea/Vomiting
- Appears dazed or stunned
- Vacant stare
- Confused about recent events
- Appears drowsy
- Loss of consciousness
- Appears confused
- Appears uncoordinated or unsteady
- Mood changes

Symptoms of Concussion: (the way the person feels)

- Headache
- Feeling slowed down
- Difficulty concentrating
- Dizziness
- Foggiess
- Fatigue
- Blurry/double vision
- Sensitivity to light/noise
- Memory problems
- Balance problems

## Complications of Concussion

### Post Concussion Syndrome

- A group of physical, cognitive and emotional problems that can persist for weeks, months or indefinitely after a concussion.
- Somatic (body) symptoms:
  - Chronic headache
  - Lightheadedness
  - Light/Noise sensitivity
  - Dizziness
  - Balance Difficulties
  - Nausea
  - Visual Problems
- Sleep Disturbance symptoms:
  - Difficulty falling asleep
  - Sleeping less/more than usual
  - Problems staying asleep
- Emotional/Psychological Symptoms:
  - Depression
  - Moodiness
  - Nervousness
  - Irritability
- Concentration & Memory symptoms:
  - Difficulty with concentration
  - Attention problems
  - Memory problems
  - Mental fogginess
  - Fatigue

### Second Impact Syndrome

- A rare but life-altering condition that can result in rapid brain swelling, permanent brain damage or death.
- Occurs within minutes of suffering a second concussion, often described as “routine” contact. It can happen within the same game/match.
- Most cases occur in adolescents and children

### Seizures/Convulsions

- Convulsive movement within seconds of concussion. They are usually benign.
- Can occur days or months after concussion.
- Athlete should be referred to physician and cleared (in writing) by family physician/neurologist before returning to play.

## **Evaluation and Management**

**Evaluation:** All suspected concussions are evaluated using the Select Physical Therapy Head Injury Report. This evaluation sheet will show the number of symptoms, the results of special tests, actions taken by the athletic trainer and instructions for the parents. Also attached is a sheet that needs to be filled out by the evaluating physician. The athlete's vestibular ability will also be tested using the Balance Error Scoring System (BESS). The athlete must also be ImPACT tested once asymptomatic. This test will be given by the athletic trainer or a neurologist.

**ImPACT:** Immediate post-concussion assessment and cognitive testing is the first, most widely used and most scientifically validated computerized concussion evaluation system. Tolland High School requires that all collision/contact athletes complete a baseline test using the ImPACT software.

**Management:** Any athlete who suffers a head injury or shows signs and symptoms of a concussion is removed from play immediately. They are not permitted to return to the game under any circumstances. Concussed athletes must be referred to the Tolland High School Athletic Trainer for evaluation. It is not mandated that athletes be seen by a medical doctor (pediatrician or neurologist) for evaluation unless symptoms do not resolve. The athletic trainer and coach must communicate to the parents or guardian of the athlete the importance of being evaluated by a physician if symptoms do not improve. After the evaluation the parents are given a sheet with home care instructions. The athlete is ImPACT tested once asymptomatic. The athlete will be tested until the results return to normal. Once the ImPACT Test is back to normal, as compared with the baseline test the athlete is put through a gradual return to play protocol. If the athlete experiences symptoms the return to play must be stopped and retried 24 hours later.

**Return to Play:**

- Day 1: Fast walk/stationary bike 15-20 minutes with supervision
- Day 2: Jogging/Running 20 minutes
- Day 3: Non Contact sports drills for 30-45
- Day 4: Full participation in practice without contact
- Day 5: Full Practice, No restrictions
- Day 6: Cleared for game/match/meet

## **ImPACT**

Immediate Post-Concussion Assessment and Cognitive Testing has become the standard in pre season and post concussion cognitive testing. Baseline testing will be administered by the Athletic Trainer. Testing after an injury will be administered by the Athletic Trainer or neurologist. ImPACT is the most widely used computer based testing program in the world and is implemented effectively across high school, collegiate and professional levels of sport participation.

All athletes participating in contact sports must have a baseline test.

Sports tested:

- Football- Fr, JV, V
- Boys Soccer- Fr, JV, V
- Girls Soccer- Fr, JV, V
- Girls Volleyball- Fr, JV, V
- Cheerleading- JV, V
- Ice Hockey- JV, V
- Boys Basketball- Fr, JV, V
- Girls Basketball- Fr, JV, V
- Boys Lacrosse- Fr, JV, V
- Girls Lacrosse- JV, V
- Baseball- Fr, JV, V
- Softball- Fr, JV, V

Optional Sports

- Outdoor/Indoor Track
- Cross Country
- Swimming
- Golf
- Tennis
- Dance

If the athlete participates in one of the optional sports and they would like to be tested you must privately contact the Athletic Trainer to set it up.

## **Balance Error Scoring System (BESS)**

Balance Error Scoring System provides a portable and cost effective way of assessing static postural stability and vestibular control. The BESS can be used to assess the effects of mild head injury on static postural stability. Information obtained from this clinical balance tool can be used to assist clinicians in making return to play decisions following mild head injury. The BESS can be performed in nearly any environment and takes approximately 10 minutes to conduct.

The balance testing regime consists of three stances on two different surfaces. The three stances are:

- Double leg stance
- Single leg stance
- Tandem stance

The two different surfaces include both a firm (ground) and foam surface. Athletes' stance should consist of the hands on the iliac crests (hips), eyes closed and a consistent foot position depending on the stance. Shoes should not be worn.

In the double leg stance, the feet are flat on the testing surface approximately pelvic width apart.

In the single leg stance position, the athlete is to stand on the non-dominant leg with the contralateral limb help approximately 20 degrees of hip flexion, 45 degrees of knee flexion and neutral position in the frontal plane.

In the tandem stance testing position, one foot is placed in front of the other with the heel of the anterior foot touching the toe of the posterior foot. The athlete's non-dominant leg is in the posterior position.

Leg dominance is determined by the athlete's kicking preference.

A modified BESS test is useful in quickly assessing a concussed athlete's vestibular ability on the field post injury.

## **Concussion Grading System**

In the past concussions were graded on a severity scale of I-III by the American Academy of Neurological Concussion Grading (AANCG). This grading system has been abandoned in favor of every concussion being evaluated and treated on a case by case basis. There has been a unanimous agreement to abandon the grading system or simple vs. complex terminology used in the past. It has been agreed upon that the majority of concussions (80-90%) resolve in 7-10 days.

## **Sideline Management of Concussion**

Any athlete that shows signs/symptoms of concussion will be removed from competition immediately and should be treated using the following protocol.

- 1) Athlete is evaluated by Athletic Trainer or team physician to rule out a more serious condition, such as a cervical spine injury. Any loss of consciousness is a medical emergency and the athlete is transported to the ER by EMS.
- 2) If the Athletic Trainer or team physician is not present, the parents must be notified immediately and referred to the ER or family physician for evaluation.
- 3) Concussion symptoms are to be recorded on the Select Physical Therapy Head Injury Form.
- 4) The parents/guardians are given copies of the Select Physical Therapy Head Injury Form. If the athlete is referred to a physician parents/guardians are instructed to have the physician fill out the physician portion of the form and then the form is returned to the Athletic Trainer.



## **Mental Rest**

Concussions require cognitive rest as well as exertional rest. It should be understood that any activity that causes an increase of blood flow to the brain can cause the athlete's symptoms to worsen. All concussions are evaluated on a case by case basis. In order for a student to have academic accommodations they must be written by the treating physician. Any student upon return to school that needs accommodations must bring a paper copy of those accommodations to the nurse's office so that the student's teachers can be notified by the school nurse. It has been shown that these activities can inhibit the brain's ability to heal.

- Reading
- Watching television
- Video games
- Texting
- Using the computer
- Test Taking
- School Work
- Listening to Music

\*Note all concussions are individualized. Some athletes may not have trouble with all of these activities.

## **Physical Education and Recreation Department**

This concussion management plan must also apply to students participating in physical education classes, sports through the Recreation department and or private/club leagues. If a student at Tolland HS suffers a head injury during an outside sport or non-sport related event then the policy set forth in this manual must be applied to them as well.

- A. Recreation or Club Sports: If it comes to the attention of the Tolland HS staff (ATC, nurses, teachers, administrators) that a student has suffered a head trauma during a recreation or club sport then the student and parents must be made aware of the concussion policy and follow the plan below.
  - a. The administration and teachers will contact the nurses or the athletic trainer who will then contact the parents and express importance of proper concussion management.
  - b. The student is withheld from physical education class and is advised to not play in any rec or club sport events until cleared by their physician. The student must be symptom free at rest.
  - c. ImPACT may also be utilized to help with the return to PE and outside sports decisions. Scores can be compared to normative data or baseline if one is available.
  - d. If the student does not participate in any sports at Tolland High School throughout the school year the student athlete is still recommended to follow the return to play protocol found in this document.
  - e. If the student participates in Tolland High School athletics they must complete the return to play with the Tolland High School Athletic Trainer overseeing once they are cleared by the treating physician.
- B. Physical Education: In the event that a student in Physical education class suffers a head injury the student is to be removed from class and brought to the nurse.
  - a. Contact parents and express importance of proper concussion management.
  - b. The student must be seen by their physician if they do not participate in Tolland High School Athletics.
  - c. If the student athlete wishes to be evaluated by the Athletic Trainer after being injured in a PE class the student athlete must first go home and set up an appointment time after school to be evaluated.
  - d. The student is withheld from physical education class until cleared by their physician and symptom free at rest. The student should then follow a graded return to exercise.

## **How to Inform Parents**

Parents of students that participate in Tolland High School Athletics will be required to complete and read information regarding concussions upon registering their student athlete for any Tolland High School sport. This Policy will be posted on the Tolland Board of Education website and the Tolland High School Athletics website.

### **Tolland High School Concussion Policies**

- If the student athlete is diagnosed with a concussion by the Tolland High School Athletic Trainer the student athlete can be excused from school for up to 3 days if necessary. Any absences over 3 days will not be excused unless a physician note is provided excusing the student.
- Any student athlete who is diagnosed with a concussion by a Physician must provide a copy of the note to the school nurse and Athletic Trainer. Notes should be brought to the nurse upon arrival to school. If the student is concerned about being late to class a pass can be given from the school nurse.
- Any necessary academic accommodations must be written by the treating Physician and a copy must be provided to the school nurse so the student's teachers can be notified.
- If the student is out of school with concussion symptoms they must be called out absent each day to the nurse's office.
- If a concussion is suffered in out of school athletics or activities and the student participates in any Tolland High School sports they must complete the return to play under the supervision of the Athletic Trainer.
- If a student athlete was referred to a physician they must first be medically cleared by the physician before beginning the return to play.
- All students should remain out of school until they are 24 hours symptom free.
- Upon return to school if the student is experiencing concussion symptoms they should go to the nurse's office where they will rest for 20 minutes. If the symptoms resolve they may return to class. If symptoms persist the student will rest for another 20 minutes. If the symptoms have not dissipated after 40 minutes of rest the student will be sent home.

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