

Student Sports – Concussions

The Board of Education recognizes that concussions and head injuries are commonly reported injuries in children and adolescents who participate in sports and other recreational activities. The Board acknowledges the risk of catastrophic injuries or deaths are significant when a concussion or head injury is not properly evaluated and managed.

Commencing July 1, 2010, and each school year thereafter, any coach of intramural or interscholastic athletics employed by the District shall complete an initial training course, approved by the State Board of Education, regarding concussions which are a type of brain injury prior to commencing the coaching assignment for the season. Such training course shall include, but not be limited to (1) the recognition of the signs and symptoms of a concussion; (2) the means of obtaining proper medical treatment for a person suspected of having a concussion; (3) the nature and risk of concussions, including the danger of continuing to engage in athletic activity after sustaining a concussion; and (4) the proper method of allowing a student athlete who has sustained a concussion to return to athletic activity.

Each school year any coach who has completed the initial training course regarding concussions shall annually review current and relevant information, developed or approved by the State Board of Education, regarding concussions prior to the start of the coaching assignment. This annual review is not required in any year the coach is required to complete a refresher course. Beginning July 1, 2015, and each school year thereafter, a coach must complete an approved refresher course not later than five years after the initial training course in order to maintain his/her coaching permit and to coach in the District.

The District will also utilize protocols developed by the State Board of Education in consultation with the Commissioner of Public Health, the Connecticut Interscholastic Athletic Association (CIAC), and appropriate organizations representing licensed athletic trainers and county medical associations to inform and educate coaches, youth athletes and their parents and/or guardians of the nature and risk of concussions or head injuries, including the dangers associated with continuing to engage in athletic activity after a concussion, of the proper method of allowing a student athlete who has sustained a concussion to return to athletic activity.

Annually the District will distribute a head injury and concussion information sheet to all parents/guardians of student participants in competitive sport activities. The parent/guardian and student must return a signed acknowledgement indicating that they have reviewed and understand the information provided before the student participates in any covered activity. This acknowledgement form must be returned and be on file with the District in order for the student to be allowed to practice or compete in the sports activity.

All coaches will complete training pertaining to the District's procedures. The required refresher course regarding concussions shall include, but not be limited to, an overview of key recognition and safety practices, an update of medical developments, current best practices in the field of concussion research, and prevention and treatment. Said refresher course shall also contain an update on new relevant federal, state and local laws and regulations, and for football coaches, current best practices regarding coaching the sport of football, including, but not limited to,

Student Sports – Concussions

frequency of games and full contact practices and scrimmages as identified by the governing authority for intramural and interscholastic athletics (CIAC).

The District, after January 1, 2015, shall implement the "Concussion Education Plan and Guidelines for Connecticut Schools," developed by the State Board of Education per the stipulations of P.A. 14-66. Written materials, online training or videos, or in person training shall address, at a minimum, the recognition of signs or symptoms of concussion, means of obtaining proper medical treatment for a person suspected of sustaining a concussion, the nature and risks of concussions, including the danger of continuing to engage in athletic activity after sustaining a concussion, proper procedures for return to athletic activity and current best practices in the prevention and treatment of a concussion.

The Board recognizes that commencing July 1, 2015, the CIAC prohibits student athletes from participation in any intramural or interscholastic activity unless the student athlete and his/her parent/guardian completes the concussion education plan of the State Board of Education and its contributing organizations to such plan. Prior to participating in any intramural or interscholastic athletic activity students must (1) read written materials, (2) view online training videos, or (3) attend in-person training regarding the District's concussion education plan provided by the Board of Education.

Prior to participating in any intramural or interscholastic athletic activity for the school year beginning July 1, 2015 and thereafter, a parent/guardian of each student athlete must (1) read written materials, (2) view online training videos, or (3) attend in-person training regarding the District's concussion education plan. Schools may use any or all of the delivery methods mentioned above to develop a plan that best fits the district's demographics.

The District, commencing July 1, 2015, will utilize the consent form developed or approved by the State Board of Education with parent/guardians of student athletes in intramural or interscholastic activities regarding concussions. This form shall provide a summary of the concussion education plan developed or approved by the State Board of Education and a summary of the Board's policy regarding concussions. The consent form shall be returned to the appropriate school authorities, signed by the parent/guardian, attesting to the receipt of such form and authorizing the student athlete to participate in the athletic activity.

Further, in compliance with applicable state statutes, the coach of any intramural or interscholastic athletics shall immediately remove any student athlete participating in intramural or interscholastic athletics who (1) is observed to exhibit signs, symptoms or behaviors consistent with a concussion following an observed or suspected blow to the head or body during a practice, game or competition, (2) is diagnosed with a concussion, or (3) is otherwise suspected of having sustained a concussion because such student athlete is observed to exhibit signs, symptoms or behaviors consistent with a concussion regardless of when such concussion or head injury may have occurred. Upon such removal, the coach or other qualified school employee defined in Connecticut General Statutes [10-212a](#), shall notify the student athlete's parent/guardian that the student athlete has exhibited such signs, symptoms, or behaviors consistent with a concussion or

Student Sports – Concussions

has been diagnosed with a concussion. Such notification shall be provided not later than twenty-four hours after such removal. However, a reasonable effort shall be made to provide such notification immediately after such removal.

The coach shall not permit such student athlete to participate in any supervised athletic activities involving physical exertion, including, but not limited to, practices, games or competitions, until such student athlete receives written clearance to participate in such supervised athletic activities involving physical exertion from a licensed health care professional* trained in the evaluation and management of concussions.

**"licensed health care professional" means a physician licensed pursuant to Chapter 370 of the General Statutes, a physician assistant licensed pursuant to Chapter 370 of the General Statutes, an advanced practice registered nurse licensed pursuant to Chapter 378 of the General Statutes or an athletic trainer licensed pursuant to Chapter 375a of the General Statutes.*

Following medical clearance, the coach shall not permit such student athlete to participate in any full, unrestricted supervised athletic activities without limitations on contact or physical exertion, including, but not limited to, practices, games or competitions and such student athlete (1) no longer exhibits signs, symptoms or behaviors consistent with a concussion at rest or with exertion, and (2) receives written clearance to participate in such full, unrestricted supervised athletic activities from a licensed health care professional trained in the evaluation and management of concussions.

The Board, as required, for the school year beginning July 1, 2014 and annually thereafter, will collect and report to the State Board of Education all occurrences of concussion. The report shall contain, if known, the nature and extent of the concussion and the circumstances in which it was sustained.

The Board believes that at the forefront of concussion management is the implementation of baseline testing, through the implementation of the ImPACT (Immediate Post-concussion Assessment and Cognitive Testing) Program.* Subject to the availability of financial resources, District athletes will receive "baseline" testing prior to the start of the sports season and should be done for individual athletes at least every other year.

*ImPACT is a 20 minute computerized concussion evaluation system that has been scientifically validated and has become a standard tool used in comprehensive clinical management of concussions for athletes of all ages. Information is available at <http://www.impacttest.com/>. This c

Legal Reference: Connecticut General Statutes
PA 10-62 An Act Concerning Student Athletes and Concussions
P.A. 14-66 An Act Concerning Youth Athletics and Concussions
"Concussion Education Plan and Guidelines for Connecticut Schools" adopted by the State Board of Education, January 7, 2015.

Student Sports – Concussions



HEADS UP: CONCUSSION IN YOUTH SPORTS
A Fact Sheet for COACHES

To download the coaches' fact sheet in Spanish, please visit:
<http://www.cdc.gov/concussion/HeadsUp/youth.html>

THE FACTS

- A concussion is a **brain injury**.
- All concussions are **serious**.
- Concussions can occur **without** loss of consciousness.
- Concussions can occur **in any sport**.
- Recognition and proper management of concussions when they **first occur** can help prevent further injury or even death.

WHAT IS A CONCUSSION?

A concussion is an injury that changes how the cells in the brain normally work. A concussion is caused by a blow to the head or body that causes the brain to move rapidly inside the skull. Even a ding, getting your bell rung, or what seems to be a mild bump or blow to the head can be serious. Concussions can also result from a fall or from players colliding with each other or with obstacles, such as a goalpost.

The potential for concussions is greatest in athletic environments where collisions are common.¹ Concussions can occur, however, in **any** organized or unorganized sport or recreational activity. As many as 3.8 million sports- and recreation-related concussions occur in the United States each year.²

RECOGNIZING A POSSIBLE CONCUSSION

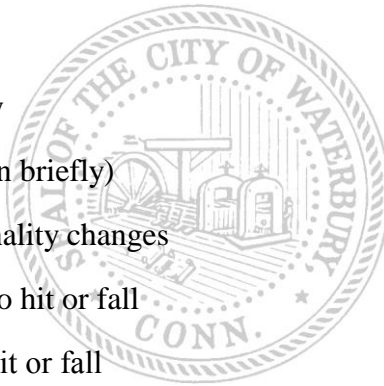
To help recognize a concussion, you should watch for the following two things among your athletes:

1. A forceful blow to the head or body that results in rapid movement of the head.
-and-
2. Any change in the athlete's behavior, thinking, or physical functioning. (See the signs and symptoms of concussion.)

SIGNS AND SYMPTOMS

SIGNS OBSERVED BY COACHING STAFF

- Appears dazed or stunned
- Is confused about assignment or position
- Forgets sports plays
- Is unsure of game, score, or opponent
- Moves clumsily
- Answers questions slowly
- Loses consciousness (even briefly)
- Shows behavior or personality changes
- Can't recall events prior to hit or fall
- Can't recall events after hit or fall



SYMPTOMS REPORTED BY ATHLETE

- Headache or pressure in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light
- Sensitivity to noise
- Feeling sluggish, hazy, foggy, or groggy
- Concentration or memory problems
- Confusion
- Does not feel right

Adapted from Lovell et al. 2004

Athletes who experience any of these signs or symptoms after a bump or blow to the head should be kept from play until given permission to return to play by a health care professional with experience in evaluating for concussion. Signs and symptoms of concussion can last from several minutes to days, weeks, months, or even longer in some cases.

Remember, you can't see a concussion and some athletes may not experience and/or report symptoms until hours or days after the injury. If you have any suspicion that your athlete has a concussion, you should keep the athlete out of the game or practice.

PREVENTION AND PREPARATION

As a coach, you can play a key role in preventing concussions and responding to them properly when they occur. Here are some steps you can take to ensure the best outcome for your athletes and the team:

- **Educate athletes and parents about concussion.** Talk with athletes and their parents about the dangers and potential long-term consequences of concussion. For more information on long-term effects of concussion, view the following online video clip: http://www.cdc.gov/ncipc/tbi/Coaches_Tool_Kit.htm#Video. Explain your concerns about concussion and your expectations of safe play to athletes, parents, and assistant coaches. Pass out the concussion fact sheets for athletes and for parents at the beginning of the season and again if a concussion occurs.
- **Insist that safety comes first.**
 - Teach athletes safe playing techniques and encourage them to follow the rules of play.
 - Encourage athletes to practice good sportsmanship at all times.
 - Make sure athletes wear the right protective equipment for their activity (such as helmets, padding, shin guards, and eye and mouth guards). Protective equipment should fit properly, be well maintained, and be worn consistently and correctly.
 - Review the athlete fact sheet with your team to help them recognize the signs and symptoms of a concussion.

Check with your youth sports league or administrator about concussion policies. Concussion policy statements can be developed to include the leagues commitment to safety, a brief description of concussion, and information on when athletes can safely return to play following a concussion (i.e., an athlete with known or suspected concussion should be kept from play until evaluated and given permission to return by a health care professional). Parents and athletes should sign the concussion policy statement at the beginning of the sports season.

- **Teach athletes and parents that it's not smart to play with a concussion.** Sometimes players and parents wrongly believe that it shows strength and courage to play injured. Discourage others from pressuring injured athletes to play. Don't let athletes persuade you that they're just fine after they have sustained any bump or blow to the head. Ask if players have ever had a concussion.

- **Prevent long-term problems.** A repeat concussion that occurs before the brain recovers from the first usually within a short period of time (hours, days, or weeks) can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in brain swelling, permanent brain damage, and even death. This more serious condition is called *second impact syndrome*.^{4,5} Keep athletes with known or suspected concussion from play until they have been evaluated and given permission to return to play by a health care professional with experience in evaluating for concussion. Remind your athletes: It's better to miss one game than the whole season.

ACTION PLAN

WHAT SHOULD A COACH DO WHEN A CONCUSSION IS SUSPECTED?

1. **Remove the athlete from play.** Look for the signs and symptoms of a concussion if your athlete has experienced a bump or blow to the head. Athletes who experience signs or symptoms of concussion should not be allowed to return to play. When in doubt, keep the athlete out of play.
2. **Ensure that the athlete is evaluated right away by an appropriate health care professional.** Do not try to judge the severity of the injury yourself. Health care professionals have a number of methods that they can use to assess the severity of concussions. As a coach, recording the following information can help health care professionals in assessing the athlete after the injury:
 - Cause of the injury and force of the hit or blow to the head
 - Any loss of consciousness (passed out/knocked out) and if so, for how long
 - Any memory loss immediately following the injury
 - Any seizures immediately following the injury
 - Number of previous concussions (if any)
3. **Inform the athlete's parents or guardians about the possible concussion and give them the fact sheet on concussion.** Make sure they know that the athlete should be seen by a health care professional experienced in evaluating for concussion.
4. **Allow the athlete to return to play only with permission from a health care professional with experience in evaluating for concussion.** A repeat concussion that occurs before the brain recovers from the first can slow recovery or increase the likelihood of having long-term problems. Prevent common long-term problems and the rare second impact syndrome by delaying the athletes return to the activity until the player receives appropriate medical evaluation and approval for return to play.

If you think your athlete has sustained a concussion take him/her out of play, and seek the advice of a health care professional experienced in evaluating for concussion.

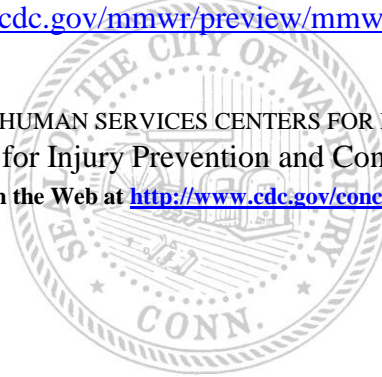
For more information and to order additional materials **free-of-charge**, visit:
<http://www.cdc.gov/concussion/HeadsUp/youth.html>

For more detailed information on concussion and traumatic brain injury, visit:
<http://www.cdc.gov/ncipc/tbi/TBI.htm>

REFERENCES

1. Powell JW. Cerebral concussion: causes, effects, and risks in sports. *Journal of Athletic Training* 2001; 36(3):307-311.
2. Langlois JA, Rutland-Brown W, Wald M. The epidemiology and impact of traumatic brain injury: a brief overview. *Journal of Head Trauma Rehabilitation* 2006; 21(5):375-378.
3. Lovell MR, Collins MW, Iverson GL, Johnston KM, Bradley JP. Grade 1 or ding concussions in high school athletes. *The American Journal of Sports Medicine* 2004; 32(1):47-54.
4. Institute of Medicine (US). *Is soccer bad for children's heads? Summary of the IOM Workshop on Neuropsychological Consequences of Head Impact in Youth Soccer*. Washington (DC): National Academy Press; 2002.
5. Centers for Disease Control and Prevention (CDC). Sports-related recurrent brain injuries-United States. *Morbidity and Mortality Weekly Report* 1997; 46(10):224-227. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00046702.htm>

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES CENTERS FOR DISEASE CONTROL AND PREVENTION
Content Source: National Center for Injury Prevention and Control, Division of Injury Response
Page Located on the Web at <http://www.cdc.gov/concussion/index.html>



Student Sports – Concussions

Fact Sheet for Student Athletes

What is a concussion?

A concussion is a brain injury that:

- Is caused by a bump, blow, or jolt to the head.
- Can change the way your brain normally works.
- Can range from mild to severe.
- Can occur during practices or games in any sport.
- Can happen even if you haven't been knocked out.
- Can be serious even if you've just been "dinged" or had your "bell rung."

How can I prevent a concussion?

It's different for every sport. But there are steps you can take to protect yourself from concussion.

- Follow your coach's rules for safety and the rules of the sport.
- Practice good sportsmanship at all times.
- Use the proper sports equipment, including personal protective equipment (such as helmets)
- In order for equipment to protect you, it must be:
 - Appropriate for the game, position, and activity
 - Well maintained
 - Properly fitted
 - Used every time you play

How do I know if I've had a concussion?

You can't see a concussion, but you might notice some of the symptoms right away. Other symptoms can show up days or weeks after the injury. It's best to see a health care professional if you think you might have a concussion. An undiagnosed concussion can affect your ability to do schoolwork and other everyday activities. It also raises your risk for additional serious injury.

What are the symptoms of a concussion?

- Nausea (feeling that you might vomit)
- Balance problems or dizziness
- Double or fuzzy vision
- Sensitivity to light or noise
- Headache
- Feeling sluggish
- Feeling foggy or groggy
- Concentration or memory problems (forgetting game plays)
- Confusion

What should I do if I think I have a concussion?

- **Tell your coaches and your parents.** Never ignore a bump, blow, or jolt to the head. Also tell your coach if one of your teammates might have a concussion.
- **Get a medical checkup.** A health care professional can tell you if you have had a concussion and when you are OK to return to play.
- **Give yourself time to recover.** If you have had a concussion, your brain needs time to heal. While your brain is still healing, you are much more likely to suffer another concussion.

Concussion Symptoms

Common symptoms in concussions are generally divided into physical/somatic, cognitive/thinking/remembering, sleep and emotional/mood disruption categories.

1. Physical

- Headache
- Nausea
- Vomiting
- Imbalance
- Slowed reaction time
- Dizziness
- Sensitivity to light
- Sensitivity to sound
- Fuzzy or blurred vision

2. Sleep

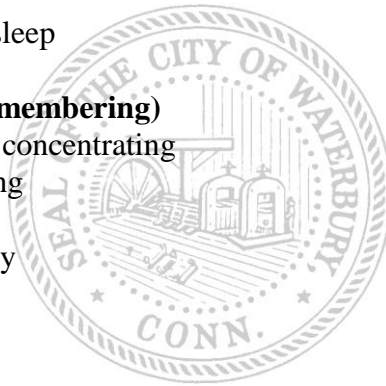
- Sleeping more or less than usual
- Drowsiness
- Trouble falling asleep
- Trouble maintaining sleep

3. Cognitive (Thinking/Remembering)

- Difficulty thinking or concentrating
- Difficulty remembering
- Confusion
- Feeling mentally foggy
- Feeling slowed down
- Decreased attention
- Decreased retention
- Distractibility
- Amnesia

4. Mood Disruption

- More emotional
- Irritable
- Sad
- Nervous
- Depressed



Source: Adapted from Pardini et al 2004.

Concussion Symptoms (continued)

Athletes who experience any of the signs and symptoms listed below after a bump, blow, or jolt to the head or body should be kept out of play the day of the injury and until a health care professional, experienced in evaluating concussions, provides written clearance that they are symptom-free and can return to play. It is important to note that some athletes may not experience and/or report symptoms until hours or days after the injury. Most people with a concussion will recover quickly and fully. For some people, however, signs and symptoms of concussion can last for days, weeks, or longer.

Potential Signs Observed by Coaches, Athletic Trainers, Parents or Others:

- Appears dazed or stunned
- Is confused about assignment or position
- Forgets an instruction
- Is unsure of game, score, or opponent
- Moves clumsily
- Answers questions slowly
- Loses consciousness (even briefly)
- Shows mood, behavior, or personality changes
- Can't recall events prior to hit or fall
- Can't recall events after hit or fall

Potential Symptoms Reported by Athlete:

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light
- Sensitivity to noise
- Feeling sluggish, hazy, foggy, or groggy
- Concentration or memory problems
- Confusion
- Does not "feel right" or is "feeling down"

Source: CDC, How Can I Recognize a Possible Concussion?

Athletes who experience any of the signs and symptoms listed above after a bump, blow, or jolt to the head or body should be kept out of play the day of the injury and until a health care professional, experienced in evaluating concussions, provides written clearance that they are symptom-free and can return to play. It is important to note that some athletes may not experience and/or report symptoms until hours or days after the injury. Most people with a concussion will recover quickly and fully. For some people, however, signs and symptoms of concussion can last for days, weeks, or longer.

The Proper Procedures for Allowing a Student Athlete Who Has Sustained a Concussion to Return to Athletic Activity

When managing an athlete with a concussion, the management plan should cover both returning to school and to play, and should:

- include monitoring both physical and cognitive activities;
- consider concussion history; and
- be individualized to the athlete.

An athlete should be referred for follow-up care from a health care professional who can help him or her gradually return to school and to play when fully recovered. An athlete who has been diagnosed with a concussion should not return to practice or play the same day. In addition, *Public Act No. 14-66, An Act Concerning Youth Athletics and Concussions* requires that:

...coaches shall not permit such student athlete to participate in any supervised team activities involving physical exertion, including, but not limited to, practices, games or competitions, until such student athlete receives written clearance to participate in such supervised team activities involving physical exertion from a licensed health care professional trained in the evaluation and management of concussions. Following clearance, the coach shall not permit such student athlete to participate in any full, unrestricted supervised team activities without limitations on contact or physical exertion, including, but not limited to, practices, games or competitions, until such student athlete no longer exhibits signs, symptoms or behaviors consistent with a concussion at rest or with exertion, and receives written clearance to participate in such full, unrestricted supervised team activities from a licensed health care professional trained in the evaluation and management of concussions.

There are five gradual steps to help safely return an athlete to play, adapted from the International Concussion Consensus Guidelines located at:

http://www.cdc.gov/concussion/headsup/return_to_play.html

Suggested Return-to-Play Progression

Baseline (Step 0): As the baseline step of the *Return-to-Play Progression*, the athlete needs to have completed physical and cognitive rest and not be experiencing concussion symptoms for a minimum of 24 hours. Keep in mind, the younger the athlete, the more conservative the treatment. There should be a minimum of 24 hours before progressing to the next step.

Step 1: Light Aerobic Exercise

Goal: only to increase an athlete's heart rate

Time: 5 to 10 minutes

Activities: exercise bike, walking, or light jogging

No weight lifting or resistance training, jumping, or hard running

Step 2: Moderate Exercise

Goal: limited body and head movement

Time: reduced from typical routine

Activities: moderate jogging, brief running, moderate-intensity stationary biking, and moderate-intensity weightlifting and resistance training

No head impact activities

Step 3: Non-contact Exercise

Goal: more intense, but non-contact movement

Time: close to typical routine

Activities: running, high-intensity stationary biking, the player's regular weightlifting routine, and non-contact sport-specific drills

This stage may add some cognitive component to practice in addition to the aerobic and movement components introduced in Steps 1 and 2.

Step 4: Practice

Goal: reintegrate in full contact practice with vigilant observation by the coach and/or athletic trainer

Step 5: Return to Play

Goal: return to competition

It is important to monitor symptoms and cognitive function carefully during each increase of exertion. Athletes should only progress to the next level of exertion if they are not experiencing symptoms at the current level. If symptoms return at any step an athlete should stop these activities as this may be a sign that the athlete is pushing too hard. Only after additional rest, when the athlete is once again not experiencing symptoms for a minimum of 24 hours, should he or she start again at the step during which symptoms were experienced.

The *Return-to-Play Progression* process is best conducted through a team approach and by a health care professional who knows the athlete's physical abilities and endurance, such as the school's athletic trainer in collaboration with the school nurse. By gauging the athlete's performance on each individual step, a health care professional will be able to determine how far to progress the athlete on a given day. In some cases, the athlete may be able to work through one step in a single day, while in other cases it may take several days to work through an individual step. It may take several weeks to months to work through the entire 5-step progression.

While most athletes will recover quickly and fully following a concussion, some will have symptoms for weeks or longer. Athletes should be referred to a concussion specialist if:

1. Symptoms worsen at any time.
2. Symptoms have not gone away after 10-14 days.
3. The athlete has a history of multiple concussions or risk factors for prolonged recovery. This may include a history of migraines, depression, mood disorders, or anxiety, as well as developmental disorders such as learning disabilities and Attention Deficit Hyperactivity Disorder (CDC, *A "Heads Up" on Managing Return to Play*).

Current Best Practices in the Prevention and Treatment of a Concussion

Prevention

There are many ways to reduce the chances of sustaining a concussion during participation in athletic activities. Schools should ensure that during athletic contests and practices, athletes:

- use the correct protective equipment (should be fitted and maintained properly in order to provide the expected protection);
- follow all safety rules and the rules of the sport;
- practice good sportsmanship; and
- do not return to play with a known or suspected concussion until they have been evaluated and given **written permission** by an appropriate health care professional.

Treatment

Education and recognition are the best tools for improving the care of the athlete with a concussion. Students who have been diagnosed with a concussion require both physical and cognitive rest. Delay in instituting health care provider orders for such rest may prolong recovery from a concussion. The health care provider's orders for avoidance of cognitive and physical activity and graduated return to activity should be followed and monitored both at home and at school. Districts should consult their school medical director if further discussion and/or clarification is needed regarding a private medical provider's orders, or in the absence of a private medical provider's orders. Additionally, children and adolescents are at increased risk of protracted recovery and severe, potentially permanent disability (e.g. early dementia, also known as chronic traumatic encephalopathy), or even death if they sustain another concussion before fully recovering from the first concussion. Therefore, it is imperative that a student is fully recovered before resuming activities that may result in another concussion. Best practice warrants that, whenever there is a question of safety, a health care professional errs on the side of caution and holds the athlete out for a game, the remainder of the season, or even a full year.

Cognitive Rest

Cognitive rest requires that the student avoid participation in, or exposure to, activities that require concentration or mental stimulation including, but not limited to:

- computers and video games;
- television viewing;
- texting;
- cell phone use;
- reading or writing;
- studying or homework;
- taking a test or completing significant projects;
- loud music; or
- bright lights.

Parents/guardians, teachers, and other school staff should watch for signs of concussion symptoms such as fatigue, irritability, headaches, blurred vision, or dizziness reappearing with any type of mental activity or stimulation. If any of these signs and symptoms occur, the student should cease the activity. Return of symptoms should guide whether the student should participate in an activity. Initially a student with a concussion may only be able to attend school for a few hours per day and/or need rest periods during the day. Students may exhibit increased difficulties with focusing, memory, learning new information, and/or an increase in irritability or impulsivity. (Districts should have policies and procedures in place related to transitioning students back to school and for making accommodations for missed tests and assignments.) An Individual Health Care Plan with academic accommodations is an example of a guideline that may be used. If the student's symptoms last longer than 7 to 14 days, a medical provider should

consider referring the student for an evaluation by a neuropsychologist, neurologist, physiatrist, or other medical specialist in traumatic brain injury.

Note: increased cognitive activity, as well as too little cognitive activity, is associated with longer recovery from concussion. Thus, it is desirable to pace a student's academic load below symptom threshold. (Pediatrics 2014; 133:1-6)

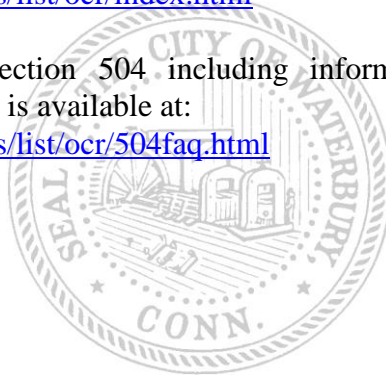
Schools are permitted to authorize certain testing accommodations for students who incur an injury within a certain timeframe prior to the test administration. In some situations, a 504 plan may be appropriate for students whose concussion symptoms are significant or whose symptoms last 6 months or longer. Section 504 is part of the Rehabilitation Act of 1973 and is designed to protect the rights of individuals with disabilities in programs and activities that receive federal financial assistance from the U.S. Department of Education. Section 504 requires a school district to provide a "free appropriate public education" (FAPE) to each qualified student with a disability who is in the school district's jurisdiction, regardless of the nature or severity of the disability. Under Section 504, FAPE consists of the provision of regular or special education and related aids and services designed to meet the student's individual educational needs as adequately as the needs of nondisabled students are met.

(More information is available on Section 504 law at:

<http://www2.ed.gov/about/offices/list/ocr/index.html>

Questions and Answers on Section 504 including information on addressing temporary impairments such as concussions is available at:

<http://www2.ed.gov/about/offices/list/ocr/504faq.html>



Physical Rest

Physical rest includes getting adequate sleep, taking frequent rest periods or naps, and avoiding physical activity that requires exertion. Some activities that should be avoided include, but are not limited to:

- activities that result in contact and collision and are high risk for re-injury;
- high speed and/or intense exercise and/or sports;
- any activity that results in an increased heart rate or increased head pressure (such as straining or strength training).

Students may experience frustration or stress about having to limit activities or having difficulties keeping up in school. They should be supported and reassured that they will be able to resume activities as soon as it is safe, and that it is important to avoid activities which will delay their recovery. Students should be informed that the concussion will resolve more quickly when they follow their medical provider's orders. Students will need encouragement and support at home and school until symptoms fully resolve (CDC, *Heads Up: Preventing Concussion Heads Up*).



Student Sports – Concussions

**Waterbury Board of Education
Student & Parent – Concussion Education Plan & Consent Form**

NOTE: This document was developed to provide coaches, students, and their parents/guardians with an annual review of current and relevant information regarding concussions and head injuries. A new form is required to be read, signed, dated and kept on file by their associated school district annually to comply with Public Act No. 14-66 AN ACT CONCERNING STUDENT ATHLETES AND CONCUSSIONS.

A concussion is the immediate and transient alteration of neurological function in the brain caused by mechanical acceleration and deceleration forces.

Part I – SIGNS AND SYMPTOMS OF A CONCUSSION

– A concussion should be suspected if any one or more of the following signs or symptoms are present, OR if the coach/evaluator is unsure.

1. Signs of a concussion may include (what the athlete looks like):

- Confusion/disorientation/irritability
- Trouble resting/getting comfortable
- Lack of concentration
- Slow response/drowsiness
- Incoherent/ slurred speech
- Slow/clumsy movements
- Loss of consciousness
- Amnesia/memory problems
- Act silly/combative/aggressive
- Repeatedly ask same questions
- Dazed appearance
- Restless/irritable
- Constant attempts to return to play
- Constant motion
- Disproportionate/inappropriate reactions
- Balance problems

2. Symptoms of a concussion may include (what the athlete reports):

- Headache or dizziness
- Nausea or vomiting
- Blurred or double vision
- Oversensitivity to sound/light/touch
- Ringing in ears
- Feeling foggy or groggy

Note: Public Act No. 14-66 requires that a coach MUST immediately remove a student- athlete from participating in any intramural or interscholastic athletic activity who (A) is observed to exhibit signs, symptoms or behaviors consistent with a concussion following a suspected blow to the head or body, or (B) is diagnosed with a concussion, regardless of when such concussion or head injury may have occurred. **Upon removal of the athlete a qualified school employee must notify the parent or legal guardian within 24 hours that the student athletes has exhibited the signs and symptoms of a concussion.**

Part II – RETURN TO PARTICIPATION (RTP)

Currently, it is impossible to accurately predict how long concussions will last. There must be full recovery before someone is allowed to return to participation. Connecticut Law now requires that no athlete may resume participation until they have received written medical clearance from a licensed health care professional (Physician, Physician Assistant, Advanced Practice Registered Nurse, Athletic Trainer) trained in the evaluation and management of concussions.

Concussion Management Requirements:

1. No athlete SHALL return to participation (RTP) on the same day of concussion.
2. Any loss of consciousness, vomiting or seizures the athlete MUST be immediately transported to the hospital.
3. Close observation of an athlete MUST continue following a concussion. This should be monitored for an appropriate amount of time following the injury to ensure that there is no escalation of symptoms.

Concussion Management Requirements: (continued)

4. Any athlete with signs or symptoms related to a concussion MUST be evaluated from a licensed health care professional (Physician, Physicians' Assistant, Advanced Practice Registered Nurse, Athletic Trainer) trained in the evaluation and management of concussions.
5. The athlete MUST obtain an initial written clearance from one of the licensed health care professionals mentioned above directing them into a well-defined RTP stepped protocol similar to one outlined below. If at any time signs or symptoms should return during the RTP progression the athlete should cease activity*.
6. After the RTP protocol has been successfully administered (no longer exhibits any signs or symptoms or behaviors consistent with concussions) , final written medical clearance is required by one of the licensed health care professionals mentioned above for them to fully return to unrestricted participation in practices and competitions.

Medical Clearance RTP protocol (Recommended one full day between steps)²

Rehabilitation stage	Functional exercise at each stage of rehabilitation	Objective of each stage
1. No activity	Complete physical and cognitive rest until asymptomatic. School may need to be modified.	Recovery
2. Light aerobic activity	Walking, swimming or stationary cycling keeping intensity, <70% of maximal exertion; no resistance training.	Increase Heart Rate
3. Sport Specific Exercise	Skating drills in ice hockey, running drills in soccer; no head impact activities.	Add Movement
4. Non-contact Training drills	Progression to more complex training drills, i.e., passing drills in football and ice hockey; may start progressive resistance training.	Exercise, coordination and cognitive load
5. Full Contact Practice	Following final medical clearance, participate in normal training activities.	Restore confidence and assess functional skills by coaching staff

*If at any time signs or symptoms should worsen during the RTP progression the athlete should stop activity that day. If the athlete's symptoms are gone the next day, she/he may resume the RTP progression at the last step completed in which no symptoms were present. If symptoms return and don't resolve, the athlete should be referred back to their medical provider.

Part III – HEAD INJURIES

– Injuries to the head includes:

- Concussions: (See above information). There are several head injuries associated with concussions which can be severe in nature including:
 - a) Second impact Syndrome - Athletes who sustain a concussion, and return to play prior to being recovered from the concussion, are also at risk for Second Impact Syndrome (SIS), a rare but life-altering condition that can result in rapid brain swelling, permanent brain damage or death; and
 - b) Post-Concussion Syndrome - A group of physical, cognitive, and emotional problems that can persist for weeks, months, or indefinitely after a concussion.
- Scalp Injury: Most head injuries only damage the scalp (a cut, scrape, bruise or swelling)... Big lumps (bruises) can occur with minor injuries because there is a large blood supply to the scalp. For the same reason, small cuts on the head may bleed a lot. Bruises on the forehead sometimes cause black eyes 1 to 3 days later because the blood spreads downward by gravity;

- Skull Fracture: Only 1% to 2% of children with head injuries will get a skull fracture. Usually there are no other symptoms except for a headache at the site where the head was hit. Most skull fractures occur without any injury to the brain and they heal easily;
- Brain Injuries are rare but are recognized by the presence of the following symptoms:
 - (1) difficult to awaken, or keep awake or (2) confused thinking and talking, or (3) slurred speech, or (4) weakness of arms or legs or (5) unsteady walking (American Academy of Pediatrics – Healthy Children, 2010).

Part IV – STUDENT, PARENT/GUARDIAN REQUIREMENT

Starting with the 2015-2016 school year, and each school year thereafter, P.A. 14-66 prohibits a student athlete to participate in any intramural or interscholastic athletic activity unless the student and his/her parent/guardian (1) reads written materials, (2) views online training or videos, or (3) attends in-person training regarding the concussion education plan.

Part V – APPLICABLE SCHOOL BOARD CONCUSSION POLICIES

Board Policy #5141.7, “Student Sports – Concussions,” and its accompanying procedures, appendices and forms constitute the Board of Education’s School Concussion Policy. They contain information on the following topics:

- the recognition of signs and symptoms of concussion,
- the means of obtaining proper medical treatment for a person suspected of sustaining a concussion,
- the nature and risks of a concussion, including the danger in continuing to engage in athletic activity after sustaining a concussion,
- the proper procedures for allowing a student who has sustained a concussion to return to athletic activity, and
- current best practices in the prevention and treatment of concussion.

I have read and understand this document the “Student/Parent - Concussion Education Plan & Consent Form” and understand the severities associated with concussions and the need for immediate treatment of such injuries. I further understand my responsibilities to be informed and participate in the concussion education plan as described in Part IV above.

Student name: _____
(Print Name)

Date: _____ Signature _____

Parent/Guardian name: _____
(Print Name)

Date: _____ Signature _____

References:

1. NFHS. Concussions. 2008 NFHS Sports Medicine Handbook (Third Edition). 2008: 77-82.

<http://www.nfhs.org>.

2. McCrory, Paul MBBS, PhD; Meeuwisse, Willem MD, PhD; Johnston, Karen MD, PhD; Dvorak, Jiri MD; Aubry, Mark MD; Molloy, Mick MB; Cantu, Robert MA, MD. Consensus Statement on Concussion in Sport 3rd International Conference on Concussion in Sport Held in Zurich, November 2008. Clinical Journal of Sport Medicine: May 2009 - Volume 19 - Issue 3 - pp 185-200

http://journals.lww.com/cjsportsmed/Fulltext/2009/05000/Consensus_Statement_on_Concussion_in_Sport_3rd.1.aspx.

3. Centers for Disease Control and Prevention. *Heads Up: Concussion in High School Sports*. http://www.cdc.gov/NCIPC/tbi/Coaches_Tool_Kit.htm.
4. U.S. Department of Health and Human Services Centers For Disease Control and Prevention. *A Fact Sheet for Coaches*. (2009). Retrieved on June 16, 2010. http://www.cdc.gov/concussion/pdf/coaches_Engl.pdf
5. American Academy of Pediatrics – Healthy Children. *Symptom check: Head Injury*. Retrieved on June 16, 2010.

<http://www.healthychildren.org/english/tips-tools/symptom-checker/pages/Head-Injury.aspx>

Resources:

- Centers for Disease Control and Prevention. *Injury Prevention & Control: Traumatic Brain Injury*. Retrieved on June 16, 2010.

<http://www.cdc.gov/TraumaticBrainInjury/index.html>

- Centers for Disease Control and Prevention. *Heads Up: Concussion in High School Sports Guide for Coaches*. Retrieved on June 16, 2010.