

East Carteret High School: “Athletic Department Protocol and Procedures for Management of Sports-Related Concussion”

Medical management of sports-related concussion is evolving. In recent years, there has been a significant amount of research into sports-related concussion in high school athletes. East Carteret High School has established this protocol to provide education about concussion for athletic department staff and other school personnel. This protocol outlines procedures for staff to follow in managing head injuries, and outlines school policy as it pertains to return to play issues after concussion.

East Carteret High School seeks to provide a safe return to activity for all athletes after injury, particularly after a concussion. In order to effectively and consistently manage these injuries, procedures have been developed to aid in insuring that concussed athletes are identified, treated and referred appropriately, receive appropriate follow-up medical care during the school day, including academic assistance, and are fully recovered prior to returning to activity.

In addition to recent research, two (2) primary documents were consulted in developing this protocol. The “Summary and Agreement Statement of the 2nd International Conference on Concussion in Sport, Prague 2004”¹ (referred to in this document as the Prague Statement), and the “National Athletic Trainers’ Association Position Statement: Management of Sport-Related Concussion”² (referred to in this document as the NATA Statement).

This protocol will be reviewed on a yearly basis, by the ECHS medical staff. Any changes or modifications will be reviewed and given to athletic department staff and appropriate school personnel in writing.

All athletic department staff will attend a yearly in-service meeting in which procedures for managing sports-related concussion are discussed.

Contents:

- I. Recognition of concussion
- II. Management and referral guidelines for all staff
- III. Procedures for the Certified Athletic Trainer (ATC)
- IV. Guidelines and procedures for coaches
- V. Follow-up care during the school day
- VI. Return to play procedures

I. Recognition of concussion

Tests for Assessing Concussion

East Carteret High School

SYMPTOMS OF CONCUSSION

- Headache
- Any vision change
- Ringing in one or both ears
- Nausea or vomiting
- Confusion
- Unsteadiness
- Altered emotional state for that athlete -- e.g., anxiety, crying, being excessively angry, refusing or unwilling to cooperate with tests.

Grade 1

Conscious at all times but dazed, foggy, or fuzzy.

1. Administer [confusion/orientation](#), [memory](#), and [concentration](#) tests. No return to play even if normal later on in the contest/practice.
2. Administer the [neurologic tests](#). Athlete must pass all components of the neurologic tests. **There is no return to play** even if normal later in the contest/practice. If pupils are unequal in size, send to an emergency room immediately.

Grade 2

Conscious at all times but dazed, blank stares, “clueless,” or amnesia of any kind. If the athlete gives wrong answers to more than two questions on the [confusion/orientation](#) or [memory](#) tests the first time tested, immediately remove him or her from play and seek emergency medical attention. **The athlete should not return to play for at least five to seven days and should be cleared by his or her doctor first.**

Grade 3

Any loss of consciousness, no matter how brief, is a grade 3 concussion *requiring immediate medical attention*. No need for you to perform any exams, but you must do the following:

- If the athlete wakes up within one minute and does not have any neck pain, you may move the athlete to the sideline, where you should keep him or her calm and quiet. Call an ambulance or ask a responsible adult to take the player directly to an emergency room.
- If the athlete is unconscious longer than one minute, does not wake up, or complains of neck pain after returning to consciousness, assume the athlete has a neck/spine injury. Do not move the athlete. Make sure that he or she is breathing. Do not allow others to move the athlete. Call an ambulance. While waiting for the ambulance to arrive, keep the athlete’s head from being moved.

In either case, expect the athlete to be prohibited from taking part in the activity for a minimum of two weeks to one month.

Resist well-meaning adults who unknowingly want their child returned to athletic activity.

An athlete who is symptomatic but stable, may be transported by his or her parents. The parents should be advised to contact the athlete’s primary care physician, or seek care at the nearest emergency department, on the day of the injury.

**** ALWAYS give parents the option of emergency transportation, even if you do not feel it is necessary.**

TESTS FOR CONCUSSION

Remember to tailor your questions to the age of your athletes.

Confusion/Orientation:

- What's your name?
- Where are you?
- What month or year is it?
- Who are we playing?
- What sport are we playing?
- Who's winning?

Memory:

- Who was our last opponent?
- Who won that game?
- When was the last major holiday?
- What is the next one?
- What has happened so far in this game?
- Who is the president of the United States?
- Give the athlete three objects (cat, book, tree) to remember, then ask him or her to tell you what they are after three minutes.

Concentration:

- Repeat these numbers backward (4-3-6, 8-2-7-1, 9-4-5-2-0).
- Beginning with December, say the months of the year backwards.
- Tell me a multiplication table forwards.

Neurologic Tests (for balance and hand/eye coordination):

- Pupils should be of equal size. If not, *call an ambulance*.
- Have the athlete touch finger to nose with eyes closed. Fails test if misses nose.
- Have the athlete stand on both feet with arms out, first with eyes open and then with eyes closed -- fails test if sways (for hockey: skate blue line forward on one foot).
- Have the athlete walk heel-toe in straight line, forward and backward -- fails test if wavers or line is not straight (for hockey: skate backwards without looking).

Generally while assessing a patient who has a suspected [head injury](#), an assessment of the pupils' size and responsiveness to [light](#) with respect to each other can indicate the severity of the injury. A person who had PEARL is unlikely to have suffered severe [brain trauma](#) or succumb to increasing [intracranial pressure](#) whereas a person with brain trauma's [pupils](#) will often be oddly [dilated](#) or each eye will respond differently to light.

III. Procedures for the Certified Athletic Trainer (ATC)

- A. The ATC will assess the injury, or provide guidance to the coach if unable to personally attend to the athlete.
 - 1. Immediate referral to the athlete's primary care physician or to the hospital will be made when medically appropriate (see section II).
 - 2. The ATC will perform serial assessments following recommendations in the NATA Statement.
 - a. The Athletic Trainer will notify the athlete's parents and give written and verbal home and follow-up care instructions.

- B. The ATC will notify the school nurse of the injury, as soon as possible, so that the school RN can initiate appropriate follow-up in school immediately upon the athlete's return to school.
 - 1. The ATC will continue to provide coordinated care with the school RN, for the duration of the injury.
 - 2. The ATC will communicate with the athlete's guidance counselor regarding the athlete's neurocognitive and recovery status, if needed.
 - 3. The ATC is responsible for monitoring recovery & coordinating the appropriate return to play activity progression.
 - 4. The ATC will maintain appropriate documentation regarding assessment and management of the injury.

IV. Guidelines and procedures for coaches:

RECOGNIZE, REMOVE, REFER

A. **Recognize** concussion

1. All coaches should become familiar with the signs and symptoms of concussion that is described in section I.
2. Very basic cognitive testing should be performed to determine cognitive deficits.

B. **Remove** from activity

1. If a coach suspects the athlete has sustained a concussion, the athlete should be removed from activity until evaluated medically.
 - a. **Any athlete who exhibits signs or symptoms of a concussion should be removed immediately, assessed, and should not be allowed to return to activity that day.**

C. **Refer** the athlete for medical evaluation

1. Coaches should report all head injuries to the ECHS Certified Athletic Trainer (ATC), as soon as possible, for medical assessment and management, and for coordination of home instructions and follow-up care.
 - a. The ATC can be reached at: 728-2885 Or 241-1806
 - b. The ATC will be responsible for contacting the athlete's parents and providing follow-up instructions.
2. Coaches should seek assistance from the host site ATC or first responder if at an away contest.
3. If the ECHS ATC is unavailable, or the athlete is injured at an away event, the **coach is responsible** for notifying the athlete's parents of the injury.
 - a. Contact the parents to inform them of the injury and make arrangements for them to pick the athlete up at school.
 - b. Contact the ATC at the above number, with the athlete's name and home phone number, so that follow-up can be initiated.
 - c. Remind the athlete to report directly to the ATC before school starts, on the day he or she returns to school after the injury.

4. In the event that an athlete's parents cannot be reached, and the athlete is able to be sent home (rather than directly to MD):
 - a. The Coach or ATC should insure that the athlete will be with a responsible individual, who is capable of monitoring the athlete and understanding the home care instructions, before allowing the athlete to go home.
 - b. The Coach or ATC should continue efforts to reach the parent.
 - c. If there is any question about the status of the athlete, or if the athlete is not able to be monitored appropriately, the athlete should be referred to the emergency department for evaluation. A coach or ATC should accompany the athlete and remain with the athlete until the parents arrive.
 - d. Athletes with suspected head injuries should not be permitted to drive home.

V. FOLLOW-UP CARE OF THE ATHLETE DURING THE SCHOOL DAY

1. The athlete will be instructed to report to the ATC or school nurse upon his or her return to school. At that point, the ATC or school nurse will:
 - a. re-evaluate the athlete utilizing a graded symptom checklist.
 - b. provide an individualized health care plan based on both the athlete's current condition, and initial injury information provided by the ATC or parent.
2. Notify the student's guidance counselor and teachers of the injury immediately via the individualized health care plan form.
3. Notify the student's P.E. teacher immediately that the athlete is restricted from all physical activity until further notice.
4. If the school RN receives notification of a student-athlete who has sustained a concussion from someone other than the ATC (athlete's parent, athlete, physician note), the ATC should be notified as soon as possible, so that follow up care can properly administered.

B. Responsibilities of the student's guidance counselor

1. Monitor the student closely and recommend appropriate academic accommodations for students who are exhibiting symptoms of post-concussion syndrome.
2. Communicate with school health office on a regular basis, to provide the most effective care for the student.

VI. RETURN TO PLAY (RTP) PROCEDURES AFTER CONCUSSION

A. Returning to participate on the same day of injury

1. As previously discussed in this document, an athlete who exhibits signs or symptoms of concussion, or has abnormal cognitive testing, **should not** be permitted to return to play on the day of the injury. **Any athlete who denies symptoms but has abnormal sideline cognitive testing should be held out of activity.**
2. **“When in doubt, hold them out.”**

B. Return to play after concussion

1. The athlete must meet all of the following criteria in order to progress to activity:
 - a. Asymptomatic at rest and with exertion (including mental exertion in school) AND:
 - b. Have written clearance from primary care physician or specialist (athlete must be cleared for progression to activity by a physician other than an Emergency Room physician).
2. Once the above criteria are met, the athlete will be progressed back to full activity following a stepwise process, (as recommended by both the Prague and NATA Statements), under the supervision of the ATC.
3. Progression is individualized, and will be determined on a case by case basis. Factors that may affect the rate of progression include: previous history of concussion, duration and type of symptoms, age of the athlete, and sport/activity in which the athlete participates. An athlete with a prior history of concussion, one who has had an extended duration of symptoms, or one who is participating in a collision or contact sport should be progressed more slowly.

4. Stepwise progression as described in the Prague Statement:

- a) No activity – do not progress to step 2 until asymptomatic
- b) Light aerobic exercise – walking, stationary bike
- c) Sport-specific training (e.g., skating in hockey, running in soccer)
- d) Non-contact training drills
- e) Full-contact training after medical clearance
- f) Game play

Note: If the athlete experiences post-concussion symptoms during any phase, the athlete should drop back to the previous asymptomatic level and resume the progression after 24 hours.

5. The ATC and athlete will discuss appropriate activities for the day. The athlete will be given verbal and written instructions regarding permitted activities. The ATC and athlete will each sign these instructions. One copy of this form is for the athlete to give to the coach, and one will be maintained by the ATC.
6. The athlete should see the ATC daily for re-assessment and instructions until he or she, has progressed to unrestricted activity, and been given a written report to that effect, from the ATC.

¹ McCrory P, et al. Summary and Agreement Statement of the 2nd International Conference on Concussion in Sport, Prague 2004. *Clin J Sports Med.* 2005; 15(2):48-55.

² Guskiewicz KM, et al. National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion. *J Athl Train.* 2004;39(3):280-297.