

School Concussion Management Program

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Introduction

Medical management of concussion/traumatic brain injury (TBI) continues to evolve. Recently, there has been a significant amount of new research regarding sports-related concussions in high school athletes, but TBI also occurs in non-athletic settings. According to the CDC, recent data shows that, on average, approximately 1.7 million people sustain a traumatic brain injury annually. New Jersey Legislation (P.L.2010, Chapter 94) (N.J.S.A. 18A:40-41.4) requires each school district, charter, and non-public school who participate in interscholastic athletics to adopt by September 1, 2011 a policy concerning the prevention and treatment of sports-related concussions and other head injuries among student-athletes.

As a result of this law, the School Concussion Management Program was created to meet the requirements set forth in N.J.S.A. 18A:40-41.4.

The School Concussion Management Program will incorporate the following modules:

- 1) Education about concussions for athletes, coaches, school personnel, and parents;
- 2) Procedures for staff to follow in managing concussions, and
- 3) School policy as it pertains to return to play/academics issues following a concussion.

The purpose of this program is to provide the tools and assessment procedures for a safe return to activity/academic instruction for all students following a concussion. In order to effectively and consistently manage these injuries, procedures have been developed to aid in insuring that affected students are identified, evaluated and referred appropriately for medical care, receive appropriate follow-up evaluations during school and are recovered prior to returning to full athletic and academic activities.

This program will be reviewed and updated annually.

New Jersey Legislation (P.L.2010, Chapter 94) (N.J.S.A. 18A:40-41.4)

AN ACT concerning the health of student-athletes and supplementing P.L.1984, c.203 (C.45:9-37.35 et seq.) and chapter 40 of Title 18A of the New Jersey Statutes.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

C.18A:40-41.1 Findings, declarations relative to head injuries of student athletes.

1. The Legislature finds and declares that:

a. A concussion is caused by a blow or motion to the head or body that disrupts the normal functioning of the brain, and can cause significant and sustained neuropsychological impairments including, but not limited to, problem solving, planning, memory, and behavioral problems;

b. The federal Centers for Disease Control and Prevention estimates that 300,000 concussions are sustained during sports-related activity in the United States, and more than 62,000 concussions are sustained each year in high-school contact sports;

c. Although concussions are one of the most commonly reported injuries in children and adolescents who participate in sports and recreational activities, little effort and resources have been committed to inform athletes, coaches, and parents and guardians about the causes and symptoms of concussions;

d. If a person sustains a second concussion while still having symptoms of a previous concussion, it can lead to the severe impairment and even the death of the victim, and is referred to as second-impact syndrome; and

e. In order to ensure the safety of student-athletes, it is imperative that athletes, coaches, and parents and guardians are educated about the nature and treatment of concussions and other sports-related head injuries, and that all measures are taken to prevent a student-athlete from experiencing second-impact syndrome.

C.18A:40-41.2 Interscholastic athletic head injury safety training program.

2. a. The Department of Education shall work to develop and implement, by the 2011-2012 school year, an interscholastic athletic head injury safety training program. The program shall be completed by a school physician, a person who coaches a public school district or nonpublic school interscholastic sport, and an athletic trainer involved in a public or nonpublic school interscholastic sports program. The safety training program shall include, but need not be limited to, the following:

(1) the recognition of the symptoms of head and neck injuries, concussions, and injuries related to second-impact syndrome; and

(2) the appropriate amount of time to delay the return to sports competition or practice of a student-athlete who has sustained a concussion or other head injury.

b. The department shall update the safety training program as necessary to ensure that it reflects the most current information available on the nature, risk, and treatment of sports-related concussions and other head injuries.

c. The department shall develop an educational fact sheet that provides information about sports-related concussions and other head injuries. A school district or a nonpublic school that participates in an interscholastic sports program shall distribute the educational fact sheet annually to the parents or guardians of student-athletes and shall obtain a signed acknowledgment of the receipt of the fact sheet by the student-athlete and his parent or guardian.

C.18A:40-41.3 Written policy for school district concerning prevention, treatment of sports-related head injuries.

3. a. Each school district shall develop a written policy concerning the prevention and treatment of sports-related concussions and other head injuries among student-athletes. The policy shall include, but need not be limited to, the procedure to be followed when it is suspected that a student-athlete has sustained a concussion or other head injury. When developing the district policy, a school district shall review the model policy established by the Commissioner of Education pursuant to subsection b. of this section, the policies established by the New Jersey State Interscholastic Athletic Association, the National Collegiate Athletic Association, and the recommendations made by the Brain Injury Association of New Jersey Concussion in Sports Steering Committee, the Athletic Trainers' Society of New Jersey, and other organizations with expertise in the area of preventing or treating sports-related concussions and other head injuries among student-athletes. Each school district shall implement the policy by the 2011-2012 school year.

The policy shall be reviewed annually, and updated as necessary, by the district to ensure that it reflects the most current information available on the prevention, risk, and treatment of sports-related concussions and other head injuries.

b. To assist school districts in developing policies concerning the prevention and treatment of sports-related concussions and other head injuries among student-athletes, the Commissioner of Education shall develop a model policy applicable to grades kindergarten through 12. This model policy shall be issued no later than March 31, 2011.

C.18A:40-41.4 Removal of student athlete from competition, practice; return.

4. A student who participates in an interscholastic sports program and who sustains or is suspected of having sustained a concussion or other head injury while engaged in a sports competition or practice shall be immediately removed from the sports competition or practice. A student-athlete who is removed from competition or practice shall not participate in further sports activity until he is evaluated by a physician or other licensed healthcare provider trained in the evaluation and management of concussions, and receives written clearance from a physician trained in the evaluation and management of concussions to return to competition or practice.

C.18A:40-41.5 Immunity from liability.

5. a. A school district and nonpublic school shall not be liable for the injury or death of a person due to the action or inaction of persons employed by, or under contract with, a youth sports team organization that operates on school grounds, if the youth sports team organization provides the district or nonpublic school, as applicable, with the following:

(1) proof of an insurance policy of an amount of not less than \$50,000 per person, per occurrence insuring the youth sports team organization against liability for any bodily injury suffered by a person; and

(2) a statement of compliance with the school district or nonpublic school's policies for the management of concussions and other head injuries.

b. As used in this section, a "youth sports team organization" means one or more sports teams organized pursuant to a nonprofit or similar charter or which are member teams in a league organized by or affiliated with a county or municipal recreation department.

C.45:9-37.48a Continuing education requirement for athletic trainer.

6. a. The State Board of Medical Examiners shall require each person licensed as an athletic trainer, as a condition for biennial license renewal pursuant to section 14 of P.L.1984, c.203 (C.45:9-37.48), to complete 24 credits of continuing athletic trainer education, which shall include a specific number of credits of instruction on topics related to concussions and head injuries, as determined by the State Board of Medical Examiners.

b. The board shall:

(1) establish standards for continuing athletic trainer education, including the subject matter and content of courses of study; and

(2) accredit education programs offering credit toward continuing athletic trainer education requirements or recognize national or State organizations that may accredit education programs.

c. Each hour of an educational course or program shall be equivalent to one credit of continuing athletic trainer education.

d. The board may, in its discretion, waive requirements for continuing athletic trainer education on an individual basis for reasons of hardship such as illness or disability, retirement of license, or other good cause. A waiver shall apply only to the current biennial renewal period at the time of board issuance.

e. The board shall not require completion of continuing athletic trainer education credits for any licensure period commencing within 12 months of the effective date of this section.

f. The board shall require completion of athletic trainer education credits on a pro-rated basis for any registration period commencing more than 12 months but less than 24 months from the effective date of this section.

g. Prior to license renewal, each licensee shall submit to the board proof of completion of the required number of hours of continuing athletic trainer education.

7. Sections 1 through 5 of this act shall take effect immediately and section 6 shall take effect on the 360th day after the date of enactment.

Approved December 7, 2010.

School Concussion Management Program

Staff Training Materials

All school staff must be trained annually regarding concussions. This is a self study program with 2 different levels of training.

Training for Athletic Directors, Athletic Trainers, Coaching Staff, Physical Education Personal, School Health Personnel and After-School Sports Club Personnel

Each staff member will complete the free online Course: *Concussion in Sports What You Need to Know* by the National Foundation of State High Schools and print out the Course Certificate. Certificates will be maintained by the Athletic department or School Nurse's office.

Course Web site is <http://www.nfhslearn.com/index.aspx>. It takes about 30-45 minutes to complete. Any questions regarding the content of material will be referred to the School Medical Inspector.

In addition, we recommend reviewing the following CDC websites for additional training material and resources. Concussion related materials (wallet cards, posters, tool kits, ect.) can be ordered for free on the CDC website:

CDC Website: Concussion in Sports

<http://www.cdc.gov/concussion/sports/index.html>

CDC Heads Up: Concussion in High School Sports

http://www.cdc.gov/concussion/HeadsUp/high_school.html#6

Concussion Guide for Coaches

http://www.cdc.gov/concussion/pdf/Coach_Guide-a.pdf

Coach's Concussion Wallet Card

http://www.cdc.gov/concussion/pdf/Wallet_Card-a.pdf

Concussion Fact Sheet for Nurses

http://www.cdc.gov/concussion/pdf/TBI_factsheet_NURSE-508-a.pdf

Concussion Signs and Symptoms Checklist

http://www.cdc.gov/concussion/pdf/TBI_schools_checklist_508-a.pdf

CDC Videos, Podcasts, and Other Media

<http://www.cdc.gov/concussion/sports/resources.html>

Training for all other District Personnel

Review all of the following online materials. For any questions about the content, they will be referred to the School Nurse and School Medical Inspector as needed.

Heads Up to Schools: Know Your Concussion ABCs

<http://www.cdc.gov/concussion/HeadsUp/schools.html>

Concussion Signs and Symptoms

http://www.cdc.gov/concussion/signs_symptoms.html.

Concussion Fact Sheet for School Personnel

http://www.cdc.gov/concussion/pdf/TBI_factsheet_TEACHERS-508-a.pdf

Concussion in the Classroom Support Materials provided by the NYSPHSAA

<http://www.nysphsaa.org/safety/>

Concussion in the Classroom brochure and video by Upstate University Hospital/State University of New York

<http://www.upstate.edu/uh/pmr/concussion/classroom.php>

CDC Videos, Podcasts, and Other Media

<http://www.cdc.gov/concussion/sports/resources.html>

Parent/Guardian Education

A section regarding concussions and the concussion management program will be included in the Interscholastic Athletic Packet. The packet must include the CDC factsheet for parents and guardians to review.

CDC factsheet for parents:

http://www.cdc.gov/concussion/pdf/TBI_factsheets_PARENTS-508-a.pdf

Parents/guardians of student-athletes will return a signed and dated acknowledgment of the receipt of the fact sheet. This can be combined with the parental sports consent form. A separate acknowledgement form is required for each sport/activity the student participates in during the school year.

Suggested wording to be included on the acknowledgement form:

“I have reviewed the information regarding concussions and understand the risk of head injuries associated with playing sports.”

Student Education

All students participating in after school intramural/interscholastic sports and sport related clubs (e.g. ski club) will attend an educational lecture regarding concussions prior to the onset of the activity/tryouts. This lecture will be provided by either the Athletic Department or the School Nurse. The lecture material will consist of the following:

1. Watching the following video recommended by the CDC:

Keeping Quiet Can Keep You Out of the Game

<http://www.youtube.com/watch?v=yIqZDbk3M40>

2. CDC Fact Sheet for Athletes

http://www.cdc.gov/concussion/pdf/Athletes_Fact_Sheet-a.pdf

http://www.cdc.gov/concussion/pdf/Athletes_Fact_Sheet_Spanish-a.pdf

After attending the lecture on Concussions, all students in attendance will sign and date the *Student Athlete Concussion Statement* (Attachment 1). The completed signed forms will be maintained in the Athletic Office or other appropriate location. A form is required for each sport/activity the student participates in during the school year.

Student Baseline Testing

All students participating in any athletic sport/club will undergo Baseline Cognitive Testing using one of the following protocols.

1. High Schools and Middle Schools that have an Athletic Trainer will use either:

- A. The ImPACT™ Computer Test and a modified BESS balance test (Attachment 2). This protocol can be done every other year.
- B. The Concussion Baseline Symptom Checklist (Attachment 3) and a modified BESS balance test (Attachment 2). This protocol can be done every other year.

2. Schools that do not have an Athletic Trainer will use the Concussion Baseline Symptom Checklist (Attachment 3). This will be performed yearly.

The results of the baseline testing will be maintained in the Athletic or School Nurse's Office.

Instructions on how to administer the modified BESS can be found at the following link:

http://www.ncaa.org/wps/portal/ncaahome?WCM_GLOBAL_CONTEXT=/ncaa/NCA/A/Academics+and+Athletes/Personal+Welfare/Health+and+Safety/Concussion

Initial Management of Head Injuries at School

Immediately remove the student from all activities if the student a) is suspected of having sustained an injury that could cause a concussion, b) signs of a concussion are observed by others, or c) symptoms of a concussion are reported by the student. Immediately have the Athletic Trainer, Coach, or the School Nurse evaluate the student.

If an Athletic Trainer is present: Use basic on-field assessment and first aid consistent with the standard practices of the athletic trainer. Once a concussion is suspected, perform an on-field assessment with the SCAT2 Form (Attachment 4).

The video on administering the SCAT2 is located at the following link:

http://s3.amazonaws.com/ncaa/web_video/health_and_safety/SCAT2/video.html

If an Athletic Trainer is not present: The Coach or School Nurse will provide basic first aid.

Complete the Concussion Signs & Symptoms Checklist.

http://www.cdc.gov/concussion/pdf/TBI_schools_checklist_508-a.pdf

(Attachment 5)

Disposition of the student

Disposition of the student will be based on the result of the on-site evaluation and clinical condition. Unless the student is being transported to a hospital, a parent or guardian must pick up the student. Students are not allowed to leave on their own accord. It is well documented that in a pediatric population concussion signs and symptoms are not always obvious at the time of the injury.

Parental/Guardian Notification

Immediately notify the student's parent/guardian of the injury and condition of the student. The parent/guardian must take their child for further medical evaluation by their Medical Provider or seek Emergency Room care for any of the Danger Signs listed on the CDC Concussion Fact Sheet for Parents.

Provide the parent/guardian with the following documents:

1. Dear Parent Letter (Attachment 6)
2. Their student's completed Concussion Signs and Symptoms Checklist or the SCAT2 Form
3. CDC's Concussion Fact Sheet for Parents:
http://www.cdc.gov/concussion/pdf/TBI_factsheets_PARENTS-508-a.pdf
4. The Physician's Medical Evaluation/Return to School Form. (Attachment 7)

REMEMBER: NO ATHLETE SUSPECTED OF HAVING A CONCUSSION IS PERMITTED TO RETURN TO PLAY THE SAME DAY.

Initial Physician Medical Evaluation

All students with a suspected concussion must be evaluated by a physician prior to returning to school. The student's physician must make a determination on the presence or absence of a concussion. Further management will be based on the Physician's Medical Evaluation/Return to School Form (Attachment7).

No Concussion

If the physician determines the student does not have a concussion, the physician may return the student to school without any academic or activity restrictions. All physician clearance notes and event documentation will be reviewed by the School Medical Inspector before the student may return to any athletic activity. The

School Medical Inspector will have final authority in recommending further evaluation and will make the final decision in returning the student to any school sponsored athletic activity.

Student has a Concussion

If the student has a concussion, their physician will appropriately treat the student and shall be required to provide a medical release, indicating when the student is able to return to school. All physician clearance notes and event documentation will be reviewed by the School Medical Inspector.

The School Medical Inspector will have final authority in recommending further evaluation and will make the final decision in returning the student to school or any school sponsored athletic activity.

Academic Workload Reduction

While initially absent from school, the student will not be allowed to resume physical activities and they will be placed on a reduced academic workload.

Reduce the academic workload until the student is cleared for full athletic activities by their physician. Individualize the academic workload based on the student's condition with input from teachers, administrators, School Medical Inspector, parents/guardians and the student.

Consider the following academic accommodations. Tailor these according to the student's needs:

- Home Instruction
- Gradual re-integration into school (e.g., student returns part-time before building up to a full schedule)
- Student is not required to make up all missed work, and provide extra help where needed
- Provide rest time or breaks during the day
- Reduce overall homework and class work load
- Postpone any tests until recovery is complete
- Provide flexibility regarding assignment due dates
- Provide preferential seating to allow for closer teacher monitoring and decreased distractions
- Create a 504 Plan/IEP, if necessary

While no formal guidelines exist regarding academic accommodations, guidance is provided at the following websites:

Concussion in the Classroom Support Materials provided by the NYSPHSAA
<http://www.nysphsaa.org/safety/>

Concussion in the Classroom brochure and video by Upstate University
Hospital/State University of New York
<http://www.upstate.edu/uh/pmr/concussion/classroom.php>

Returning to School

When the student is ready to return to school, have their physician provide a completed Physician Concussion Return to School Form (Attachment 7) stating either

1. The student continues to require a reduced academic workload and is restricted from all athletic activities.

or

2. The student is cleared for full academic workload and athletic activities and must complete the Graduated Return-to-Athletics Protocol.

When the student remains on a reduced academic workload and is restricted from athletic activities, the School Nurse will evaluate the student weekly using the *Nursing Follow-up Concussion Checklist* (Attachment 8). For schools that utilize the ImPACT™ Computer Test, the Athletic Trainer will administer the ImPACT™ Computer Test weekly.

Resumption of Athletic Activities without Restrictions

When the student's physician clears the student for full academic workload and athletic activities, repeat baseline testing in order to compare the result to the initial baseline scores.

High Schools and Middle Schools that have an Athletic Trainer will use either:

- A. The ImPACT™ Computer Test and a modified BESS balance test (Attachment 2).

B. The Concussion Baseline Symptom Checklist (Attachment 3) and a modified BESS balance test (Attachment2).

Schools that do not have an Athletic Trainer will use Concussion Baseline Symptom Checklist (Attachment 3).

Once the baseline testing is repeated, have the School Medical Inspector review the entire medical documentation packet. The School Medical Inspector will determine if the student is ready to participate in the Graduated Return-to-Athletics Protocol. The School Medical Inspector reserves the right to request an in-office evaluation of the student to confirm that a student is ready to participate in Graduated Return-to-Athletics Protocol. If this is the case, the student's insurance will be billed for this evaluation.

Graduated Return-to-Athletics Protocol

The School Medical Inspector will create and individualize a Graduated Return-to-Athletics Protocol based on the student's grade and level of athletic activity. The Athletic Trainer, Coach, Athletic Director or Physical Education Teacher will administer it under the supervision of the School Medical Inspector.

Graduated Return-to-Athletics Protocol consists of 6 progression levels. Administer one level each day (24 hours apart). The student must be symptom free before proceeding to the next level. If any symptoms occur during the progression of the protocol, return the student to the previous level and complete that level after a 24 hour rest period. If there are any questions, contact the School Medical Inspector.

Table 1: Graduate Return-to-Athletics Protocol - Progression Levels

Level 1	No activity with complete physical and cognitive rest
Level 2	Light aerobic exercise (less than 70% of maximum heart rate)
Level 3	Sport specific exercise (drills specific to athlete's sport)
Level 4	Non-contact training drills (more intense sport drills with no contact from other players)
Level 5	Full contact practice/Gym (following medical clearance)
Level 6	Return to play (normal game play)

Complete the Graduated Return-to-Athletics Protocol Form after each level. A sample Graduated Return-to-Athletics Protocol Form is attached (Attachment 9). Individualized forms will be created by the School Medical Inspector for each student.

Final School Medical Inspector Review

The School Medical Inspector will sign off on the successfully completed Graduated Return-to-Athletics Protocol. The student is now cleared for full athletic and academic activities. Provide a clearance letter to the parent/guardian.

Clearance letter suggested wording (on school letterhead):

Date_____

Dear_____

Your child_____ has successfully completed the Graduated Return-to-Athletic Protocol and is now cleared for full school athletic activities and academic responsibilities. If you have any questions regarding this, please contact the school. If you have any further medical concerns regarding your child's recent concussion, please contact your Physician.

Sincerely,

Figure 1: Baseline Flow Sheet

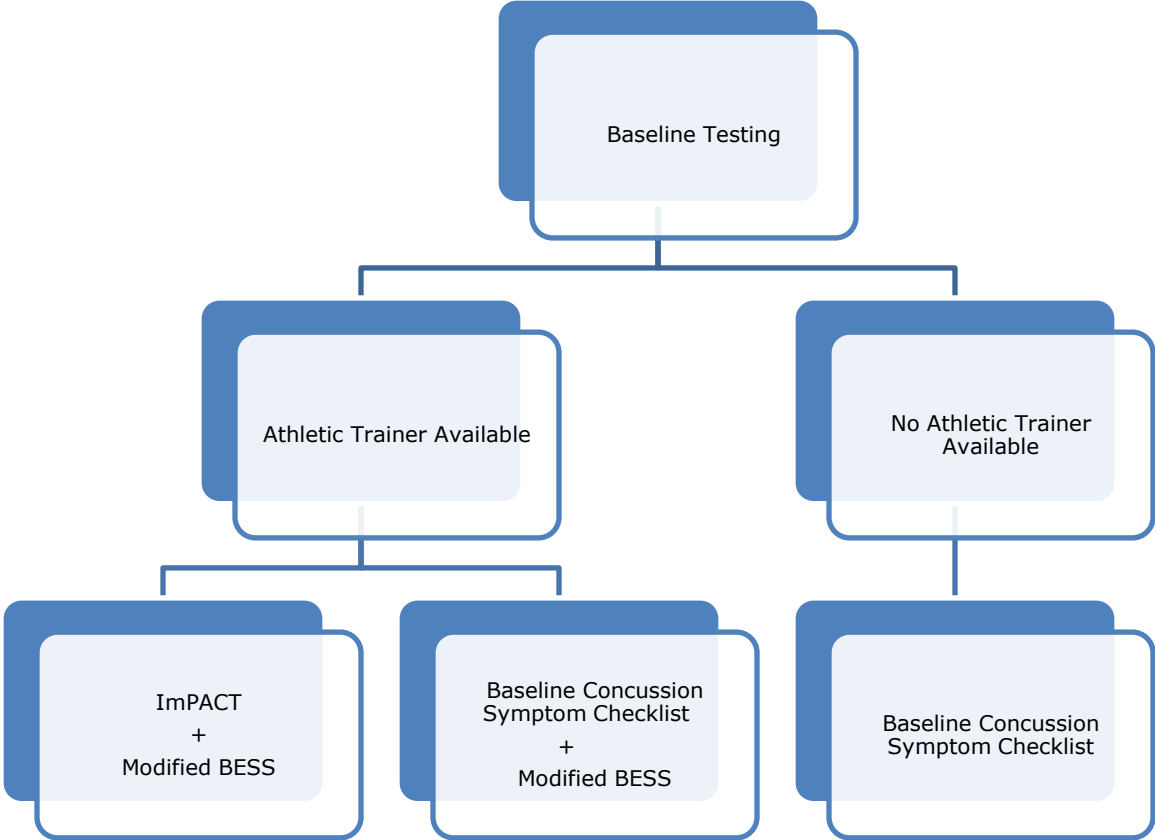


Figure 2: Management of a Possible Concussion

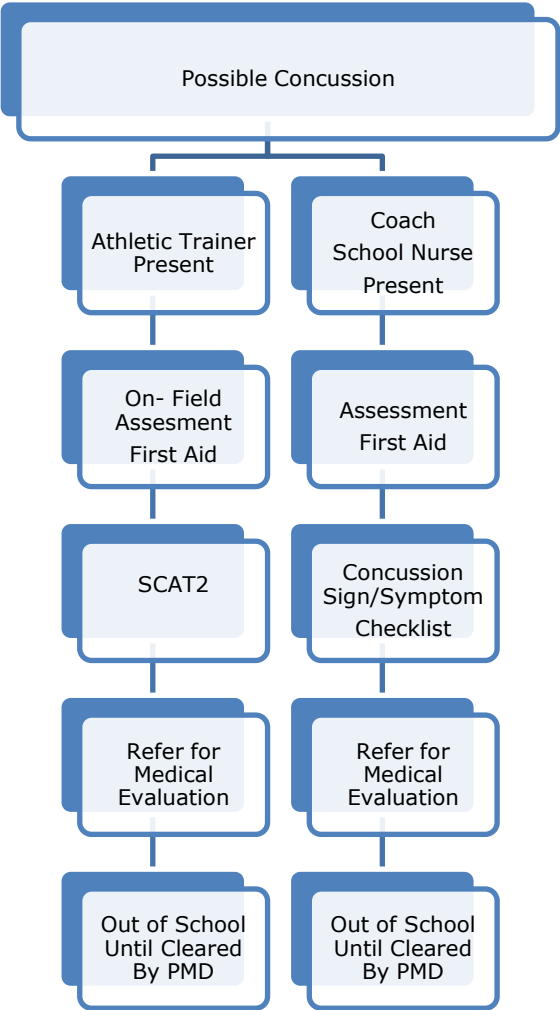


Figure 3: Initial PMD Evaluation

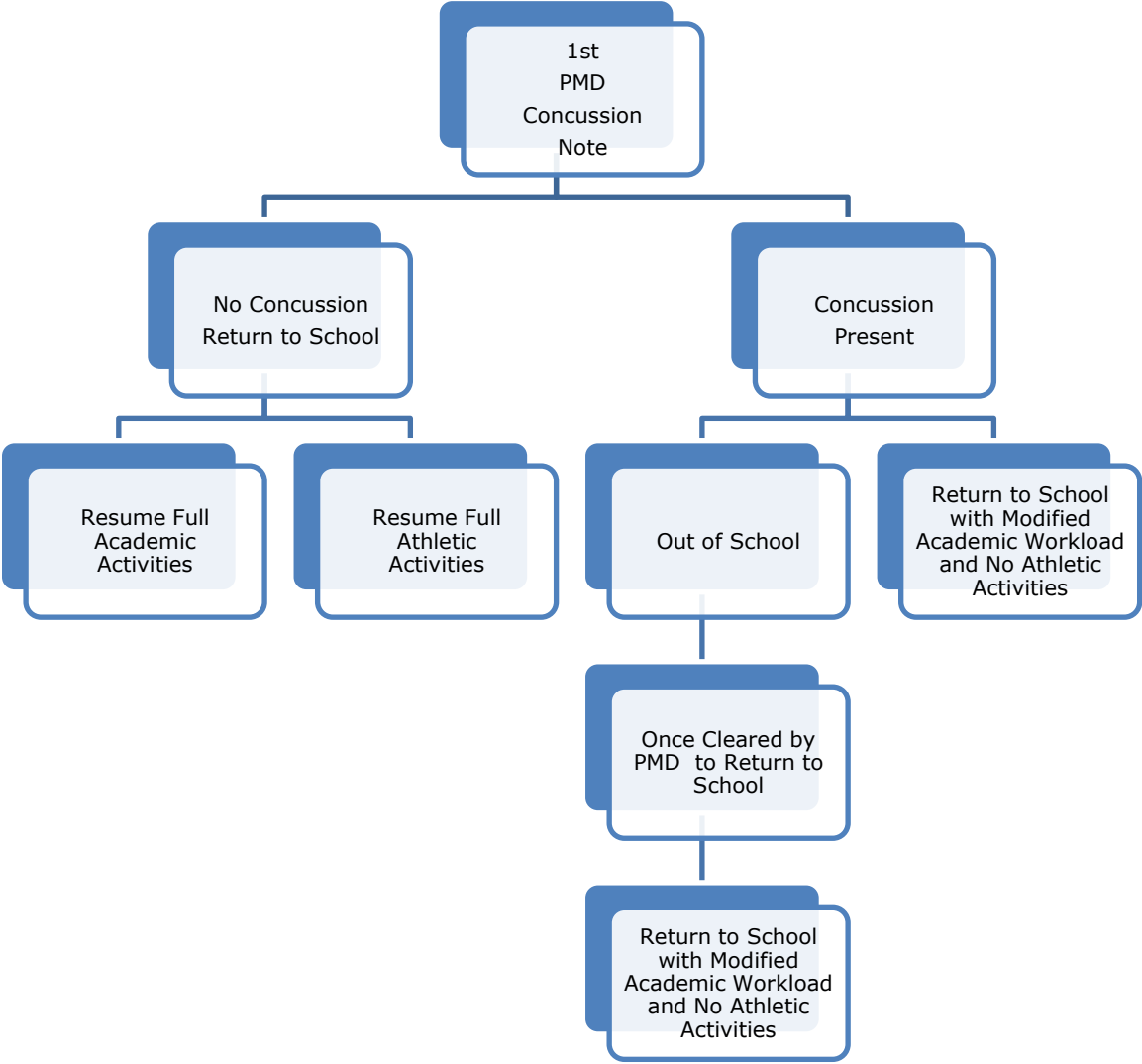
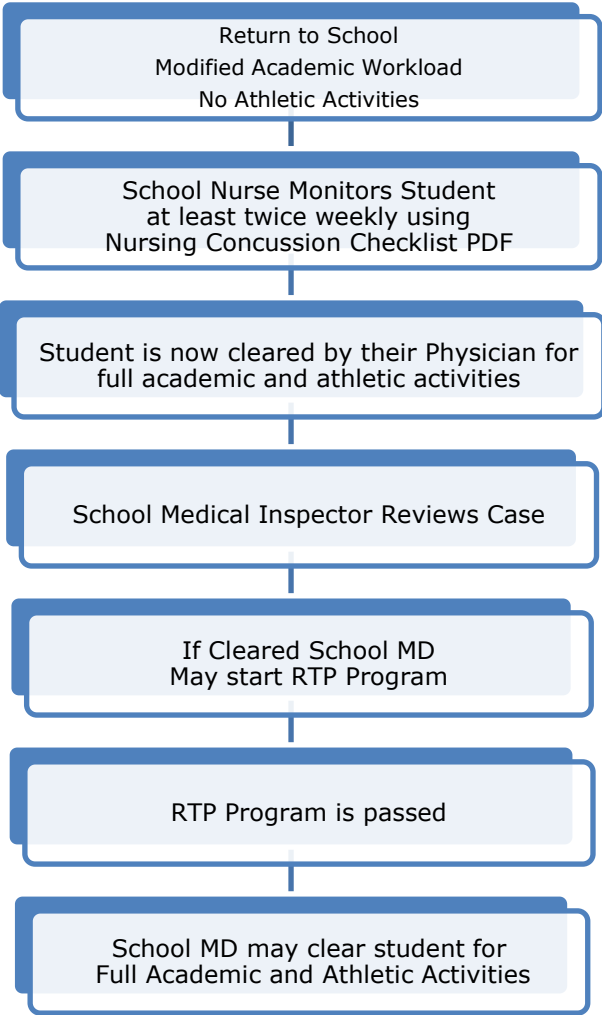


Figure 4: Returning to School



Frequently Asked Questions

Page under development

Attachment 1: Student Athlete Concussion Statement

Student-Athlete Concussion Statement

- I understand that it is my responsibility to report all injuries and illnesses to my athletic trainer, coach, athletic director, physical education teacher and/or school nurse.
- I have read and understand the *CDC Athlete Concussion Fact Sheet*.

After reading *CDC Athlete Concussion Fact Sheet*, I am aware of the following information:

_____ A concussion is a brain injury, which I am responsible for reporting to my
Initial athletic trainer, coach, athletic director, physical education teacher and/or school nurse.

_____ A concussion can affect my ability to perform everyday activities, and affect
Initial reaction time, balance, sleep, and classroom performance.

_____ You cannot see a concussion, but you might notice some of the symptoms
Initial right away. Other symptoms can show up hours or days after the injury.

_____ If I suspect a teammate has a concussion, I am responsible for reporting the
Initial injury to my athletic trainer, coach, athletic director, physical education teacher and/or school nurse.

_____ I will not return to play in a game or practice if I have received a blow to
Initial the head or body that results in concussion-related symptoms.

_____ Following a concussion the brain needs time to heal. You are much more likely
Initial to have a repeat concussion if you return to play before your symptoms resolve.

Signature of Student-Athlete

Date

Printed name of Student-Athlete

Attachment 2: Modified BESS Balance Test

Name _____

Date of Assessment _____

Balance examination

This balance testing is based on a modified version of the Balance Error Scoring System (BESS)⁶. A stopwatch or watch with a second hand is required for this testing.

Balance testing

"I am now going to test your balance. Please take your shoes off, roll up your pant legs above ankle (if applicable), and remove any ankle taping (if applicable). This test will consist of three twenty second tests with different stances."

(a) Double leg stance:

"The first stance is standing with your feet together with your hands on your hips and with your eyes closed. You should try to maintain stability in that position for 20 seconds. I will be counting the number of times you move out of this position. I will start timing when you are set and have closed your eyes."

(b) Single leg stance:

"If you were to kick a ball, which foot would you use? [This will be the dominant foot] Now stand on your non-dominant foot. The dominant leg should be held in approximately 30 degrees of hip flexion and 45 degrees of knee flexion. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."

(c) Tandem stance:

"Now stand heel-to-toe with your non-dominant foot in back. Your weight should be evenly distributed across both feet. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."

Balance testing – types of errors

1. Hands lifted off iliac crest
2. Opening eyes
3. Step, stumble, or fall
4. Moving hip into > 30 degrees abduction
5. Lifting forefoot or heel
6. Remaining out of test position > 5 sec

Each of the 20-second trials is scored by counting the errors, or deviations from the proper stance, accumulated by the athlete. The examiner will begin counting errors only after the individual has assumed the proper start position. **The modified BESS is calculated by adding one error point for each error during the three 20-second tests. The maximum total number of errors for any single condition is 10.** If a athlete commits multiple errors simultaneously, only one error is recorded but the athlete should quickly return to the testing position, and counting should resume once subject is set. Subjects that are unable to maintain the testing procedure for a minimum of **five seconds** at the start are assigned the highest possible score, ten, for that testing condition.

Which foot was tested: Left Right
(i.e. which is the **non-dominant** foot)

Condition	Total errors
Double Leg Stance (feet together)	of 10
Single leg stance (non-dominant foot)	of 10
Tandem stance (non-dominant foot at back)	of 10
Balance examination score (30 minus total errors)	of 30

Attachment 3: Concussion Baseline Symptom Checklist

Baseline Concussion Symptom Checklist

Student's Name _____

Date _____

Grade _____

Age _____

How do you feel?

You should score yourself on the following symptoms, based on how you feel now.

	none	mild	moderate	severe			
Headache	0	1	2	3	4	5	6
"Pressure in head"	0	1	2	3	4	5	6
Neck Pain	0	1	2	3	4	5	6
Nausea or vomiting	0	1	2	3	4	5	6
Dizziness	0	1	2	3	4	5	6
Blurred vision	0	1	2	3	4	5	6
Balance problems	0	1	2	3	4	5	6
Sensitivity to light	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feeling slowed down	0	1	2	3	4	5	6
Feeling like "in a fog"	0	1	2	3	4	5	6
"Don't feel right"	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Difficulty remembering	0	1	2	3	4	5	6
Fatigue or low energy	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
Trouble falling asleep (if applicable)	0	1	2	3	4	5	6
More emotional	0	1	2	3	4	5	6
Irritability	0	1	2	3	4	5	6
Sadness	0	1	2	3	4	5	6
Nervous or Anxious	0	1	2	3	4	5	6

Total number of symptoms (Maximum possible 22)

Symptom severity score

(Add all scores in table, maximum possible: 22 x 6 = 132)

Do the symptoms get worse with physical activity? Y N

Do the symptoms get worse with mental activity? Y N

Overall rating

If you know the athlete well prior to the injury, how different is the athlete acting compared to his / her usual self? Please circle one response.

no different

very different

unsure

Attachment 4: SCAT2 Form

SCAT2



Sport Concussion Assessment Tool 2

Name

Sport/team

Date/time of injury

Date/time of assessment

Age Gender M F

Years of education completed

Examiner

What is the SCAT2?¹

This tool represents a standardized method of evaluating injured athletes for concussion and can be used in athletes aged from 10 years and older. It supersedes the original SCAT published in 2005². This tool also enables the calculation of the Standardized Assessment of Concussion (SAC)^{3,4} score and the Maddocks questions⁵ for sideline concussion assessment.

Instructions for using the SCAT2

The SCAT2 is designed for the use of medical and health professionals. Preseason baseline testing with the SCAT2 can be helpful for interpreting post-injury test scores. Words in *italics* throughout the SCAT2 are the instructions given to the athlete by the tester.

This tool may be freely copied for distribution to individuals, teams, groups and organizations.

What is a concussion?

A concussion is a disturbance in brain function caused by a direct or indirect force to the head. It results in a variety of non-specific symptoms (like those listed below) and often does not involve loss of consciousness. Concussion should be suspected in the presence of **any one or more** of the following:

- Symptoms (such as headache), or
- Physical signs (such as unsteadiness), or
- Impaired brain function (e.g. confusion) or
- Abnormal behaviour.

Any athlete with a suspected concussion should be REMOVED FROM PLAY, medically assessed, monitored for deterioration (i.e., should not be left alone) and should not drive a motor vehicle.

Symptom Evaluation

How do you feel?

You should score yourself on the following symptoms, based on how you feel now.

	none	mild	moderate	severe			
Headache	0	1	2	3	4	5	6
"Pressure in head"	0	1	2	3	4	5	6
Neck Pain	0	1	2	3	4	5	6
Nausea or vomiting	0	1	2	3	4	5	6
Dizziness	0	1	2	3	4	5	6
Blurred vision	0	1	2	3	4	5	6
Balance problems	0	1	2	3	4	5	6
Sensitivity to light	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feeling slowed down	0	1	2	3	4	5	6
Feeling like "in a fog"	0	1	2	3	4	5	6
"Don't feel right"	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Difficulty remembering	0	1	2	3	4	5	6
Fatigue or low energy	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
Trouble falling asleep (if applicable)	0	1	2	3	4	5	6
More emotional	0	1	2	3	4	5	6
Irritability	0	1	2	3	4	5	6
Sadness	0	1	2	3	4	5	6
Nervous or Anxious	0	1	2	3	4	5	6

Total number of symptoms (Maximum possible 22)

Symptom severity score

(Add all scores in table, maximum possible: 22 x 6 = 132)

Do the symptoms get worse with physical activity? Y N

Do the symptoms get worse with mental activity? Y N

Overall rating

If you know the athlete well prior to the injury, how different is the athlete acting compared to his / her usual self? Please circle one response.

no different

very different

unsure

Cognitive & Physical Evaluation

1 Symptom score (from page 1)
22 **minus** number of symptoms of 22

2 Physical signs score
Was there loss of consciousness or unresponsiveness? Y N
If yes, how long? minutes
Was there a balance problem/unsteadiness? Y N
Physical signs score (1 point for each negative response) of 2

3 Glasgow coma scale (GCS)

Best eye response (E)

No eye opening	1
Eye opening in response to pain	2
Eye opening to speech	3
Eyes opening spontaneously	4

Best verbal response (V)

No verbal response	1
Incomprehensible sounds	2
Inappropriate words	3
Confused	4
Oriented	5

Best motor response (M)

No motor response	1
Extension to pain	2
Abnormal flexion to pain	3
Flexion/Withdrawal to pain	4
Localizes to pain	5
Obeys commands	6

Glasgow Coma score (E + V + M) of 15
GCS should be recorded for all athletes in case of subsequent deterioration.

4 Sideline Assessment – Maddocks Score
"I am going to ask you a few questions, please listen carefully and give your best effort."

Modified Maddocks questions (1 point for each correct answer)

At what venue are we at today?	0	1
Which half is it now?	0	1
Who scored last in this match?	0	1
What team did you play last week/game?	0	1
Did your team win the last game?	0	1

Maddocks score of 5
Maddocks score is validated for sideline diagnosis of concussion only and is not included in SCAT 2 summary score for serial testing.

5 Cognitive assessment Standardized Assessment of Concussion (SAC)

Orientation (1 point for each correct answer)

What month is it?	0	1
What is the date today?	0	1
What is the day of the week?	0	1
What year is it?	0	1
What time is it right now? (within 1 hour)	0	1

Orientation score of 5

Immediate memory
"I am going to test your memory. I will read you a list of words and when I am done, repeat back as many words as you can remember, in any order."

Trials 2 & 3:
"I am going to repeat the same list again. Repeat back as many words as you can remember in any order, even if you said the word before."

Complete all 3 trials regardless of score on trial 1 & 2. Read the words at a rate of one per second. Score 1 pt. for each correct response. Total score equals sum across all 3 trials. Do not inform the athlete that delayed recall will be tested.

List	Trial 1	Trial 2	Trial 3	Alternative word list
elbow	0 1	0 1	0 1	candle baby finger
apple	0 1	0 1	0 1	paper monkey penny
carpet	0 1	0 1	0 1	sugar perfume blanket
saddle	0 1	0 1	0 1	sandwich sunset lemon
bubble	0 1	0 1	0 1	wagon iron insect
Total				

Immediate memory score of 15

Concentration
Digits Backward:
"I am going to read you a string of numbers and when I am done, you repeat them back to me backwards, in reverse order of how I read them to you. For example, if I say 7-1-9, you would say 9-1-7."

If correct, go to next string length. If incorrect, read trial 2. One point possible for each string length. Stop after incorrect on both trials. The digits should be read at the rate of one per second.

	Alternative digit lists
4-9-3	0 1 6-2-9 5-2-6 4-1-5
3-8-1-4	0 1 3-2-7-9 1-7-9-5 4-9-6-8
6-2-9-7-1	0 1 1-5-2-8-6 3-8-5-2-7 6-1-8-4-3
7-1-8-4-6-2	0 1 5-3-9-1-4-8 8-3-1-9-6-4 7-2-4-8-5-6

Months in Reverse Order:
"Now tell me the months of the year in reverse order. Start with the last month and go backward. So you'll say December, November ... Go ahead"

1 pt. for entire sequence correct
Dec-Nov-Oct-Sept-Aug-Jul-Jun-May-Apr-Mar-Feb-Jan 0 1

Concentration score of 5

¹ This tool has been developed by a group of international experts at the 3rd International Consensus meeting on Concussion in Sport held in Zurich, Switzerland in November 2008. The full details of the conference outcomes and the authors of the tool are published in British Journal of Sports Medicine, 2009, volume 43, supplement 1. The outcome paper will also be simultaneously co-published in the May 2009 issues of Clinical Journal of Sports Medicine, Physical Medicine & Rehabilitation, Journal of Athletic Training, Journal of Clinical Neuroscience, Journal of Science & Medicine in Sport, Neurosurgery, Scandinavian Journal of Science & Medicine in Sport and the Journal of Clinical Sports Medicine.

² McCrory P et al. Summary and agreement statement of the 2nd International Conference on Concussion in Sport, Prague 2004. British Journal of Sports Medicine. 2005; 39: 196-204

³ McCrea M. Standardized mental status testing of acute concussion. Clinical Journal of Sports Medicine. 2001; 11: 176-181

⁴ McCrea M, Randolph C, Kelly J. Standardized Assessment of Concussion: Manual for administration, scoring and interpretation. Waukesha, Wisconsin, USA.

⁵ Maddocks, DL; Dicker, GD; Saling, MM. The assessment of orientation following concussion in athletes. Clin J Sport Med. 1995;5(1):32-3

⁶ Guskiewicz KM. Assessment of postural stability following sport-related concussion. Current Sports Medicine Reports. 2003; 2: 24-30

Balance examination

This balance testing is based on a modified version of the Balance Error Scoring System (BESS)[®]. A stopwatch or watch with a second hand is required for this testing.

Balance testing

"I am now going to test your balance. Please take your shoes off, roll up your pant legs above ankle (if applicable), and remove any ankle taping (if applicable). This test will consist of three twenty second tests with different stances."

(a) Double leg stance:

"The first stance is standing with your feet together with your hands on your hips and with your eyes closed. You should try to maintain stability in that position for 20 seconds. I will be counting the number of times you move out of this position. I will start timing when you are set and have closed your eyes."

(b) Single leg stance:

"If you were to kick a ball, which foot would you use? [This will be the dominant foot] Now stand on your non-dominant foot. The dominant leg should be held in approximately 30 degrees of hip flexion and 45 degrees of knee flexion. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."

(c) Tandem stance:

"Now stand heel-to-toe with your non-dominant foot in back. Your weight should be evenly distributed across both feet. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."

Balance testing – types of errors

1. Hands lifted off iliac crest
2. Opening eyes
3. Step, stumble, or fall
4. Moving hip into > 30 degrees abduction
5. Lifting forefoot or heel
6. Remaining out of test position > 5 sec

Each of the 20-second trials is scored by counting the errors, or deviations from the proper stance, accumulated by the athlete. The examiner will begin counting errors only after the individual has assumed the proper start position. **The modified BESS is calculated by adding one error point for each error during the three 20-second tests. The maximum total number of errors for any single condition is 10.** If a athlete commits multiple errors simultaneously, only one error is recorded but the athlete should quickly return to the testing position, and counting should resume once subject is set. Subjects that are unable to maintain the testing procedure for a minimum of **five seconds** at the start are assigned the highest possible score, ten, for that testing condition.

Which foot was tested: Left Right
(i.e. which is the **non-dominant** foot)

Condition	Total errors
Double Leg Stance (feet together)	of 10
Single leg stance (non-dominant foot)	of 10
Tandem stance (non-dominant foot at back)	of 10
Balance examination score (30 minus total errors)	of 30

Coordination examination

Upper limb coordination

Finger-to-nose (FTN) task: *"I am going to test your coordination now. Please sit comfortably on the chair with your eyes open and your arm (either right or left) outstretched (shoulder flexed to 90 degrees and elbow and fingers extended). When I give a start signal, I would like you to perform five successive finger to nose repetitions using your index finger to touch the tip of the nose as quickly and as accurately as possible."*

Which arm was tested: Left Right

Scoring: 5 correct repetitions in < 4 seconds = 1

Note for testers: Athletes fail the test if they do not touch their nose, do not fully extend their elbow or do not perform five repetitions. Failure should be scored as 0.

Coordination score

of 1

Cognitive assessment

Standardized Assessment of Concussion (SAC)

Delayed recall

"Do you remember that list of words I read a few times earlier? Tell me as many words from the list as you can remember in any order."

Circle each word correctly recalled. Total score equals number of words recalled.

List	Alternative word list		
elbow	candle	baby	finger
apple	paper	monkey	penny
carpet	sugar	perfume	blanket
saddle	sandwich	sunset	lemon
bubble	wagon	iron	insect

Delayed recall score

of 5

Overall score

Test domain	Score
Symptom score	of 22
Physical signs score	of 2
Glasgow Coma score (E + V + M)	of 15
Balance examination score	of 30
Coordination score	of 1
Subtotal	of 70
Orientation score	of 5
Immediate memory score	of 5
Concentration score	of 15
Delayed recall score	of 5
SAC subtotal	of 30
SCAT2 total	of 100
Maddocks Score	of 5

Definitive normative data for a SCAT2 "cut-off" score is not available at this time and will be developed in prospective studies. Embedded within the SCAT2 is the SAC score that can be utilized separately in concussion management. The scoring system also takes on particular clinical significance during serial assessment where it can be used to document either a decline or an improvement in neurological functioning.

Scoring data from the SCAT2 or SAC should not be used as a stand alone method to diagnose concussion, measure recovery or make decisions about an athlete's readiness to return to competition after concussion.

Athlete Information

Any athlete suspected of having a concussion should be removed from play, and then seek medical evaluation.

Signs to watch for

Problems could arise over the first 24-48 hours. You should not be left alone and must go to a hospital at once if you:

- Have a headache that gets worse
- Are very drowsy or can't be awakened (woken up)
- Can't recognize people or places
- Have repeated vomiting
- Behave unusually or seem confused; are very irritable
- Have seizures (arms and legs jerk uncontrollably)
- Have weak or numb arms or legs
- Are unsteady on your feet; have slurred speech

Remember, it is better to be safe.

Consult your doctor after a suspected concussion.

Return to play

Athletes should not be returned to play the same day of injury.

When returning athletes to play, they should follow a stepwise symptom-limited program, with stages of progression. For example:

1. rest until asymptomatic (physical and mental rest)
2. light aerobic exercise (e.g. stationary cycle)
3. sport-specific exercise
4. non-contact training drills (start light resistance training)
5. full contact training after medical clearance
6. return to competition (game play)

There should be approximately 24 hours (or longer) for each stage and the athlete should return to stage 1 if symptoms recur. Resistance training should only be added in the later stages.

Medical clearance should be given before return to play.

Tool	Test domain	Time	Score			
	Date tested					
	Days post injury					
SCAT2	Symptom score					
	Physical signs score					
	Glasgow Coma score (E + V + M)					
	Balance examination score					
	Coordination score					
SAC	Orientation score					
	Immediate memory score					
	Concentration score					
	Delayed recall score					
SAC Score						
Total	SCAT2					
Symptom severity score (max possible 132)						
Return to play			<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N

Additional comments

Concussion injury advice (To be given to concussed athlete)

This patient has received an injury to the head. A careful medical examination has been carried out and no sign of any serious complications has been found. It is expected that recovery will be rapid, but the patient will need monitoring for a further period by a responsible adult. Your treating physician will provide guidance as to this timeframe.

If you notice any change in behaviour, vomiting, dizziness, worsening headache, double vision or excessive drowsiness, please telephone the clinic or the nearest hospital emergency department immediately.

Other important points:

- Rest and avoid strenuous activity for at least 24 hours
- No alcohol
- No sleeping tablets
- Use paracetamol or codeine for headache. Do not use aspirin or anti-inflammatory medication
- Do not drive until medically cleared
- Do not train or play sport until medically cleared

Patient's name

Date/time of injury

Date/time of medical review

Treating physician

Contact details or stamp

Clinic phone number

Attachment 5: CDC Concussion Signs and Symptoms Checklist

Concussion Signs and Symptoms Checklist

**Heads Up to Schools:
KNOW YOUR
CONCUSSION
ABCs**

Assess the situation Be alert for signs and symptoms Contact a health care professional

Student's Name: _____ Student's Grade: _____ Date/Time of Injury: _____

Where and How Injury Occurred: *(Be sure to include cause and force of the hit or blow to the head.)* _____

Description of Injury: *(Be sure to include information about any loss of consciousness and for how long, memory loss, or seizures following the injury, or previous concussions, if any. See the section on Danger Signs on the back of this form.)* _____

DIRECTIONS:

Use this checklist to monitor students who come to your office with a head injury. Students should be monitored for a minimum of 30 minutes. Check for signs or symptoms when the student first arrives at your office, fifteen minutes later, and at the end of 30 minutes.

Students who experience one or more of the signs or symptoms of concussion after a bump, blow, or jolt to the head should be referred to a health care professional with experience in evaluating for concussion. For those instances when a parent is coming to take the student to a health care professional, observe the student for any new or worsening symptoms right before the student leaves. Send a copy of this checklist with the student for the health care professional to review.

OBSERVED SIGNS	0 MINUTES	15 MINUTES	30 MINUTES	<input type="checkbox"/> MINUTES Just prior to leaving
Appears dazed or stunned				
Is confused about events				
Repeats questions				
Answers questions slowly				
Can't recall events <i>prior</i> to the hit, bump, or fall				
Can't recall events <i>after</i> the hit, bump, or fall				
Loses consciousness (even briefly)				
Shows behavior or personality changes				
Forgets class schedule or assignments				
PHYSICAL SYMPTOMS				
Headache or "pressure" in head				
Nausea or vomiting				
Balance problems or dizziness				
Fatigue or feeling tired				
Blurry or double vision				
Sensitivity to light				
Sensitivity to noise				
Numbness or tingling				
Does not "feel right"				
COGNITIVE SYMPTOMS				
Difficulty thinking clearly				
Difficulty concentrating				
Difficulty remembering				
Feeling more slowed down				
Feeling sluggish, hazy, foggy, or groggy				
EMOTIONAL SYMPTOMS				
Irritable				
Sad				
More emotional than usual				
Nervous				

To download this checklist in Spanish, please visit: www.cdc.gov/Concussion. Para obtener una copia electrónica de esta lista de síntomas en español, por favor visite: www.cdc.gov/Concussion.

Danger Signs:

Be alert for symptoms that worsen over time. The student should be seen in an emergency department right away if s/he has:

- One pupil (the black part in the middle of the eye) larger than the other
- Drowsiness or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness, or agitation
- Unusual behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)

Additional Information About This Checklist:

This checklist is also useful if a student appears to have sustained a head injury outside of school or on a previous school day. In such cases, be sure to ask the student about possible sleep symptoms. Drowsiness, sleeping more or less than usual, or difficulty falling asleep may indicate a concussion.

To maintain confidentiality and ensure privacy, this checklist is intended only for use by appropriate school professionals, health care professionals, and the student's parent(s) or guardian(s).

For a free tear-off pad with additional copies of this form, or for more information on concussion, visit: www.cdc.gov/Concussion.

Resolution of Injury:

- __ Student returned to class
- __ Student sent home
- __ Student referred to health care professional with experience in evaluating for concussion

SIGNATURE OF SCHOOL PROFESSIONAL COMPLETING THIS FORM: _____

TITLE: _____

COMMENTS:

Attachment 6: Sample Dear Parent Letter

[School Letterhead]

Date

Dear Parent/Guardian,

Your child sustained a possible concussion today. We are requesting that you seek prompt medical evaluation for your child by your Medical Provider or in the Emergency Room. A copy of your child's concussion evaluation is attached as well as an information sheet created by the CDC (Center for Disease Control) about Concussions. Please review this material.

Please note in order for your child to return to school, your Medical Provider must complete the attached Physician Concussion Return to School Form.

While your child is recovering from their concussion, they will be removed from all physical activities and will have a reduced academic workload. This reduced academic workload will be individualized for your child.

Please contact the school nurse the following day to provide an update on your child's condition.

Sincerely,

Attachment 7: The Physician's Medical Evaluation/Return to School Form

Physician Concussion Return to School Form

This form is adapted from the Acute Concussion Evaluation (ACE) care plan on the CDC web site (www.cdc.gov/injury). All medical providers are encouraged to review this site if they have questions regarding the latest information on the evaluation and care of the scholastic athlete following a concussion injury. **Please initial any recommendations that you select.**

Athlete's Name _____ Date of Birth: _____
Date of Injury: _____

This return to play plan is based on today's evaluation. Date of Evaluation: _____

Care plan completed by: _____ Return to this office. Date/Time _____
Return to school on (date) _____

RETURN TO SPORTS

1. Athletes should not return to practice or play the same day that their head injury occurred.
2. Athletes should never return to play or practice if they still have ANY symptoms

ACADEMICS: Students not cleared for full participation in sports will automatically be considered as requiring a reduced/tailored academic workload.

The following are my recommendations at the present time:

- _____ No evidence of initial concussion. Cleared for full academic and athletic activities.
- _____ Student does have a concussion. No School until _____.
- _____ Student does have a concussion. May return to school with a reduced academic workload and no athletic activities.
- _____ Concussion resolved. Cleared for full participation in all academic and athletic activities without restrictions after completing the Gradual Return to Play Plan.

Medical Office Information (Please Print/Stamp)

Physician's Name _____ Physician's Office phone _____

Physician's Signature _____ Office Address _____

Graduated Return-to-Athletics (Graduated Return to Play Plan)

The School Medical Inspector will create and individualize a Graduated Return-to-Athletics Protocol based on the student's grade and level of athletic activity. The Athletic Trainer, Coach, Athletic Director or Physical Education Teacher will administer it under the supervision of the School Medical Inspector.

Attachment 8: Nursing Follow-up Concussion Checklist

Nursing Follow-up Concussion Symptom Checklist

Student's Name _____
Date _____
Date of Concussion _____
Grade _____
Age _____

How do you feel?

You should score yourself on the following symptoms, based on how you feel now.

	none	mild	moderate	severe			
Headache	0	1	2	3	4	5	6
"Pressure in head"	0	1	2	3	4	5	6
Neck Pain	0	1	2	3	4	5	6
Nausea or vomiting	0	1	2	3	4	5	6
Dizziness	0	1	2	3	4	5	6
Blurred vision	0	1	2	3	4	5	6
Balance problems	0	1	2	3	4	5	6
Sensitivity to light	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feeling slowed down	0	1	2	3	4	5	6
Feeling like "in a fog"	0	1	2	3	4	5	6
"Don't feel right"	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Difficulty remembering	0	1	2	3	4	5	6
Fatigue or low energy	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
Trouble falling asleep (if applicable)	0	1	2	3	4	5	6
More emotional	0	1	2	3	4	5	6
Irritability	0	1	2	3	4	5	6
Sadness	0	1	2	3	4	5	6
Nervous or Anxious	0	1	2	3	4	5	6

Total number of symptoms (Maximum possible 22)

Symptom severity score

(Add all scores in table, maximum possible: 22 x 6 = 132)

Do the symptoms get worse with physical activity? Y N

Do the symptoms get worse with mental activity? Y N

Overall rating

If you know the athlete well prior to the injury, how different is the athlete acting compared to his / her usual self? Please circle one response.

no different
 very different
 unsure

Attachment 9: Sample Graduated Return-to-Athletics Protocol Form

Graduated Return-to-Athletics Protocol

Student's Name _____ Date _____

Age _____ Grade _____

The Graduated Return-to-Athletics Protocol is created by the School Medical Inspector and individualized to the student's grade and level of athletic activity. It is administered by the Athletic Trainer, Coach, Athletic Director or Physical Education Teacher under the supervision of the School Medical Inspector.

_____ Student's Physician cleared student for full athletic activities.

School MD

_____ Concussion testing is repeated and compared to baseline results by the
School MD School Medical Inspector and found to be acceptable.

_____ School Medical Inspector reviewed the student's concussion file and clears
School MD student for the Graduated Return-to-Athletics Protocol.

The protocol begins with complete rest and progress through to return-to-full athletic activity. This will be individualized by the School Medical Inspector.

Each level should be administered 24 hours apart with the student symptom free before moving to the next level in the progression. If any symptoms occur during the progression of the protocol, the student should drop back to the previous level and try to complete that level after a 24 hour rest period. If there are any questions, the School Medical Inspector should be contacted. The progression levels are listed below:

Date	Progression Level	Completed Without Symptoms	Tester's name and Signature
	1 Completion of a Normal Day of School Activities		
	2 Light aerobic exercise (less than 70% of maximum heart rate)		
	3 Sport specific exercise (drills specific to athlete's sport)		
	4 Non-contact training drills (more intense sport drills with no contact from other players)		
	5 Full contact practice/Gym (following medical clearance)		
	6 Return to Play (normal game play)		

Student has completed the Graduated Return to Athletics Protocol and is cleared for full Academic and Athletic activities.

_____ School Medical Inspector

_____ Date

Attachment 10: Additional Resources

Additional Concussion Resources

CDC Concussion website

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

ImPACT™ Testing

<http://www.impacttest.com/>

Brain Injury Association of New Jersey

www.BIANJ.org

National Collegiate Athletic Association

http://www.ncaa.org/wps/portal/ncaahome?WCM_GLOBAL_CONTEXT=/ncaa/ncaa/academics+and+athletes/personal+welfare/health+and+safety/concussion

National Institute of Health <http://www.nlm.nih.gov/medlineplus/concussion.html>