



CONCUSSION PROTOCOL AND PROCEDURES

Introduction

In accordance with SB 771 and HB 858 which amended sections 7-432 and 14-501 of the Annotated Code of Maryland, The Maryland State Department of Education (MSDE) has developed policies and provided recommendations for the implementation of concussion awareness programs throughout the state of Maryland for student-athletes, their parents or guardians, and their coaches. The Department has also developed recommendations on the management and treatment of student-athletes suspected or diagnosed with having sustained a concussion. These recommendations, in addition to the accompanying recommended forms, provide guidance for both the student-athlete's exclusion from play as well as their return to the classroom. Finally, the Department addresses the concussion education and tracking requirements of non-school related athletic programs and provides guidance and suggestions for those programs.

The provisions of the policies and plan call for training every public high school coach as well as providing awareness to all student-athletes and their parents or guardians on:

- The nature and risk of a concussion or head injury
- The criteria for removal of from and return to play
- The risk of not reporting injury
- Appropriate academic accommodations

The provisions also mandate written verification of:

- The coach receiving concussion awareness training
- The student-athlete and parent or guardian acknowledging receipt of concussion awareness information

In addition, schools shall extend appropriate procedures for academic accommodations to student-athletes who have been diagnosed with a concussion.

Finally, non-school youth athletic activities conducted on school property must provide assurances that concussion information has been provided to all participants and their parents or guardians.

Frederick County Public Schools has formulated the following procedures to be in compliance with MSDE regulations on concussion awareness and training.

Definitions

Concussion – a type of traumatic brain injury (TBI) causing an immediate and, usually short-lived change in mental status or an alteration of normal consciousness resulting from a bump, blow, jolt, shaking or spinning of the head or body.

Graduated return to play protocols- the progressive return to play stages included in the Policies and Programs on Concussions for Public Schools and Youth Sports Programs (Maryland State Department of Education, updated through December 2012).

Return to play – participation in a non-medically supervised practice of athletic competition after a period of exclusion.

Student-athlete – a student participating in any tryout, practice, or contest of a school team.

School personnel – those directly responsible for administering or coaching an interscholastic athletic program within a school or county and those employees of the school or school system with overall responsibility for student-athletes academic performance and medical well-being.

Youth sports program – a program organized for recreational athletic competition and instruction for participants who are younger than 19 years old.

Coach's Education

FCPS has the responsibility to assure that each coach is trained in concussion risk and management. At a minimum, the coach's training shall include:

- The nature and risk of a brain injury
- The risk of not reporting the injury
- Criteria for removal and return to play
- Understanding concussions
- Recognizing concussions
- Signs and symptoms
- Response and action plan

All FCPS coaches will participate in the following concussion awareness training:

- The National Federation of State High School Associations' (NFHS) online coach education course, *Concussion in Sports-What You Need to Know*. This Center for Disease

Control's (CDC) –endorsed program provides a guide to understanding, recognizing and properly managing concussions in high school sports. It is available at www.nfhs.learn.com

- The Center for Disease Control's (CDC) tools for youth and high school sports coaches, parents, athletes, and health care professionals provide important information on preventing, recognizing, and responding to a concussion and are available at http://www.cdc.gov/concussion/HeadsUp/online_training.html. These include *Heads Up to Schools: Know Your Concussion ABCs*; *Heads Up: Concussion in Youth Sports*; and *Heads Up: Concussion in High School Sports*.
- Safe Schools Training module, *Concussion Awareness: Athletics*. This training is available to FCPS employees and is available at <http://fcps.mdsafeschools.com/training>.

Presentation of a certificate of completion from a coaches training course with biennial renewal as a condition of coaching employment will be required to assure compliance. FCPS coaches will present certificates to their Athletic Director and Supervisor of Athletics and Extracurricular Activities to verify completion of their training. The following certificates are required:

- NFHS on-line course, *Concussion in Sports-What You Need to Know* is required every two years
- Safe Schools Training Module, *Concussion Awareness: Athletics* is required yearly

The following list of resources should be at every practice or competition where a student-athlete could sustain a concussion.

- On field quick reference guide kept in team medical kit or other accessible area
- A CDC clipboard or clipboard sticker (http://www.cdc.gov/concussion/pdf/Clipboard_Sticker~a.pdf)
- Copies of the "Medical Clearance for Suspected Head Injury" form

Concussion Awareness for Student-Athletes, Parents or Guardians and School Personnel

FCPS will assure that student-athletes, parents or guardians, and school personnel receive an informational sheet describing:

- The nature and risk of a concussion or head injury
- The criteria for removal and return to play
- The risks of not reporting injury and continuing to play

- Appropriate academic accommodations for diagnosed concussion victims

FCPS will use materials from the following sources:

- The Center for Disease Control's (CDC) tools for youth and high school sports coaches, parents, athletes, and health care professionals provide important information on preventing, recognizing, and responding to a concussion, and are available at http://www.cdc.gov/concussion/headsUp/online_training.html
- The Maryland Public Secondary Schools Athletic Association (MPSSAA) website has posted parent and student-athlete information sheets, forms and other materials at www.mpssaa.org

FCPS will provide concussion information in the following ways:

- In-service training
- Coach/Parent/Student-Athlete pre-season meetings
- Meet the Coach Nights
- Team meetings/practices
- Website www.fcps.org with links to MPSSAA

Every student-athletes and at least one parent or guardian must verify in writing that they have received information on concussions and sign a statement acknowledging receipt of the information. FCPS will include this form in the Required Paperwork for Participation in Interscholastic Athletics.

Furthermore, every student-athlete and at least one parent or guardian must verify in writing if the student-athlete has a history of traumatic head injury/concussion. FCPS will include this form in the Required Paperwork for Participation in Interscholastic Athletics.

Removal and Return to Play

After an appropriate medical assessment, any student-athlete suspected of sustaining a concussion shall immediately be removed from practice or play. The student-athlete shall not return to play until cleared by a licensed health care provider authorized to approve return to play. Additionally, FCPS will ensure appropriate academic accommodations and restrictions are made available to student-athletes during the recovery phase from a concussion.

As part of the protocol, a parent, guardian or emergency contact must be notified in person or by telephone and in writing immediately after a student-athlete sustains a suspected concussion. The athletic director and school nurse must be notified before the start of the next school day.

To assist student-athletes, parents and school personnel the following forms and documents are provided on the MPSSAA website at www.mpssaa.org

- High School Student-Athlete Probable Head Injury Flow Chart
- Medical Clearance for Suspected Head Injury
- Graduated Return to Play Protocol
- Appropriate Education Accommodations
- Case Management and Care Coordination – Roles and Responsibilities
- 2011 Center for Disease Control and Prevention *Heads Up to Schools: Know Your Concussion ABCs*

Licensed Health Care Providers

As of this writing, there are no formally approved or licensed certifications of concussion management. As a result, and until such time as a certification exists, each medical professional authorizing return to play must determine whether they are aware of current medical guidelines on concussion evaluation and if concussion evaluation and management fall within their own scope of practice. Any medical professional’s concussion education should include at least the following:

- 2010 AAP Sport Related Concussion in Children and Adolescent
<http://aappolicy.aappublications.org/cgi/reprint/pediatrics;126/3/597.pdf>
- 2008 Zurich Concussion in Sport Group Consensus
<http://sportsconcussions.com/html/Zurich%20Statement.pdf>
- 2011 Centers for Disease Control and Prevention *Heads Up: Brain Injury in your Practice*
http://www.cdc.gov/concussion/HeadsUp/physicians_tool_kit.html
- 2011 Centers for Disease Control and Prevention *Heads Up to Clinicians: Addressing Concussion in Sports Among Kids and Teens*
<http://preventingconcussions.org>

Identification of Collision, Contact and Non Contact Sports

Collision	Contact	Limited Contact	Non Contact
Consistent with the purpose of the game athletes hit or collide with each	Athletes routinely make contact with each other or inanimate objects	Contact with other athletes or inanimate objects are less frequent or	Any contact is inadvertent and not expected

other or inanimate objects including the ground with great force	but usually with less force than in collision sports	inadvertent	
Football Boys Lacrosse	Basketball Field Hockey Girls Lacrosse Soccer Wrestling	Baseball High Jump Pole Vault Softball Volleyball	Discus Shot Put Triple Jump Long Jump Golf Swimming Track Cross Country Tennis

Recommendations for Concussion Injury Mitigation and Reduction of Contact Exposure for Collision Sports

By definition, those activities designated as Collision Sports may incur a high rate of concussion for participating athletes. Research indicates that in addition to proper instruction and drills a reduction of exposure to live contact should contribute to a lower rate of concussion injury.

Football

Rationale:

Research has demonstrated the rate of concussion injury in football is the highest among interscholastic sports. The National High School Sports Related Injury Surveillance Study 2011-12 found that head/face concussions accounted for 23.6 % of total injuries. Furthermore, the data details 95% of these injuries occur while blocking, being blocked, tackling or being tackled. Research data by the Ivy League and the NCAA have reported similar findings in the rate on concussions. Currently numerous national and state organizations, as well as three local school systems in the state of Maryland have implemented reductions to contact exposure during practice sessions.

Definitions:

- Live Hitting is defined as football drills or live game simulations where full game speed blocking and tackling of players to the ground occurs.
- Full Padded is defined as players dressed and equipped in accordance with NFHS Football Rule 1-5 (equipment guidelines).

Recommendations:

1. Coaches should place special emphasis during practice sessions on proper techniques for blocking and tackling.
2. The following football practice restrictions are recommended to strike a balance between teaching proper technique and skills while limiting the number of live contact exposures.

Pre-season:

- No live hitting until day 6 of practice (Heat Acclimation Rules)
- Live hitting (full speed, go to ground contact) periods limited to full padded practice days.

In-season (Beginning the Monday prior to the first play date):

- A team may conduct full padded practice days, but may only participate in live hitting drills and live game simulations with live hitting no more than two practice days per week.
- Live hitting drills or live game simulations with live hitting shall not be conducted the day prior to a game.

Boys Lacrosse

Rationale:

Research has demonstrated the rate of concussion injury in boys' lacrosse is among the highest within interscholastic sports. The National High School Sports Related Injury Surveillance Study 2011-12 found that head/face concussions accounted for 34.3 of reported injuries. NCAA data collected from 1988 to 2003 found the concussion injury rate in men's lacrosse to be 2nd only to football. Research by the Ivy League has reported similar collaborative data.

Definition:

- Body Checking is defined as contact typically made with a shoulder or chest to an opponent with both hands of the player applying the check remaining in contact with the cross.

Recommendations:

1. Coaches should place special emphasis during practice sessions on proper techniques for body checking that avoids contact with or to the head.
 2. The following boy's lacrosse practice restrictions are recommended to strike a balance between teaching proper technique and skills while limiting the number of live contact exposures.
- After the 1st play date, schools are limited to a maximum of one full-contact practice per day.
 - No live body checking allowed in practice the day prior to a game. (Stick checking is permitted.)

Recommendations for Concussion Injury Mitigation in Contact Sports

While activities classified as Contact Sports are not specifically structured to provide for intentional physical contact between participants like Collision Sports, the incidence of game/sport related contact between players and/or equipment cannot be totally avoided. Providing athletes with proper instruction and drills emphasizing proper techniques should contribute to a lower rate of concussion injury.

Rationale:

Research has demonstrated that the rate of concussion in contact sports indicates the need for special emphasis on specific sports related skills. The National High School Sports Related Injury Surveillance Study 2011-12 indicated skill-related activities that led to the highest incidents of head/face concussion injury. Thus the instruction and drill of proper techniques in these specific sport segments is essential in order to minimize potential for injury.

Sport Recommendations:

Basketball

- Coaches will place special emphasis on proper techniques on play involving body-to- body contact specifically rebounding, picking, screening and shot blockage.

Field Hockey

- Coaches will place special emphasis on proper techniques on dual challenges specifically where the potential for body-to-body or body-to-stick contact can occur.

Girl's Lacrosse

- Coaches will place special emphasis on proper techniques specifically for player positioning and stick checking.

Soccer

- Coaches will place special emphasis during practice sessions specifically on proper individual heading techniques, heading duals and aerial challenges.

Wrestling

- Coaches will place special emphasis specifically on proper takedown techniques and aspects of competitions involving contact to the head.

Youth Sports Programs Use of School Property

Youth sports programs seeking to use school facilities must verify distribution of concussion information to parents or guardians and receive verifiable acknowledgement of receipt. In addition, each youth sports program will annually affirm to FCPS of their intention to comply with the concussion information procedures. Materials for use for youth sports are available on the CDC website <http://www.cdc.gov>

HEADS UP CONCUSSION IN HIGH SCHOOL SPORTS

A FACT SHEET FOR PARENTS

What is a concussion?

A concussion is a type of traumatic brain injury. Concussions are caused by a bump or blow to the head. Even a “ding,” “getting your bell rung,” or what seems to be a mild bump or blow to the head can be serious.

You can't see a concussion. Signs and symptoms of concussion can show up right after the injury or may not appear or be noticed until days or weeks after the injury. If your child reports any symptoms of concussion, or if you notice the symptoms yourself, seek medical attention right away.

What are the signs and symptoms of a concussion?

If your child has experienced a bump or blow to the head during a game or practice, look for any of the following signs of a concussion:

SYMPTOMS REPORTED BY ATHLETE	SIGNS OBSERVED BY PARENTS/GUARDIANS
<ul style="list-style-type: none"> • 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 • Just “not feeling right” or “feeling down” 	<ul style="list-style-type: none"> • 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

How can you help your child prevent a concussion or other serious brain injury?

- Ensure that they follow their coach's rules for safety and the rules of the sport.
- Encourage them to practice good sportsmanship at all times.
- Make sure they wear the right protective equipment for their activity. Protective equipment should fit properly and be well maintained.
- Wearing a helmet is a must to reduce the risk of a serious brain injury or skull fracture.
 - However, helmets are not designed to prevent concussions. There is no “concussion-proof” helmet. So, even with a helmet, it is important for kids and teens to avoid hits to the head.

What should you do if you think your child has a concussion?

SEEK MEDICAL ATTENTION RIGHT AWAY. A health care professional will be able to decide how serious the concussion is and when it is safe for your child to return to regular activities, including sports.

KEEP YOUR CHILD OUT OF PLAY. Concussions take time to heal. Don't let your child return to play the day of the injury and until a health care professional says it's OK. Children who return to play too soon—while the brain is still healing—risk a greater chance of having a repeat concussion. Repeat or later concussions can be very serious. They can cause permanent brain damage, affecting your child for a lifetime.

TELL YOUR CHILD'S COACH ABOUT ANY PREVIOUS CONCUSSION. Coaches should know if your child had a previous concussion. Your child's coach may not know about a concussion your child received in another sport or activity unless you tell the coach.

If you think your teen has a concussion:

Don't assess it yourself. Take him/her out of play. Seek the advice of a health care professional.

It's better to miss one game than the whole season.

For more information, visit www.cdc.gov/Concussion.

April 2013



HEADS+UP

CONCUSSION IN HIGH SCHOOL SPORTS

A FACT SHEET FOR **ATHLETES**

Concussion facts:

- A concussion is a brain injury that affects how your brain works.
- A concussion is caused by a bump, blow, or jolt to the head or body.
- A concussion can happen even if you haven't been knocked out.
- If you think you have a concussion, you should not return to play on the day of the injury and not until a health care professional says you are OK to return to play.

What are the symptoms of a concussion?

Concussion symptoms differ with each person and with each injury, and they may not be noticeable for hours or days. Common symptoms include:

- Headache
- Confusion
- Difficulty remembering or paying attention
- Balance problems or dizziness
- Feeling sluggish, hazy, foggy, or groggy
- Feeling irritable, more emotional, or "down"
- Nausea or vomiting
- Bothered by light or noise
- Double or blurry vision
- Slowed reaction time
- Sleep problems
- Loss of consciousness

During recovery, exercising or activities that involve a lot of concentration (such as studying, working on the computer, or playing video games) may cause concussion symptoms to reappear or get worse.

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

DON'T HIDE IT. REPORT IT. Ignoring your symptoms and trying to "tough it out" often makes symptoms worse. Tell your coach, parent, and athletic trainer if you think you or one of your teammates may have a concussion. Don't let anyone pressure you into continuing to practice or play with a concussion.

GET CHECKED OUT. Only a health care professional can tell if you have a concussion and when it's OK to return to play. Sports have injury timeouts and player substitutions so that you can get checked out and the team can perform at its best. The sooner you get checked out, the sooner you may be able to safely return to play.

TAKE CARE OF YOUR BRAIN. A concussion can affect your ability to do schoolwork and other activities. Most athletes with a concussion get better and return to sports, but it is important to rest and give your brain time to heal. A repeat concussion that occurs while your brain is still healing can cause long-term problems that may change your life forever.

How can I help prevent a concussion?

Every sport is different, but there are steps you can take to protect yourself.

- Follow your coach's rules for safety and the rules of the sport.
- Practice good sportsmanship at all times.

If you think you have a concussion:

Don't hide it. Report it. Take time to recover.

It's better to miss one game than the whole season.

For more information, visit www.cdc.gov/Concussion.

April 2013





For official use only:
Name of Athlete _____
Sport/season _____
Date Received _____

Concussion Awareness Parent/Student-Athlete Acknowledgement Statement

I _____, the parent/guardian of
 _____,
 Parent/Guardian Athlete Name of Student-

acknowledge that I have received information on all of the following:

- The definition of a concussion
- The signs and symptoms of a concussion to observe for or that may be reported by my athlete
- How to help my athlete prevent a concussion
- What to do if I think my athlete has a concussion, specifically, to seek medical attention right away, keep my athlete out of play, tell the coach about a recent concussion, and report any concussion and/or symptoms to the school nurse.

Parent/Guardian _____ Parent/Guardian _____ Date
 _____ PRINT NAME SIGNATURE

Student Athlete _____ Student Athlete _____ Date
 _____ PRINT NAME SIGNATURE

It's better to miss one game than the whole season.

For more information visit: www.cdc.gov/Concussion.

PRE-PARTICIPATION HEAD INJURY/CONCUSSION REPORTING FORM FOR EXTRACURRICULAR ACTIVITIES

This form should be completed by the student's parent(s) or legal guardian(s). It must be submitted to the Athletic Director, or official designated by the school, prior to the start of each season a student plans to participate in an extracurricular athletic activity.

Student Information

Name:

Grade:

Sport(s):

Home Address:

Has student ever experienced a traumatic head injury (a blow to the head)? Yes _____

No _____

If yes, when? Dates (month/year): _____

Has student ever received medical attention for a head injury? Yes _____ No _____

If yes, when? Dates (month/year): _____

If yes, please describe the circumstances:

Was student diagnosed with a concussion? Yes _____ No _____

If yes, when? Dates (month/year): _____

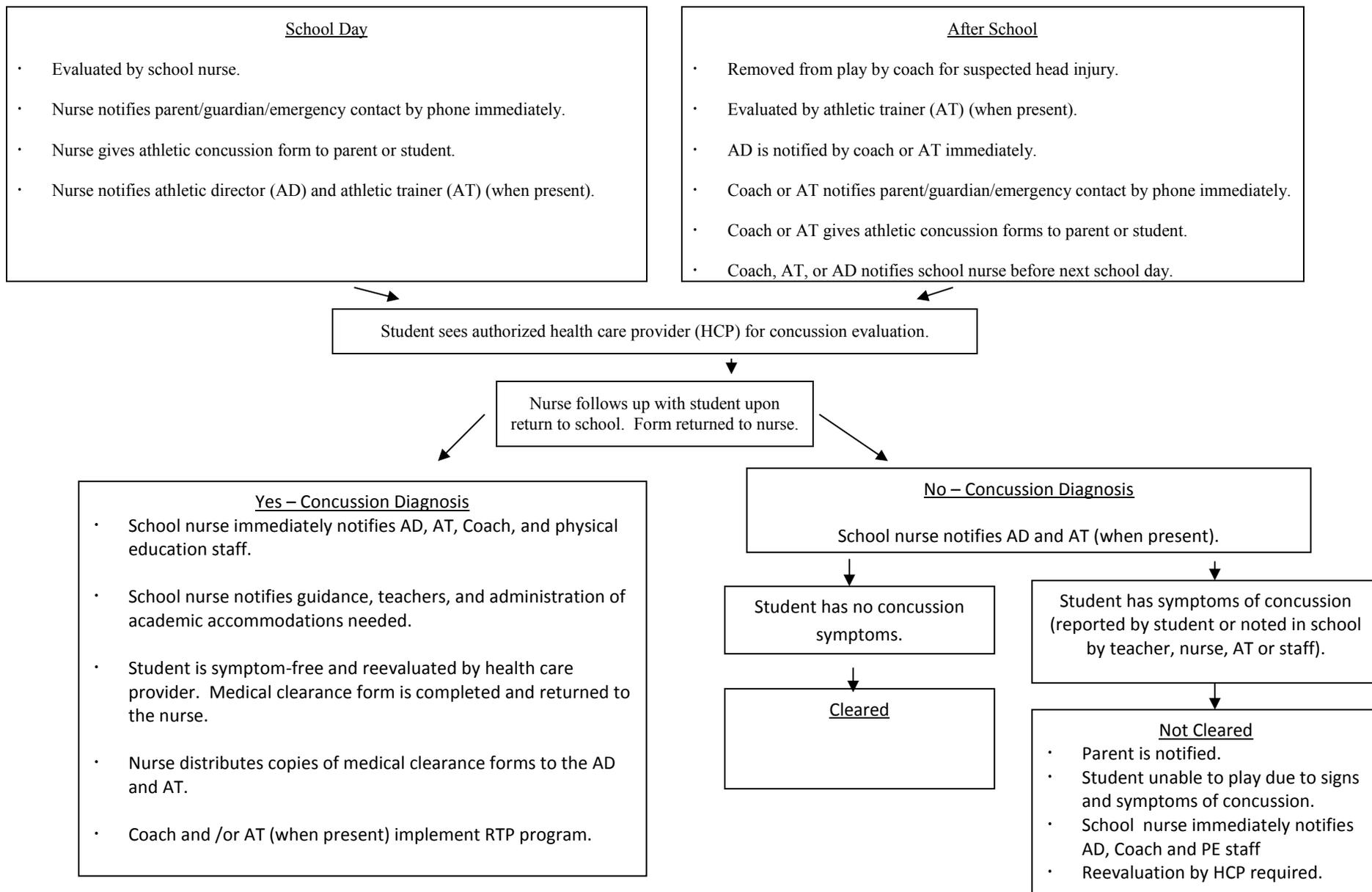
Duration of Symptoms (such as headache, difficulty concentrating, fatigue) for most recent concussion:

Parent/Guardian: Name: _____ (Please print)

Signature/Date _____

Student Athlete: Signature/Date

High School Student-Athlete Probable Head Injury Flow Chart



Graduated Return To Play Protocol

Description of Stage	Date Completed	Supervised by
<p>STAGE 1: LIGHT AEROBIC ACTIVITY</p> <p><u>Begin stage 1 when:</u> Student is cleared by health care provider and has no symptoms</p> <p><u>Sample activities for stage 1:</u> 20-30 minutes jogging, stationary bike or treadmill</p>		
<p>STAGE 2: HEAVY AEROBIC AND STRENGTH ACTIVITY</p> <p><u>Begin stage 2 when:</u> 24 hours have passed since student began stage 1 AND student has not experienced any return of symptoms in the previous 24 hours</p> <p><u>Sample activities for stage 2:</u> Progressive resistance training workout consisting of all of the following:</p> <ul style="list-style-type: none"> • 4 laps around field or 10 minutes on stationary bike, and • Ten 60 yard springs, and • 5 sets of 5 reps: Front squats/push-ups/shoulder press, and • 3-5 laps or walking lunges 		
<p>STAGE 3: FUNCTIONAL, INDIVIDUAL SPORT-SPECIFIC DRILLS WITHOUT RISK OF CONTACT</p> <p><u>Begin stage 3 when:</u> 24 hours have passed since student began stage 2 AND student has not experienced any return of symptoms in the previous 24 hours</p> <p><u>Sample activities for stage 3:</u> 30-45 minutes of functional/sport specific drills coordinated by coach or athletic trainer. NOTE: no heading of soccer ball or drills involving blocking sled.</p>		
<p>STAGE 4: NON-CONTACT PRACTICE</p> <p><u>Begin stage 4 when:</u> 24 hours have passed since student began stage 3 AND student has not experienced any return of symptoms in the previous 24 hours</p> <p><u>Sample activities for stage 4:</u> Full participation in team's regular strength and conditioning program. NOTE: no heading of soccer ball or drills involving blocking sled permitted.</p>		
<p>STAGE 5: FULL-CONTACT PRACTICE AND FULL PARTICIPATION IN PHYSICAL EDUCATION</p> <p><u>Begin stage 5 when:</u> 24 hours have passed since student began stage 4 AND student has not experienced any return of symptoms in the previous 24 hours</p> <p><u>Sample activities for stage 5:</u> Unrestricted participation in practices and physical education</p>		
<p>STAGE 6: RETURN TO GAME</p> <p><u>Begin stage 6 when:</u> 24 hours have passed since student began stage 5 AND student has not experienced any return of symptoms in the previous 24 hours</p>		

Case Management and Care Coordination -Roles and Responsibilities

A student with a suspected or diagnosed TBI/concussion may need a designated school case manager to coordinate his/her care. Providing appropriate support for a student returning to school after a TBI/concussion requires a coordinated and collaborative team approach. The Task Force recognizes the student, parent, and school staff as integral partners in the management of TBIs/concussions in the school setting. The roles and responsibilities of team members for the management of students with a suspected or diagnosed TBI/concussion may include, but are not limited to, the following:

Team Members	Role(s)	Responsibilities
Student/Athlete	Notify appropriate school staff and parents/guardians about any head injuries	<ul style="list-style-type: none"> ● Increase education about and awareness of TBIs/concussions including an understanding of signs and symptoms. ● Immediately inform school staff and parents/guardians in the event of injury and suspected TBI/concussion. ● Participate in care planning, including accommodations for return to learn and return to play authorization.
Parent/Guardian	Integral part of the process of planning, and coordination of care for the health and safety of the student	<ul style="list-style-type: none"> ● Increase education about and awareness of TBIs/concussions; ● Complete and return all necessary pre-participation forms and sports physical forms for the student annually. ● Provide the school with emergency contact information that is accurate and updated as needed. ● Provide the school with complete and accurate medical information related to the student’s TBI/concussion including written health care provider documentation. ● Communicate with the school nurse and school staff to develop the plan of care for the student.

Team Members	Role(s)	Responsibilities
School Administrator	Leader of the school team	<ul style="list-style-type: none"> ● Oversee/ensure implementation of school policies and protocols; ● Communicate the importance of concussion management to all necessary school staff. ● Encourage communication between all team members; and ● Assure effective implementation of Return to Play (RTP) accommodations for students with concussion.
Private Medical Provider	Provide guidance and directives for the student's treatment of TBI/concussion in the school setting	<ul style="list-style-type: none"> ● Provide written signed orders regarding restrictions and monitoring for specific symptoms that the provider should be made aware of by family and/or school nurse/school staff. ● Provide the local school system-specific graduated return to activity schedule to follow, or approve use of the district's graduated return to activity schedule if deemed appropriate. ● Provide written clearance/authorization for return to full activities. (In order for a student to return to athletic activities after he or she has sustained a concussion during school athletic activities, an evaluation must be completed and signed by a licensed physician.)
School Nurse (Registered Nurse)	Leader of the school health nursing team; may serve as a liaison between health care professionals and school- based personnel.	<ul style="list-style-type: none"> ● Provide education about concussion management to other team members as indicated. ● Interpret written orders from the health care provider including the return to school order; seek clarification if needed. ● Institute health-related accommodations as needed in school; ● Monitor student's status and progress in school and report changes to parent/guardian and health care provider. ● Communicate status and progress to the athletic department and other school staff on a need-to-know basis. ● Participate in school support team meetings and 504 Plans. ● Document nursing care and communication with all team members.

Team Members	Role(s)	Responsibilities
School Counselor	Provide support to the student and family and assist with academic accommodations as needed	<ul style="list-style-type: none"> • Communicate with school nurse about student and coordinate information for teaching staff about student's return/treatment. • Reinforce student's need for academic rest as ordered. • Convene team meetings as needed per student's status. • Suggest necessary accommodations required to ensure student's success based on information provided by school nurse and health care professional if needed. • Communicate with teachers and monitor effectiveness of classroom accommodations.
School Teachers (General Education and Special Education Teachers)	Ensure appropriate instruction and supports are provided for the student during the transition back to school	<ul style="list-style-type: none"> • Understand the signs and symptoms of TBI/concussion and the potential impact on academic performance. • Provide support for successful re-entry to school. • Participate as a member of the student services support team • Administer necessary testing, if special educator. • Assist in development and implementation of 504 Plan or IEP if applicable. • Assist in the development of short-term, appropriate accommodations in consultation with the school team. • Understand the range of accommodations needed for the student during the school day, including, but not limited to, shorter school day, rest periods, extended time for tests and assignments, copies of notes, alternative assignments, minimizing distractions, audio taping classes, or peer note taking. • Communicate student's progress to school team.
School Psychologist	Resource consultant for the school team	<ul style="list-style-type: none"> • Consult with school team members regarding student(s) with prolonged or complex recovery. • Provide educational and psychological assessments as determined by the school team. • Consult with school team regarding educational planning and accommodations for the student with TBI/concussion.

Team Members	Role(s)	Responsibilities
Speech-Language Pathologist	Supports transition of the student back to school (e.g., return to learn) when necessary	<ul style="list-style-type: none"> • Evaluate the student’s current status and needs, including medical information, and provide appropriate recommendations if necessary. • Assist in the development of a transition plan back to school, as needed. • Review any prior testing performed in the medical setting post-injury and administer additional testing as needed. • Assist in development of an Individualized Education Program (IEP) if applicable. • Suggest appropriate instructional accommodations and modifications for student if applicable. • Provide speech and/or language services if applicable and monitor student progress. • Assist in promoting awareness of TBI/concussion symptoms.
Athletic Director	Provides leadership and supervision of the interscholastic athletic program.	<ul style="list-style-type: none"> • Ensure concussion materials are provided to coaches, athletes, and parents. • Provide concussion materials to coaches, athletes, and parents. • Ensure athletes and parents have signed forms acknowledging receipt of concussion information. • Ensure all coaches have completed annually a recognized concussion training course. • Collect all Student Accident/Concussion forms from coaches. • Provide a copy of the Student Accident/Concussion form to the principal or designee. • Provide a copy of the Student Accident/Concussion form to the school nurse. • When athlete returns, collect the signed Return to Play clearance from the coach. • Provide a copy of the Return to Play clearance form to principal. • Provide a copy of the Return to Play clearance form to school nurse.

Team Members	Role(s)	Responsibilities
Certified Athletic Trainer	Under the supervision of a qualified physician can assist the medical director and coach by identifying a student with a potential concussion and evaluate the student diagnosed with TBI/concussion in progress of return to athletic activities based on private medical provider orders and/or district protocol.	<ul style="list-style-type: none"> • Educate students and staff in concussion management and prevention. • Oversee student athletes taking baseline validated standardized computerized tests if permitted by district policy. • Evaluate student-athletes for signs and symptoms of a concussion when present at athletic events. • Observe for late onset of signs and symptoms, and refer as appropriate. • Evaluate the student to determine if injury warrants emergency transport per district policy. • Refer parents/guardians of student athletes believed to have sustained a concussion to their medical provider. • Provide parents/guardians with oral and/or written instructions on observing the student for concussive complications that warrant immediate emergency care. • Assist in implementation of accommodations for the student-athlete. • Monitor the student’s return to school activities and communicate with the supervising medical director, school nurse, parent/guardian, and appropriate school staff.
Physical Education Teacher	Provide appropriate instruction and supports for student’s transition back to school and during physical education class activities	<ul style="list-style-type: none"> • Recognize signs and symptoms of TBI/concussion and remove student from activities immediately if student presents with signs and symptoms. • Contact the school nurse or certified athletic trainer (if available) for assistance with any student injury (<i>thus transferring responsibility of treatment and parent notification...</i>). • Communicate with school administrator and school nurse regarding suspected TBI/concussion and any head injuries occurring in physical education class and complete required school incident report form. • Verify written authorization for student to participate in physical education activities post-TBI/concussion. • Adhere to the school’s gradual return to play protocol.
Coaches	Provides leadership and	<ul style="list-style-type: none"> • Adhere to the local school system’s policies regarding concussion

Team Members	Role(s)	Responsibilities
	supervision of the interscholastic sport team to which he/she is assigned.	<p>management and ensure coaching staff, assistant coaches, parents/guardians, and students are educated about concussions and local policies/procedures.</p> <ul style="list-style-type: none"> • Provide students and parents/guardians with concussion information, prior to sports participation. • Review safety techniques, sportsmanship, and proper equipment with student athletes. • Understand the sport and create drills, practice sessions, and instruction to reinforce safety. • During practice and /or contests, remove an athlete if a TBI/concussion is suspected. • Contact parent/guardian to pick up student or call 911 if appropriate or parents cannot be located. • Provide parent and Emergency Medical Technician (EMT) with information about injury or suspected TBI/concussion including signs and symptoms observed. • Complete Student Accident/Injury Form or other school system form regarding TBI/concussion. • Provide a copy of the completed student accident/injury form to athletics director. • Follow up with parents/guardian regarding student athlete's well-being. • Collect the signed Return-to-Play clearance and authorization form. • Provide a copy of the Return to Play clearance form to athletics director and communicate with school administrator and school nurse.

Appropriate Educational Accommodations

Post-Concussion Effect	Functional School Problem	Accommodation/ Management Strategy
Attention/ Concentration	Short focus on lecture, class work, homework	Shorter assignments, break down tasks, lighter work load
“Working” Memory	Holding instructions in mind, reading comprehension, math calculation, writing	Repetition, written instructions, use of calculator, short reading passages
Memory Consolidation/ Retrieval	Retaining new information, accessing learned info when needed	Smaller chunks to learn, recognition cues
Processing Speed	Keep pace with work demand, process verbal information effectively	Extended time, slow down verbal info, comprehension-checking
Fatigue	Decreased arousal/ activation to engage basic attention, working memory	Rest breaks during classes, homework, and exams
Headaches	Interferes with concentration	Rest breaks
Light/Noise Sensitivity	Symptoms worsen in bright or loud environments	Wear sunglasses, seating away from bright sunlight or other light. Avoid noisy/ crowded environments such as lunchroom, assemblies, hallways.
Dizziness/Balance Problems	Unsteadiness when walking	Elevator pass, class transition prior to bell
Sleep Disturbance	Decreased arousal, shifted sleep schedule	Later start time, shortened day
Anxiety	Can interfere with concentration; Student may push through symptoms to prevent falling behind	Reassurance from teachers and team about accommodations; Workload reduction, alternate forms of testing
Depression/Withdrawal	Withdrawal from school or friends due to stigma or activity restrictions	Time built in for socialization
Cognitive Symptoms	Concentrating, learning	See specific cognitive accommodations above
Symptom Sensitivity	Symptoms worsen with <i>over</i> -activity, resulting in any of the above problems	Reduce cognitive or physical demands below symptom threshold; provide rest breaks; complete work in small increments until symptom threshold increases

Source: Sady, M.D., Vaughan, C.G. & Gioia, G.A. (2011) School and the Concussed Youth: Recommendations for Concussion Education and Management. *Physical Medicine and Rehabilitation Clinics of North America*. 22, 701-719. (pp.714)