

*For Your Records Only*

Read Only ~ Printable Version

**WEST DEPTFORD SCHOOL DISTRICT**

**RANDOM ALCOHOL AND DRUG TESTING PROGRAM  
STUDENT CONSENT TO TEST FORM**

I acknowledge that I have reviewed a copy of Policy 5536 and the "Administrative Procedures for the Alcohol and Drug Testing and Random Alcohol and Drug Testing Policy for Students" online or have requested a hard copy from the High School Main office. I have read and understand the purposes, requirements, and consequences of the Testing Program as described in those documents.

I authorize the West Deptford School District to conduct testing which will be provided on-site to test for alcohol and/or drugs if my identification number is randomly selected from the testing pool. I authorize the release of the information concerning the results of such tests to designated District personnel.

I acknowledge that the Medical Review Officer will contact the student and the student's parent(s)/guardian(s) if the test is positive. The purpose of this contact with the Medical Review Officer is to determine if there is an acceptable reason for the positive test result, in which case the test will be considered negative.

*It is understood that by participating in a WDHS sport the student athlete will be immediately placed into the Random Drug Testing Pool.*

**I understand that this Form remains in effect until the submission of an Activity Drop Form, graduation, withdrawal from the School District or until the first day of the next school year.**

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## West Deptford School District's Concussion Procedures & Guidelines for Return to Competition

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At the direction of our school physician, Dr. David Gehring, and adopted by the West Deptford Board of Education, West Deptford Schools will follow the concussion guidelines set forth by the Zurich Concussion Consensus Statement<sup>1</sup> and the NJSIAA<sup>2</sup> as follows:

### Prevention

1. Annual distribution of the NJ Department of Education Concussion and Head Injury fact sheet to every student-athlete who participates in interscholastic sports. A signed acknowledgement from each parent/guardian and student-athlete will be obtained and kept on file.
2. All Coaches, Athletic Trainers, School Nurses, and School/Team Physicians shall complete an Interscholastic Head Injury Safety Training Program.
3. Review of educational information for student-athletes on prevention of concussions.

### Treatment

1. Student-athletes who are exhibiting signs or symptoms of a sports-related concussion or head injury shall be immediately removed from competition or practice and may not return to play that day.
2. Emergency Medical Services (911) will be called if there is a deterioration of symptoms, loss of consciousness, or direct neck pain associated with the injury.
3. When available the student-athlete will be evaluated by the school's licensed healthcare provider who is trained in the evaluation and management of concussions.
4. School personnel will make contact with the student-athletes parent/guardian and inform him/her of the suspected sports-related concussion or head injury.
5. The student-athlete will not be allowed to return to competition or practice until he/she has written clearance from a physician trained in the evaluation and management of concussions and has completed the graduated return-to-play protocol.

### Return to Play Guidelines

At any time during a practice or game that a student athlete experiences any sign(s)/symptom(s) of a head injury or a concussion, he/she will not be allowed to return to play/practice that day.

First time concussed athletes with no loss of consciousness and signs/symptoms lasting less than 7 days may return to play when he/she meets the following criteria:

1. Asymptomatic (with no use of medications to mask headache or other symptoms).
2. Completion of the Zurich Activity Progression (see below). This may begin once the athlete is asymptomatic for 24 hours and medically cleared to do so.

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<sup>1</sup>McCroly et al. Consensus Statement on Concussion in Sport: The 3<sup>rd</sup> International Conference on Concussion in Sport. *Journal of Athletic Training*, 2009; 44(4): 434-448.

<sup>2</sup>New Jersey State Interscholastic Athletic Association Medical Advisory Board. *NJSIAA Policy Statement*, April 2010.

Any loss of consciousness, signs/symptoms lasting 7 days or longer, or repeat concussions will require a minimum 7 day asymptomatic period and medical clearance before beginning the Zurich Activity Progression and will be managed on an individualized basis as approved by the school physician. The asymptomatic period for any concussion may be extended at the discretion of the West Deptford school physician and/or Athletic Trainer.

Physician clearance notes inconsistent with the concussion policy may not be accepted and such matters will be referred to our school physician.

**\*\*PLEASE NOTE:** According to NJ state law signed by Governor Christie in December 2010 (P.L. 2010, Chapter 94) (N.J.S.A 18A:40-41.3) and the NJ department of Education guidelines, physicians evaluating concussed athletes must be "trained in the evaluation and management of concussions."

Notes will not be accepted from the emergency room only. You must follow up with a physician trained in the evaluation and management of concussions.

### Zurich Return to Activity Progression

We follow a stepwise activity progression based on recommendations in the Zurich Consensus Statement from the 3rd International Congress on Concussion in Sport as follows:

Step 1: Light aerobic exercise (i.e. stationary bike, elliptical machine)

Step 2: Moderate aerobic exercise (begin running program)

Step 3: Functional exercises (increase running intensity, begin agility, non-contact sport-specific drills)

Step 4: Non-contact practice activities

Step 5: Full contact practice activities

Step 6: Full game play

**EACH STEP IS SEPERATED BY 24 HOURS.** If any symptoms occur, the athlete will drop back to the previous level and try to progress again after the 24 hours of rest has past.

By signing the sign off sheet, you are agreeing to the following statement: *I have read the entirety of this informational sheet and have no questions regarding clarification of policies. Any questions I had regarding head injury policies were answered by the athletic trainer, school nurse, or school physician prior to my signing this document. I understand that head injuries are serious injuries and should not be taken lightly.*

## **Sports-Related Concussion and Head Injury Fact Sheet and Parent/Guardian Acknowledgement Form**

A concussion is a brain injury that can be caused by a blow to the head or body that disrupts normal functioning of the brain. Concussions are a type of Traumatic Brain Injury (TBI), which can range from mild to severe and can disrupt the way the brain normally functions. Concussions can cause significant and sustained neuropsychological impairment affecting problem solving, planning, memory, attention, concentration, and behavior.

The Centers for Disease Control and Prevention estimates that 300,000 concussions are sustained during sports related activities nationwide, and more than 62,000 concussions are sustained each year in high school contact sports. Second-impact syndrome occurs when a person sustains a second concussion while still experiencing symptoms of a previous concussion. It can lead to severe impairment and even death of the victim.

Legislation (P.L. 2010, Chapter 94) signed on December 7, 2010, mandated measures to be taken in order to ensure the safety of K-12 student-athletes involved in interscholastic sports in New Jersey. It is imperative that athletes, coaches, and parent/guardians are educated about the nature and treatment of sports related concussions and other head injuries. The legislation states that:

- All Coaches, Athletic Trainers, School Nurses, and School/Team Physicians shall complete an Interscholastic Head Injury Safety Training Program by the 2011-2012 school year.
- All school districts, charter, and non-public schools that participate in interscholastic sports will distribute annually this educational fact to all student athletes and obtain a signed acknowledgement from each parent/guardian and student-athlete.
- Each school district, charter, and non-public school shall develop a written policy describing the prevention and treatment of sports-related concussion and other head injuries sustained by interscholastic student-athletes.
- Any student-athlete who participates in an interscholastic sports program and is suspected of sustaining a concussion will be immediately removed from competition or practice. The student-athlete will not be allowed to return to competition or practice until he/she has written clearance from a physician trained in concussion treatment and has completed his/her district's graduated return-to-play protocol.

### **Quick Facts**

- Most concussions do not involve loss of consciousness
- You can sustain a concussion even if you do not hit your head
- A blow elsewhere on the body can transmit an "impulsive" force to the brain and cause a concussion

### **Signs of Concussions (Observed by Coach, Athletic Trainer, Parent/Guardian)**

- Appears dazed or stunned
- Forgets plays or demonstrates short term memory difficulties (e.g. unsure of game, opponent)
- Exhibits difficulties with balance, coordination, concentration, and attention
- Answers questions slowly or inaccurately
- Demonstrates behavior or personality changes
- Is unable to recall events prior to or after the hit or fall

### **Symptoms of Concussion (Reported by Student-Athlete)**

- Headache
- Nausea/vomiting
- Balance problems or dizziness
- Double vision or changes in vision
- Sensitivity to light/sound
- Feeling of sluggishness or fogginess
- Difficulty with concentration, short term memory, and/or confusion

**What Should a Student-Athlete do if they think they have a concussion?**

- **Don't hide it.** Tell your Athletic Trainer, Coach, School Nurse, or Parent/Guardian.
- **Report it.** Don't return to competition or practice with symptoms of a concussion or head injury. The sooner you report it, the sooner you may return-to-play.
- **Take time to recover.** If you have a concussion your brain needs time to heal. While your brain is healing you are much more likely to sustain a second concussion. Repeat concussions can cause permanent brain injury.

**What can happen if a student-athlete continues to play with a concussion or returns to play too soon?**

- Continuing to play with the signs and symptoms of a concussion leaves the student-athlete vulnerable to second impact syndrome.
- Second impact syndrome is when a student-athlete sustains a second concussion while still having symptoms from a previous concussion or head injury.
- Second impact syndrome can lead to severe impairment and even death in extreme cases.

**Should there be any temporary academic accommodations made for Student-Athletes who have suffered a concussion?**

- To recover cognitive rest is just as important as physical rest. Reading, texting, testing-even watching movies can slow down a student-athletes recovery.
- Stay home from school with minimal mental and social stimulation until all symptoms have resolved.
- Students may need to take rest breaks, spend fewer hours at school, be given extra time to complete assignments, as well as being offered other instructional strategies and classroom accommodations.

**Student-Athletes who have sustained a concussion should complete a graduated return-to-play before they may resume competition or practice, according to the following protocol:**

- **Step 1:** Completion of a full day of normal cognitive activities (school day, studying for tests, watching practice, interacting with peers) without reemergence of any signs or symptoms. If no return of symptoms, next day advance.
- **Step 2:** Light Aerobic exercise, which includes walking, swimming, and stationary cycling, keeping the intensity below 70% maximum heart rate. No resistance training. The objective of this step is increased heart rate.
- **Step 3:** Sport-specific exercise including skating, and/or running: no head impact activities. The objective of this step is to add movement.
- **Step 4:** Non-contact training drills (e.g. passing drills). Student-athlete may initiate resistance training.
- **Step 5:** Following medical clearance (consultation between school health care personnel and student-athlete's physician), participation in normal training activities. The objective of this step is to restore confidence and assess functional skills by coaching and medical staff.
- **Step 6:** Return to play involving normal exertion or game activity.

For further information on Sports-Related Concussions and other Head Injuries, please visit:

- [CDC Heads Up](#)
- [Keeping Heads Healthy](#)
- [National Federation of State High School Associations](#)
- [Athletic Trainers' Society of New Jersey](#)

_____ Signature of Student-Athlete	_____ Print Student-Athlete's Name	_____ Date
_____ Signature of Parent/Guardian	_____ Print Parent/Guardian's Name	_____ Date



## **Sports-Related Concussion and Head Injury Fact Sheet and Parent/Guardian Acknowledgement Form**

A concussion is a traumatic brain injury that can be caused by a blow to the head or body that disrupts the normal functioning of the brain. This sudden movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells, disrupting the way the brain normally functions. Concussions can cause significant and sustained neuropsychological impairment affecting balance, reading (tracking), problem solving, planning, memory, attention, concentration, and behavior. Concussions can range from mild to severe. Having a concussion increases the risk of sustaining another concussion. Second-impact syndrome may occur when a person sustains a second concussion while still experiencing symptoms of a previous concussion. It can lead to severe impairment and even death.

### **Requirements addressing sports-related concussions and head injuries for student athletes and cheerleaders**

- All school districts, charter, and non-public schools that participate in interscholastic sports are required to distribute this educational fact to all student athletes and cheerleaders and obtain a signed acknowledgment from each parent/guardian and student-athlete.
- Each school district, charter, and non-public school shall develop a written policy describing the prevention and treatment of sports-related concussion and other head injuries sustained by interscholastic student-athletes and cheerleaders.
- Any cheerleader or student-athlete who participates in an interscholastic sports program and is suspected of sustaining a concussion will be immediately removed from competition or practice. The student-athlete will not be allowed to return to competition or practice until they have written clearance from a physician trained in concussion treatment and have completed his/her district's graduated return-to-play protocol.

### **Quick Facts**

- Most concussions do not involve loss of consciousness.
- You can sustain a concussion even if you do not hit your head.
- A blow elsewhere on the body can transmit an "impulsive" force to the brain and cause a concussion.
- Signs and symptoms of concussion can show up right after an injury or may not appear or be noticed until hours or days after the injury.

### **Signs of Concussions (Observed by Coach, Athletic Trainer, Parent/Guardian/Caregiver, Teammate, and others)**

- Appears dazed or stunned
- Forgets plays or demonstrates short term memory difficulties (e.g., unsure of game, opponent)
- Exhibits difficulties with balance, coordination, concentration, and attention

- Answers questions slowly or inaccurately
- Is unable to recall events prior to or after the hit or fall

### **Symptoms of Concussion (Reported by Student-Athlete)**

- Headache
- Nausea/vomiting
- Balance problems or dizziness
- Double vision or changes in vision - trouble reading
- Sensitivity to light/sound
- Feeling of sluggishness or fogginess - fatigue
- Difficulty with concentration, short term memory, and/or confusion

### **Dangerous Signs & Symptoms of a Concussion**

- New onset of symptoms
- One pupil is larger than the other
- Drowsiness or inability to wake up
- A headache that gets worse and does not go away
- Slurred speech, weakness, numbness, or decreased coordination
- Repeated vomiting, nausea, or seizures (shaking or twitching)
- Unusual behavior, increased confusion, restlessness, or agitation
- Loss of consciousness (passed out/knocked out); even a brief loss of consciousness should be taken seriously.

### **What should a student-athlete do if they think they have a concussion?**

- Do not hide it. Tell your athletic trainer, coach, school nurse, or parent/guardian.
- Report it. Do not return to competition or practice with symptoms of a concussion or head injury.
- Take time to recover. If you have a concussion, your brain needs time to heal. While your brain is healing you are much more likely to sustain a second concussion.

### **What can happen if a student-athlete continues to play with a concussion or returns to play too soon?**

- Continuing to play with the signs and symptoms of a concussion leaves the student-athlete vulnerable to second impact syndrome.
- Second impact syndrome is when a student-athlete sustains a second concussion while still having symptoms from a previous concussion or head injury.
- Second impact syndrome can lead to severe impairment and even death in extreme cases.

### **Should there be any temporary academic accommodation made for student-athletes who have suffered a concussion?**

- Most students will only need help through informal, academic adjustments as they recover from a concussion.
- Students may need to take rest breaks, spend fewer hours at school, be given extra time to complete assignments, as well as being offered other instructional strategies and classroom accommodations
- Contact the school nurse if symptoms persist to discuss whether additional accommodations are

necessary.

- To recover, cognitive rest is just as important as physical rest. Reading, texting, computer use and even watching movies can slow down recovery. Limit screen time during recovery.

**Students who have sustained a concussion may not return to practice or competition until they receive written clearance from a physician trained in the evaluation and management of concussion and complete the graduated [Six-step return to play protocol outlined by the CDC](#):**

**Step 1: Back to regular activities (such as school)**

Athletes or cheerleaders are back to their regular activities (such as school).

**Step 2: Light aerobic activity**

Begin with light aerobic exercise only to increase an athlete's heart rate. This means about 5 to 10 minutes on an exercise bike, walking, or light jogging. No weightlifting at this point.

**Step 3: Moderate activity**

Continue with activities to increase an athlete's heart rate with body or head movement. This includes moderate jogging, brief running, moderate-intensity stationary biking, moderate-intensity weightlifting (less time and/or less weight from their typical routine).

**Step 4: Heavy, non-contact activity**

Add heavy non-contact physical activity, such as sprinting/running, high-intensity stationary biking, regular weightlifting routine, non-contact sport-specific drills (in 3 planes of movement).

**Step 5: Practice & full contact**

Athletes may return to practice and full contact (if appropriate for the sport) in controlled practice.

**Step 6: Competition**

Young athletes may return to competition.

For further information on Sports-Related Concussions and other Head Injuries, please visit:

- [CDC Heads Up](#)
- [Keeping Heads Healthy](#)

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Student athlete's name (print)

Student athlete's signature

Date

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Parent / Guardian name (print)

Parent / Guardian signature

Date



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*NJSIAA*



1161 Route 130, P.O. Box 487, Robbinsville, NJ 08691 609-259-2776 609-259-3047-Fax

## **NJSIAA STEROID TESTING POLICY CONSENT TO RANDOM TESTING**

In Executive Order 72, issued December 20, 2005, Governor Richard Codey directed the New Jersey Department of Education to work in conjunction with the New Jersey State Interscholastic Athletic Association (NJSIAA) to develop and implement a program of random testing for steroids, of teams and individuals qualifying for championship games.

Any student-athlete who possesses, distributes, ingests or otherwise uses any of the banned substances on the attached page, without written prescription by a fully-licensed physician, as recognized by the American Medical Association, to treat a medical condition, violates the NJSIAA's sportsmanship rule, and is subject to NJSIAA penalties, including ineligibility from competition. The NJSIAA will test certain randomly selected individuals and teams that qualify for a state championship tournament or state championship competition for banned substances. The results of all tests shall be considered confidential and shall only be disclosed to the student, his or her parents and his or her school. No student may participate in NJSIAA competition unless the student and the student's parent/guardian consent to random testing.

By signing the sign off sheet, we consent to random testing in accordance with the NJSIAA steroid testing policy. We understand that, if the student or the student's team qualifies for a state championship tournament or state championship competition, the student may be subject to testing for banned substances. To see a list of Banned Drugs, visit:  
[www.njsiaa.org](http://www.njsiaa.org)



West Deptford Athletic Training Office  
856.848.6110 ext 2212



*For Your Records Only*  
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Dear Parent/Guardian,

West Deptford High School is currently implementing an innovative concussion program for our student-athletes. This program will assist our athletic trainer/team physicians in evaluating and treating head injuries (e.g., concussion). In order to better manage concussions sustained by our student-athletes, we have acquired a program called ImPACT (Immediate Post Concussion Assessment and Cognitive Testing), which involves an online, computerized exam that each athlete takes prior to the athletic season. ImPACT is utilized in many professional, collegiate, and high school sports programs across the country to aid in the diagnosis and management of concussions. **All athletes are required to take the baseline test on a home computer or school computer.**

If the athlete is believed to have suffered a concussion during practice or competition, the exam is taken again and the data is compared to the baseline test. This information is then used as a tool to assist the athletic training staff and treating physicians in determining the extent of the injury, monitoring recovery, and in making safe return to play decisions. If an injury of this nature occurs, we will be in contact with you. **All post-concussion tests will be administered under the supervision of WDHS administration and/or athletic staff at the school.**

The non-invasive test is set up in "video-game" type format and takes about 25-30 minutes to complete. It is simple, and actually many athletes enjoy the challenge of taking the test. Essentially, the ImPACT test is a preseason physical of the brain. It tracks information such as memory, reaction time, speed, and concentration. It, however, is not an IQ test.

One of the reasons concussions are so dangerous is a condition called Second Impact Syndrome. If an athlete sustains a second concussion before completely recovering from the first, the results can be deadly. At West Deptford, we understand the competitive nature of sports, but we always hold the athlete's health and safety as our top priority.

On the back of this letter, you will find the ImPACT testing instructions. To ensure a valid test, please make certain that your son/daughter follows the instructions closely. It is very important that your child be able to fully concentrate during the entire test. Poor performance will result in an invalid test, and will require a mandatory re-take.

I wish to stress again that the ImPACT testing procedures are non-invasive, and they pose no risks to your student-athlete. We are excited to implement this program given that it provides us the best available information for managing concussions and preventing potential brain damage that can occur with multiple concussions. The West Deptford High School administration, coaching, and athletic training staffs are striving to keep your child's health and safety at the forefront of the student athletic experience.



West Deptford Athletic Training Office  
856.848.6110 ext 2212



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## ImPACT Testing Instructions

To ensure a valid test, please follow these instructions. It is very important that you are able to fully concentrate during the entire test. Poor performance will result in an invalid test and will require a re-take! The Customer ID code is: QF8MYTJFXW

- Set aside 30-45 minutes in a quiet room with no distractions to take the test.
- No headphones or cell phone use during the test. Turn off any televisions, radio, or anything else that can produce background noise.
- Tell siblings and family members about the importance of the test to avoid interruptions or distractions.
- Note: The test will begin by asking you background questions called the "demographic" section. There are 6 test sections called "modules." These include word memory, design memory, Xs and Os, symbol match, color word match, and three letters.
- Take your time to read each section's instructions very carefully. Each module is self explanatory. It is common to perform the color word match module incorrectly. Please read that section's instructions thoroughly.
- Other than the initial demographic section, do not ask anyone to help you with your performance during the test, such as assistance with memory questions, etc. Do not write anything down during the test to aid memory.
- You MUST use a standard external mouse. You may not use a finger mouse pad (i.e., laptop), a Track Mouse, or anything other than a standard mouse.
- Minimum computer requirements:
  - Make sure you are using Internet Explorer 6.0 and above, or Firefox 1.5 or above, and Safari for the MAC running OSX 10.2 and above.
  - You must have Macromedia FLASH PLAYER 8.0 or newer installed. You can download FLASH PLAYER at [www.adobe.com](http://www.adobe.com).
  - If you have a pop up blocker installed, you must turn it off for the duration of the test.
  - Close all other programs on your computer before taking the test.
  - You need a broadband Internet connection.
- To take the baseline test, go to: [www.impacttestonline.com/testing](http://www.impacttestonline.com/testing), enter the Customer ID Code (located at the top of this page), then click on "Launch Baseline Test."
- Make certain to select "West Deptford High School" when asked for "school/organization" in the demographic section.
- Your test results are not displayed once you are finished (all results are password protected). See Ms. English if you are interested in your baseline results.
- Please note our test contract with ImPACT does NOT allow for unlimited baseline tests. Please do not allow others to take an additional test.
- If you do not have access to the Internet or a home computer that meets the above requirements, contact Ms. English or the Athletic Department to arrange a testing time at school.
- Return your ImPACT test receipt to Mr. Panchella or to the Athletic Office once you have completed the test.
- Thank you for participating in our ImPACT Concussion Management Program.



West Deptford Athletic Training Office  
856.848.6110 ext 2212



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## **ImPACT Consent Form**

For use of the Immediate Post-Concussion Assessment and Cognitive Testing (ImPACT)

I have read the attached information. I understand its contents. I have been given an opportunity to ask questions, and all questions have been answered to my satisfaction. I agree to allow my son/daughter to participate in the ImPACT Concussion Management Program. I also agree to make certain my son/daughter follows all testing instructions to ensure a valid test. I the athlete agree, to participate in the ImPACT Concussion Management Program. I the athlete, also agree to follow all testing instructions to ensure a valid test.

## Website Resources

- Sudden Death in Athletes  
<http://tinyurl.com/m2gjmvg>
- Hypertrophic Cardiomyopathy Association  
[www.4hcm.org](http://www.4hcm.org)
- American Heart Association [www.heart.org](http://www.heart.org)

## Collaborating Agencies:

### American Academy of Pediatrics

**New Jersey Chapter**  
3836 Quakerbridge Road, Suite 108  
Hamilton, NJ 08619  
(p) 609-842-0014  
(f) 609-842-0015  
[www.aapnj.org](http://www.aapnj.org)



### American Heart Association

1 Union Street, Suite 301  
Robbinsville, NJ, 08691  
(p) 609-208-0020  
[www.heart.org](http://www.heart.org)



### New Jersey Department of Education

PO Box 500  
Trenton, NJ 08625-0500  
(p) 609-292-5935  
[www.state.nj.us/education/](http://www.state.nj.us/education/)



### New Jersey Department of Health

P. O. Box 360  
Trenton, NJ 08625-0360  
(p) 609-292-7837  
[www.state.nj.us/health](http://www.state.nj.us/health)



### Lead Author: American Academy of Pediatrics,

### New Jersey Chapter

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**Additional Reviewers:** NJ Department of Education, NJ Department of Health and Senior Services, American Heart Association/New Jersey Chapter, NJ Academy of Family Practice, Pediatric Cardiologists, New Jersey State School Nurses

**Revised 2014:** Nancy Curry, EdM; Christine DeWitt-Parker, MSN, CSN, RN; Lakota Kruse, MD, MPH; Susan Martz, EdM; Stephen G. Rice, MD; Jeffrey Rosenberg, MD, Louis Teichholz, MD; Perry Weinstock, MD

# SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

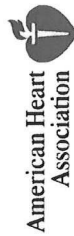
## The Basic Facts on Sudden Cardiac Death in Young Athletes



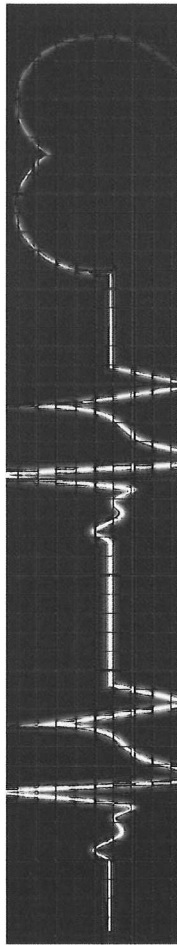
STATE OF NEW JERSEY  
DEPARTMENT OF EDUCATION



American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN™



American Heart Association  
*Learn and Live*



## SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

**S**udden death in young athletes between the ages of 10 and 19 is very rare.

What, if anything, can be done to prevent this kind of tragedy?



### What is sudden cardiac death in the young athlete?

Sudden cardiac death is the result of an unexpected failure of proper heart function, usually (about 60% of the time) during or immediately after exercise without trauma. Since the heart stops pumping adequately, the athlete quickly collapses, loses consciousness, and ultimately dies unless normal heart rhythm is restored using an automated external defibrillator (AED).

### How common is sudden death in young athletes?

Sudden cardiac death in young athletes is very rare. About 100 such deaths are reported in the United States per year. The chance of sudden death occurring to any individual high school athlete is about one in 200,000 per year.

Sudden cardiac death is more common: in males than in females; in football and basketball than in other sports; and in African-Americans than in other races and ethnic groups.



The second most likely cause is congenital (con-JEN-it-al) (i.e., present from birth) abnormalities of the coronary

arteries. This means that these blood vessels are connected to the main blood vessel of the heart in an abnormal way. This differs from blockages that may occur when people get older (commonly called "coronary artery disease," which may lead to a heart attack).

### What are the most common causes?

Research suggests that the main cause is a loss of proper heart rhythm, causing the heart to quiver instead of pumping blood to the brain and body. This is called ventricular fibrillation (ven-TRICK-you-lar fib-roo-LAY-shun). The problem is usually caused by one of several cardiovascular abnormalities and electrical diseases of the heart that go unnoticed in healthy-appearing athletes.

The most common cause of sudden death in an athlete is hypertrophic cardiomyopathy (hi-per-TRO-fic CAR-dee-oh-my-OP-a-thee) also called HCM. HCM is a disease of the heart, with abnormal thickening of the heart muscle, which can cause serious heart rhythm problems and blockages to blood flow. This genetic disease runs in families and usually develops gradually over many years.

The second most likely cause is congenital (con-JEN-it-al) (i.e., present from birth) abnormalities of the coronary

arteries. This means that these blood vessels are connected to the main blood vessel of the heart in an abnormal way. This differs from blockages that may occur when people get older (commonly called "coronary artery disease," which may lead to a heart attack).

## SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

Other diseases of the heart that can lead to sudden death in young people include:

- Myocarditis (my-oh-car-DIE-tis), an acute inflammation of the heart muscle (usually due to a virus).
- Dilated cardiomyopathy, an enlargement of the heart for unknown reasons.
- Long QT syndrome and other electrical abnormalities of the heart which cause abnormal fast heart rhythms that can also run in families.
- Marfan syndrome, an inherited disorder that affects heart valves, walls of major arteries, eyes and the skeleton. It is generally seen in unusually tall athletes, especially if being tall is not common in other family members.

### Are there warning signs to watch for?

- In more than a third of these sudden cardiac deaths, there were warning signs that were not reported or taken seriously. Warning signs are:
- Fainting, a seizure or convulsions during physical activity;
  - Fainting or a seizure from emotional excitement, emotional distress or being startled;
  - Dizziness or lightheadedness, especially during exertion;
  - Chest pains, at rest or during exertion;
  - Palpitations - awareness of the heart beating unusually (skipping, irregular or extra beats) during athletics or during cool down periods after athletic participation;
  - Fatigue or tiring more quickly than peers; or
  - Being unable to keep up with friends due to shortness of breath (labored breathing).

### What are the current recommendations for screening young athletes?

New Jersey requires all school athletes to be examined by their primary care physician ("medical home") or school physician at least once per year. The New Jersey Department of Education requires use of the specific Preparation Physical Examination Form (PPE).

This process begins with the parents and student-athletes answering questions about symptoms during exercise (such as chest pain, dizziness, fainting, palpitations or shortness of breath); and questions about family health history.

The primary healthcare provider needs to know if any family member died suddenly during physical activity or during a seizure. They also need to know if anyone in the family under the age of 50 had an unexplained sudden death such as drowning or car accidents. This information must be provided annually for each exam because it is so essential to identify those at risk for sudden cardiac death.

The required physical exam includes measurement of blood pressure and a careful listening examination of the heart, especially for murmurs and rhythm abnormalities. If there are no warning signs reported on the health history and no abnormalities discovered on exam, no further evaluation or testing is recommended.

### Are there options privately available to screen for cardiac conditions?

Technology-based screening programs including a 12-lead electrocardiogram (ECG) and echocardiogram (ECHO) are noninvasive and painless options parents may consider in addition to the required

PPE. However, these procedures may be expensive and are not currently advised by the American Academy of Pediatrics and the American College of Cardiology unless the PPE reveals an indication for these tests. In addition to the expense, other limitations of technology-based tests include the possibility of "false positives" which leads to unnecessary stress for the student and parent or guardian as well as unnecessary restriction from athletic participation.

The United States Department of Health and Human Services offers risk assessment options under the Surgeon General's Family History Initiative available at <http://www.hhs.gov/familyhistory/index.html>.

### When should a student athlete see a heart specialist?

If the primary healthcare provider or school physician has concerns, a referral to a child heart specialist, a pediatric cardiologist, is recommended. This specialist will perform a more thorough evaluation, including an electrocardiogram (ECG), which is a graph of the electrical activity of the heart. An echocardiogram, which is an ultrasound test to allow for direct visualization of the heart structure, will likely also be done. The specialist may also order a treadmill exercise test and a monitor to enable a longer recording of the heart rhythm. None of the testing is invasive or uncomfortable.

### Can sudden cardiac death be prevented just through proper screening?

A proper evaluation should find most, but not all, conditions that would cause sudden death in the athlete. This is because some diseases are difficult to uncover and may only develop later in life. Others can develop following a

normal screening evaluation, such as an infection of the heart muscle from a virus.

This is why screening evaluations and a review of the family health history need to be performed on a yearly basis by the athlete's primary healthcare provider. With proper screening and evaluation, most cases can be identified and prevented.

### Why have an AED on site during sporting events?

The only effective treatment for ventricular fibrillation is immediate use of an automated external defibrillator (AED). An AED can restore the heart back into a normal rhythm. An AED is also life-saving for ventricular fibrillation caused by a blow to the chest over the heart (commotio cordis).

N.J.S.A. 18A:40-41a through c, known as "Janet's Law," requires that at any school-sponsored athletic event or team practice in New Jersey public and nonpublic schools including any of grades K through 12, the following must be available:

- An AED in an unlocked location on school property within a reasonable proximity to the athletic field or gymnasium; and
  - A team coach, licensed athletic trainer, or other designated staff member if there is no coach or licensed athletic trainer present, certified in cardiopulmonary resuscitation (CPR) and the use of the AED; or
  - A State-certified emergency services provider or other certified first responder.
- The American Academy of Pediatrics recommends the AED should be placed in central location that is accessible and ideally no more than a 1 to 1 1/2 minute walk from any location and that a call is made to activate 911 emergency system while the AED is being retrieved.



# OPIOID USE AND MISUSE EDUCATIONAL FACT SHEET

## Keeping Student-Athletes Safe

School athletics can serve an integral role in students' development. In addition to providing healthy forms of exercise, school athletics foster friendships and camaraderie, promote sportsmanship and fair play, and instill the value of competition.

Unfortunately, sports activities may also lead to injury and, in rare cases, result in pain that is severe or long-lasting enough to require a prescription opioid painkiller.<sup>1</sup> It is important to understand that overdoses from opioids are on the rise and are killing Americans of all ages and backgrounds. Families and communities across the country are coping with the health, emotional and economic effects of this epidemic.<sup>2</sup>

This educational fact sheet, created by the New Jersey Department of Education as required by state law (*N.J.S.A. 18A:40-41.10*), provides information concerning the use and misuse of opioid drugs in the event that a health care provider prescribes a student-athlete or cheerleader an opioid for a sports-related injury. Student-athletes and cheerleaders participating in an interscholastic sports program (and their parent or guardian, if the student is under age 18) must provide their school district written acknowledgment of their receipt of this fact sheet.

### How Do Athletes Obtain Opioids?

In some cases, student-athletes are prescribed these medications. According to research, about a third of young people studied obtained pills from their own previous prescriptions (i.e., an unfinished prescription used outside of a physician's supervision), and 83 percent of adolescents had unsupervised access to their prescription medications.<sup>3</sup> It is important for parents to understand the possible hazard of having unsecured prescription medications in their households. Parents should also understand the importance of proper storage and disposal of medications, even if they believe their child would not engage in non-medical use or diversion of prescription medications.

### What Are Signs of Opioid Use?

According to the National Council on Alcoholism and Drug Dependence, 12 percent of male athletes and 8 percent of female athletes had used prescription opioids in the 12-month period studied.<sup>3</sup> In the early stages of abuse, the athlete may exhibit unprovoked nausea and/or vomiting. However, as he or she develops a tolerance to the drug, those signs will diminish. Constipation is not uncommon, but may not be reported. One of the most significant indications of a possible opioid addiction is an athlete's decrease in academic or athletic performance, or a lack of interest in his or her sport. If these warning signs are noticed, best practices call for the student to be referred to the appropriate professional for screening,<sup>4</sup> such as provided through an evidence-based practice to identify problematic use, abuse and dependence on illicit drugs (e.g., Screening, Brief Intervention, and Referral to Treatment (SBIRT)) offered through the New Jersey Department of Health.

## What Are Some Ways Opioid Use and Misuse Can Be Prevented?

According to the New Jersey State Interscholastic Athletic Association (NJSIAA) Sports Medical Advisory Committee chair, John P. Kripsak, D.O., "Studies indicate that about 80 percent of heroin users started out by abusing narcotic painkillers."

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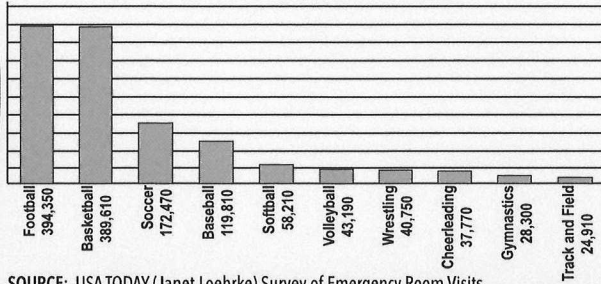
The Sports Medical Advisory Committee, which includes representatives of NJSIAA member schools as well as experts in the field of healthcare and medicine, recommends the following:

- The pain from most sports-related injuries can be managed with non-narcotic medications such as acetaminophen, non-steroidal anti-inflammatory medications like ibuprofen, naproxen or aspirin. Read the label carefully and always take the recommended dose, or follow your doctor's instructions. More is not necessarily better when taking an over-the-counter (OTC) pain medication, and it can lead to dangerous side effects.<sup>4</sup>
- Ice therapy can be utilized appropriately as an anesthetic.
- Always discuss with your physician exactly what is being prescribed for pain and request to avoid narcotics.
- In extreme cases, such as severe trauma or post-surgical pain, opioid pain medication should not be prescribed for more than five days at a time;
- Parents or guardians should always control the dispensing of pain medications and keep them in a safe, non-accessible location; and
- Unused medications should be disposed of immediately upon cessation of use. Ask your pharmacist about drop-off locations or home disposal kits like Deterra or Medsaway.



### Number of Injuries Nationally in 2012 Among Athletes 19 and Under from 10 Popular Sports

(Based on data from U.S. Consumer Product Safety Commission's National Electronic Injury Surveillance System)



SOURCE: USA TODAY (Janet Loehrke) Survey of Emergency Room Visits

## Even With Proper Training and Prevention, Sports Injuries May Occur

There are two kinds of sports injuries. Acute injuries happen suddenly, such as a sprained ankle or strained back. Chronic injuries may happen after someone plays a sport or exercises over a long period of time, even when applying overuse-preventative techniques.<sup>5</sup>

Athletes should be encouraged to speak up about injuries, coaches should be supported in injury-prevention decisions, and parents and young athletes are encouraged to become better educated about sports safety.<sup>6</sup>

## What Are Some Ways to Reduce the Risk of Injury?<sup>7</sup>

Half of all sports medicine injuries in children and teens are from overuse. An overuse injury is damage to a bone, muscle, ligament, or tendon caused by repetitive stress without allowing time for the body to heal. Children and teens are at increased risk for overuse injuries because growing bones are less resilient to stress. Also, young athletes may not know that certain symptoms are signs of overuse.

The best way to deal with sports injuries is to keep them from happening in the first place. Here are some recommendations to consider:



**PREPARE** Obtain the preparticipation physical evaluation prior to participation on a school-sponsored interscholastic or intramural athletic team or squad.



**CONDITIONING** Maintain a good fitness level during the season and offseason. Also important are proper warm-up and cooldown exercises.



**PLAY SMART** Try a variety of sports and consider specializing in one sport before late adolescence to help avoid overuse injuries.



**ADEQUATE HYDRATION** Keep the body hydrated to help the heart more easily pump blood to muscles, which helps muscles work efficiently.



**TRAINING** Increase weekly training time, mileage or repetitions no more than 10 percent per week. For example, if running 10 miles one week, increase to 11 miles the following week. Athletes should also cross-train and perform sport-specific drills in different ways, such as running in a swimming pool instead of only running on the road.



**REST UP** Take at least one day off per week from organized activity to recover physically and mentally. Athletes should take a combined three months off per year from a specific sport (may be divided throughout the year in one-month increments). Athletes may remain physically active during rest periods through alternative low-stress activities such as stretching, yoga or walking.



**PROPER EQUIPMENT** Wear appropriate and properly fitted protective equipment such as pads (neck, shoulder, elbow, chest, knee, and shin), helmets, mouthpieces, face guards, protective cups, and eyewear. Do not assume that protective gear will prevent all injuries while performing more dangerous or risky activities.

## Resources for Parents and Students on Preventing Substance Misuse and Abuse

The following list provides some examples of resources:

National Council on Alcoholism and Drug Dependence - NJ promotes addiction treatment and recovery.

New Jersey Department of Health, Division of Mental Health and Addiction Services is committed to providing consumers and families with a wellness and recovery-oriented model of care.

New Jersey Prevention Network includes a parent's quiz on the effects of opioids.

Operation Prevention Parent Toolkit is designed to help parents learn more about the opioid epidemic, recognize warning signs, and open lines of communication with their children and those in the community.

Parent to Parent NJ is a grassroots coalition for families and children struggling with alcohol and drug addiction.

Partnership for a Drug Free New Jersey is New Jersey's anti-drug alliance created to localize and strengthen drug-prevention media efforts to prevent unlawful drug use, especially among young people.

The Science of Addiction: The Stories of Teens shares common misconceptions about opioids through the voices of teens.

Youth IMPACTing NJ is made up of youth representatives from coalitions across the state of New Jersey who have been impacting their communities and peers by spreading the word about the dangers of underage drinking, marijuana use, and other substance misuse.

**References**  
<sup>1</sup> Massachusetts Technical Assistance Partnership for Prevention  
<sup>2</sup> Centers for Disease Control and Prevention  
<sup>3</sup> New Jersey State Interscholastic Athletic

Association (NJSIAA) Sports Medical Advisory Committee (SMAC)  
<sup>4</sup> Athletic Management, David Csillan, athletic trainer, Ewing High School, NJSIAA SMAC

<sup>5</sup> National Institute of Arthritis and Musculoskeletal and Skin Diseases  
<sup>6</sup> USA TODAY  
<sup>7</sup> American Academy of Pediatrics



# SPORTS-RELATED EYE INJURIES:

## AN EDUCATIONAL FACT SHEET FOR PARENTS



Participating in sports and recreational activities is an important part of a healthy, physically active lifestyle for children. Unfortunately, injuries can, and do, occur. Children are at particular risk for sustaining a sports-related eye injury and most of these injuries can be prevented. Every year, more than 30,000 children sustain serious sports-related eye injuries. Every 13 minutes, an emergency room in the United States treats a sports-related eye injury.<sup>1</sup> According to the National Eye Institute, the sports with the highest rate of eye injuries are: baseball/softball, ice hockey, racquet sports, and basketball, followed by fencing, lacrosse, paintball and boxing.

Thankfully, there are steps that parents can take to ensure their children's safety on the field, the court, or wherever they play or participate in sports and recreational activities.

### Prevention of Sports-Related Eye Injuries

Approximately 90% of sports-related eye injuries can be prevented with simple precautions, such as using protective eyewear.<sup>2</sup> **Each sport has a certain type of recommended protective eyewear, as determined by the American Society for Testing and Materials (ASTM). Protective eyewear should sit comfortably on the face. Poorly fitted equipment may be uncomfortable, and may not offer the best eye protection. Protective eyewear for sports includes, among other things, safety goggles and eye guards, and it should be made of polycarbonate lenses, a strong, shatterproof plastic. Polycarbonate lenses are much stronger than regular lenses.**<sup>3</sup>

Health care providers (HCP), including family physicians, ophthalmologists, optometrists, and others, play a critical role in advising students, parents and guardians about the proper use of protective eyewear. To find out what kind of eye protection is recommended, and permitted for your child's sport, visit the National Eye Institute at <http://www.nei.nih.gov/sports/findingprotection.asp>. Prevent Blindness America also offers tips for choosing and buying protective eyewear at <http://www.preventblindness.org/tips-buying-sports-eye-protectors>, and <http://www.preventblindness.org/recommended-sports-eye-protectors>.

It is recommended that all children participating in school sports or recreational sports wear protective eyewear. Parents and coaches need to make sure young athletes protect their eyes, and properly gear up for the game. Protective eyewear should be part of any uniform to help reduce the occurrence of sports-related eye injuries. Since many youth teams do not require eye protection, parents may need to ensure that their children wear safety glasses or goggles whenever they play sports. Parents can set a good example by wearing protective eyewear when they play sports.

<sup>1</sup> National Eye Institute, National Eye Health Education Program, Sports-Related Eye Injuries: What You Need to Know and Tips for Prevention, [www.nei.nih.gov/sports/pdf/sportsrelatedeyeinjuries.pdf](http://www.nei.nih.gov/sports/pdf/sportsrelatedeyeinjuries.pdf), December 26, 2013.

<sup>2</sup> Rodriguez, Jorge O., D.O., and Lavina, Adrian M., M.D., Prevention and Treatment of Common Eye Injuries in Sports, <http://www.aafp.org/afp/2003/0401/p1481.html>, September 4, 2014; National Eye Health Education Program, Sports-Related Eye Injuries: What You Need to Know and Tips for Prevention, [www.nei.nih.gov/sports/pdf/sportsrelatedeyeinjuries.pdf](http://www.nei.nih.gov/sports/pdf/sportsrelatedeyeinjuries.pdf), December 26, 2013.

<sup>3</sup> Bedinghaus, Troy, O.D., Sports Eye Injuries, [http://vision.about.com/od/emergencyeyecare/a/Sports\\_Injuries.htm](http://vision.about.com/od/emergencyeyecare/a/Sports_Injuries.htm), December 27, 2013.

## Most Common Types of Eye Injuries



The most common types of eye injuries that can result from sports injuries are blunt injuries, corneal abrasions and penetrating injuries.

◆ **Blunt injuries:** Blunt injuries occur when the eye is suddenly compressed by impact from an object. Blunt injuries, often caused by tennis balls, racquets, fists or elbows, sometimes cause a black eye or hyphema (bleeding in front of the eye). More serious blunt injuries often break bones near the eye, and may sometimes seriously damage important eye structures and/or lead to vision loss.

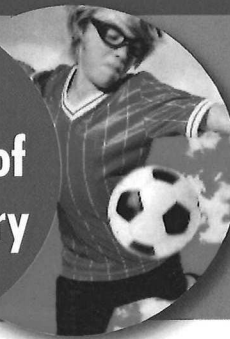
◆ **Corneal abrasions:** Corneal abrasions are painful scrapes on the outside of the eye, or the cornea. Most corneal abrasions eventually heal on their

own, but a doctor can best assess the extent of the abrasion, and may prescribe medication to help control the pain. The most common cause of a sports-related corneal abrasion is being poked in the eye by a finger.

◆ **Penetrating injuries:** Penetrating injuries are caused by a foreign object piercing the eye. Penetrating injuries are very serious, and often result in severe damage to the eye. These injuries often occur when eyeglasses break while they are being worn. Penetrating injuries must be treated quickly in order to preserve vision.<sup>4</sup>

- Pain when looking up and/or down, or difficulty seeing;
- Tenderness;
- Sunken eye;
- Double vision;
- Severe eyelid and facial swelling;
- Difficulty tracking;

## Signs or Symptoms of an Eye Injury



- The eye has an unusual pupil size or shape;
- Blood in the clear part of the eye;
- Numbness of the upper cheek and gum; and/or
- Severe redness around the white part of the eye.

## What to do if a Sports-Related Eye Injury Occurs



If a child sustains an eye injury, it is recommended that he/she receive immediate treatment from a licensed HCP (e.g., eye doctor) to reduce the risk of serious damage, including blindness. It is also recommended that the child, along with his/her parent or guardian, seek guidance from the HCP regarding the appropriate amount of time to wait before returning to sports competition or practice after sustaining an eye injury. The school nurse and the child's teachers should also be notified when a child sustains an eye injury. A parent or guardian should also provide the school nurse with a physician's note detailing the nature of the eye injury, any diagnosis, medical orders for

the return to school, as well as any prescription(s) and/or treatment(s) necessary to promote healing, and the safe resumption of normal activities, including sports and recreational activities.

## Return to Play and Sports

According to the American Family Physician Journal, there are several guidelines that should be followed when students return to play after sustaining an eye injury. For example, students who have sustained significant ocular injury should receive a full examination and clearance by an ophthalmologist or optometrist. In addition, students should not return to play until the period of time recommended by their HCP has elapsed. For more minor eye injuries, the athletic trainer may determine that

it is safe for a student to resume play based on the nature of the injury, and how the student feels. No matter what degree of eye injury is sustained, it is recommended that students wear protective eyewear when returning to play and immediately report any concerns with their vision to their coach and/or the athletic trainer.



**Additional information on eye safety can be found at <http://isee.nei.nih.gov> and <http://www.nei.nih.gov/sports>.**

<sup>4</sup>Bedinghaus, Troy, O.D., Sports Eye Injuries, [http://vision.about.com/od/emergencyeyecare/a/Sports\\_Injuries.htm](http://vision.about.com/od/emergencyeyecare/a/Sports_Injuries.htm), December 27, 2013.