

PARAMUS MIDDLE SCHOOLS – EASTBROOK & WESTBROOK

ATHLETIC/STUDENT ACTIVITY PHYSICAL PROCEDURE FOR 2021-2022

All students who will participate in intramural sports/clubs are required to obtain a physical examination prior to the first practice or tryout session.

All students participating in ski club or open gym are required to obtain a physical examination prior to the first day of participation.

Be advised that ALL physical examinations forms submitted must be reviewed by the school physician prior to participation. This process may take up to two weeks. Please plan accordingly when handing in paperwork and adhere to the announced due dates.

YOU MUST SUBMIT AN ATHLETIC REGISTRATION FORM FOR EACH SPORT/STUDENT ACTIVITY

I. Physical Examination Procedures: (required every 365 days)

ANNUAL FORMS

- 1) Preparticipation Physical Evaluation HISTORY FORM and if needed THE ATHLETE WITH SPECIAL NEEDS: SUPPLEMENTAL HISTORY FORM- completed by the parent and student prior to the physical exam and reviewed by the examining provider.
- 2) Preparticipation Physical Evaluation PHYSICAL EXAMINATION FORM and CLEARANCE FORM –must be signed by a licensed provider with MD, DO, APN, or PA status. **Must have a physical signature not a signature stamp.** Both sides must be completed and signed.
- 3) Parent/Guardian Concussion Policy Acknowledgement Form
- 4) Sudden Cardiac Death in Young Athletes- Parent Sign-off Sheet.
- 5) Students who self-medicate with an inhaler for **ASTHMA MUST** complete the Asthma Action Plan
- 6) Students who self-medicate with an **EPIPEN or AUVI-Q MUST** complete the district Emergency Health Care Plan for Epinephrine Auto –Injector.
- 7) Students with **DIABETES MUST** submit orders for diabetes management in school and sports from their health care provider.

NO PHYSICAL WILL BE CLEARED UNLESS ALL FORMS ARE PROPERLY COMPLETED INCLUDING STUDENT AND PARENT/GUARDIAN SIGNATURES. DO NOT LEAVE ANY BLANKS.

II. HEALTH HISTORY UPDATE QUESTIONNAIRE

According to NJ “Scholastic Student-Athlete Safety Act”, each student whose medical examination was completed more than 90 days prior to the first day of practice shall provide a health history update of medical problems experienced since the last medical examination. Read the instructions carefully. **Your child will not be permitted to participate until this sheet is completed.**

ALL FORMS SHOULD BE RETURNED AT THE SAME TIME. LOOSE PAPERS WILL NOT BE ACCEPTED. PAPERWORK THAT IS INCOMPLETE OR SUBMITTED INCORRECTLY WILL BE RETURNED

*****FAXES WILL NOT BE ACCEPTED*****

Return ALL forms to the SCHOOL NURSE.

DO NOT RETURN FORMS TO COACHES, TEACHERS OR ANY OTHER OFFICES.

THERE ARE NO GUARANTEES ON RECEIPT OF MAILED FORMS!!

As per the Scholastic Student-Athletic Safety Act (P.L. 2013, c.71), the preparticipation physical examination (page 3) must be completed by a health care provider who has completed the Student-Athlete Cardiac Assessment Module. Please check with your health care provider before your exam to make sure they have done this. Physical Exams done by providers who have not completed this module will not be accepted and will be returned to the student.

PARAMUS MIDDLE SCHOOLS - EASTBROOK/WESTBROOK ATHLETIC REGISTRATION

(Please Print)

YOU MUST SUBMIT A REGISTRATION FORM FOR EACH SPORT SEASON

Name _____	Sport _____
Grade _____	School Year _____ - _____
Date of Birth _____	
Name of Parent/Guardian _____	
Address _____	Home Phone _____
Mother Work Phone _____	Mother Cell Phone _____
Father Work Phone _____	Father Cell Phone _____
Family Physician _____	Phone _____

TRAINING RULE PLEDGE

I agree to abstain from using, selling, transferring or possessing alcohol, drugs, or tobacco unless prescribed by a medical doctor. I understand that violation of any of the above rules shall result in a suspension from the team according to the Board of Education policy.

EQUIPMENT RESPONSIBILITY

I promise to maintain all equipment issued to me in the best possible condition and to return it at the end of the season. Equipment may be used for Paramus High School athletics only. I assume full financial responsibility for the equipment issued to me.

PARENTAL PERMISSION

I/We give permission for my/our child (NAME) _____ to participate in (SPORT) _____ during the 20__ - 20__ school year. I understand that the sports insurance provided by the Board of Education is a full excess plan, which means that I must submit any medical bills to my own insurance company first. The school's insurance will pay those expenses not covered by my own insurance up to the policy limits. I understand that any costs not covered by insurance shall be my own expense. I understand that the insurance carrier also provides coverage on a voluntary basis and at my expense.

I/We also realize that these activities involve the potential for injury, which is inherent in all sports. I/We acknowledge that even with the best coaching, use of the most advanced protective equipment, and the strict observance of rules, injuries are still a possibility. On rare occasions, these injuries can be severe as to result in total disability, paralysis, or even death. I/We acknowledge that I/We have read and understand this warning.

I/We also agree to support the training rule pledge/policy as summarized above.

Student's Signature _____ Date _____

Parent's Signature _____ Date _____

ATTENTION PARENT/GUARDIAN: The preparticipation physical examination (page 3) must be completed by a health care provider who has completed the Student-Athlete Cardiac Assessment Professional Development Module.

PREPARTICIPATION PHYSICAL EVALUATION HISTORY FORM

(Note: This form is to be filled out by the patient and parent prior to seeing the physician. The physician should keep copy of this form in the chart.)

Date of Exam _____
Name _____ Date of birth _____
Sex _____ Age _____ Grade _____ School _____ Sport(s) _____

Medicines and Allergies: Please list all of the prescription and over-the-counter medicines and supplements (herbal and nutritional) that you are currently taking

Do you have any allergies? ☐ Yes ☐ No If yes, please identify specific allergy below.
☐ Medicines ☐ Pollens ☐ Food

☐ Stinging Insects

Explain "Yes" answers below. Circle questions you don't know the answers to.

GENERAL QUESTIONS	Yes	No
1. Has a doctor ever denied or restricted your participation in sports for any reason?		
2. Do you have any ongoing medical conditions? If so, please identify below: <input type="checkbox"/> Asthma <input type="checkbox"/> Anemia <input type="checkbox"/> Diabetes <input type="checkbox"/> Infections Other: _____		
3. Have you ever spent the night in the hospital?		
4. Have you ever had surgery?		
HEART HEALTH QUESTIONS ABOUT YOU	Yes	No
5. Have you ever passed out or nearly passed out DURING or AFTER exercise?		
6. Have you ever had discomfort, pain, tightness, or pressure in your chest during exercise?		
7. Does your heart ever race or skip beats (irregular beats) during exercise?		
8. Has a doctor ever told you that you have any heart problems? If so, check all that apply: <input type="checkbox"/> High blood pressure <input type="checkbox"/> A heart murmur <input type="checkbox"/> High cholesterol <input type="checkbox"/> A heart infection <input type="checkbox"/> Kawasaki disease Other: _____		
9. Has a doctor ever ordered a test for your heart? (For example, ECG/EKG, echocardiogram)		
10. Do you get lightheaded or feel more short of breath than expected during exercise?		
11. Have you ever had an unexplained seizure?		
12. Do you get more tired or short of breath more quickly than your friends during exercise?		
HEART HEALTH QUESTIONS ABOUT YOUR FAMILY	Yes	No
13. Has any family member or relative died of heart problems or had an unexpected or unexplained sudden death before age 50 (including drowning, unexplained car accident, or sudden infant death syndrome)?		
14. Does anyone in your family have hypertrophic cardiomyopathy, Marfan syndrome, arrhythmogenic right ventricular cardiomyopathy, long QT syndrome, short QT syndrome, Brugada syndrome, or catecholaminergic polymorphic ventricular tachycardia?		
15. Does anyone in your family have a heart problem, pacemaker, or implanted defibrillator?		
16. Has anyone in your family had unexplained fainting, unexplained seizures, or near drowning?		
BONE AND JOINT QUESTIONS	Yes	No
17. Have you ever had an injury to a bone, muscle, ligament, or tendon that caused you to miss a practice or a game?		
18. Have you ever had any broken or fractured bones or dislocated joints?		
19. Have you ever had an injury that required x-rays, MRI, CT scan, injections, therapy, a brace, a cast, or crutches?		
20. Have you ever had a stress fracture?		
21. Have you ever been told that you have or have you had an x-ray for neck instability or atlantoaxial instability? (Down syndrome or dwarfism)		
22. Do you regularly use a brace, orthotics, or other assistive device?		
23. Do you have a bone, muscle, or joint injury that bothers you?		
24. Do any of your joints become painful, swollen, feel warm, or look red?		
25. Do you have any history of juvenile arthritis or connective tissue disease?		

MEDICAL QUESTIONS	Yes	No
26. Do you cough, wheeze, or have difficulty breathing during or after exercise?		
27. Have you ever used an inhaler or taken asthma medicine?		
28. Is there anyone in your family who has asthma?		
29. Were you born without or are you missing a kidney, an eye, a testicle (males), your spleen, or any other organ?		
30. Do you have groin pain or a painful bulge or hernia in the groin area?		
31. Have you had infectious mononucleosis (mono) within the last month?		
32. Do you have any rashes, pressure sores, or other skin problems?		
33. Have you had a herpes or MRSA skin infection?		
34. Have you ever had a head injury or concussion?		
35. Have you ever had a hit or blow to the head that caused confusion, prolonged headache, or memory problems?		
36. Do you have a history of seizure disorder?		
37. Do you have headaches with exercise?		
38. Have you ever had numbness, tingling, or weakness in your arms or legs after being hit or falling?		
39. Have you ever been unable to move your arms or legs after being hit or falling?		
40. Have you ever become ill while exercising in the heat?		
41. Do you get frequent muscle cramps when exercising?		
42. Do you or someone in your family have sickle cell trait or disease?		
43. Have you had any problems with your eyes or vision?		
44. Have you had any eye injuries?		
45. Do you wear glasses or contact lenses?		
46. Do you wear protective eyewear, such as goggles or a face shield?		
47. Do you worry about your weight?		
48. Are you trying to or has anyone recommended that you gain or lose weight?		
49. Are you on a special diet or do you avoid certain types of foods?		
50. Have you ever had an eating disorder?		
51. Do you have any concerns that you would like to discuss with a doctor?		
FEMALES ONLY		
52. Have you ever had a menstrual period?		
53. How old were you when you had your first menstrual period?		
54. How many periods have you had in the last 12 months?		

Explain "yes" answers here

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

Signature of athlete _____ Signature of parent/guardian _____ Date _____

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■ PREPARTICIPATION PHYSICAL EVALUATION **THE ATHLETE WITH SPECIAL NEEDS: SUPPLEMENTAL HISTORY FORM**

Date of Exam _____

Name _____ Date of birth _____

Sex _____ Age _____ Grade _____ School _____ Sport(s) _____

1. Type of disability		
2. Date of disability		
3. Classification (if available)		
4. Cause of disability (birth, disease, accident/trauma, other)		
5. List the sports you are interested in playing		
	Yes	No
6. Do you regularly use a brace, assistive device, or prosthetic?		
7. Do you use any special brace or assistive device for sports?		
8. Do you have any rashes, pressure sores, or any other skin problems?		
9. Do you have a hearing loss? Do you use a hearing aid?		
10. Do you have a visual impairment?		
11. Do you use any special devices for bowel or bladder function?		
12. Do you have burning or discomfort when urinating?		
13. Have you had autonomic dysreflexia?		
14. Have you ever been diagnosed with a heat-related (hyperthermia) or cold-related (hypothermia) illness?		
15. Do you have muscle spasticity?		
16. Do you have frequent seizures that cannot be controlled by medication?		

Explain "yes" answers here

Please indicate if you have ever had any of the following.

	Yes	No
Atlantoaxial instability		
X-ray evaluation for atlantoaxial instability		
Dislocated joints (more than one)		
Easy bleeding		
Enlarged spleen		
Hepatitis		
Osteopenia or osteoporosis		
Difficulty controlling bowel		
Difficulty controlling bladder		
Numbness or tingling in arms or hands		
Numbness or tingling in legs or feet		
Weakness in arms or hands		
Weakness in legs or feet		
Recent change in coordination		
Recent change in ability to walk		
Spina bifida		
Latex allergy		

Explain "yes" answers here

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

Signature of athlete _____ Signature of parent/guardian _____ Date _____

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New Jersey Department of Education 2014; Pursuant to P.L.2013, c.71

NOTE: The preparticipation physical examination must be conducted by a health care provider who 1) is a licensed physician, advanced practice nurse, or physician assistant; and 2) completed the Student-Athlete Cardiac Assessment Professional Development Module.

PREPARTICIPATION PHYSICAL EVALUATION PHYSICAL EXAMINATION FORM

Name _____ Date of birth _____

PHYSICIAN REMINDERS

- Consider additional questions on more sensitive issues
 - Do you feel stressed out or under a lot of pressure?
 - Do you ever feel sad, hopeless, depressed, or anxious?
 - Do you feel safe at your home or residence?
 - Have you ever tried cigarettes, chewing tobacco, snuff, or dip?
 - During the past 30 days, did you use chewing tobacco, snuff, or dip?
 - Do you drink alcohol or use any other drugs?
 - Have you ever taken anabolic steroids or used any other performance supplement?
 - Have you ever taken any supplements to help you gain or lose weight or improve your performance?
 - Do you wear a seat belt, use a helmet, and use condoms?
- Consider reviewing questions on cardiovascular symptoms (questions 5–14).

EXAMINATION			
Height	Weight	<input type="checkbox"/> Male <input type="checkbox"/> Female	
BP / (/)	Pulse	Vision R 20/	L 20/ Corrected <input type="checkbox"/> Y <input type="checkbox"/> N
MEDICAL	NORMAL	ABNORMAL FINDINGS	
Appearance <ul style="list-style-type: none"> Marfan stigmata (kyphoscoliosis, high-arched palate, pectus excavatum, arachnodactyly, arm span > height, hyperlaxity, myopia, MVP, aortic insufficiency) 			
Eyes/ears/nose/throat <ul style="list-style-type: none"> Pupils equal Hearing 			
Lymph nodes			
Heart ^a <ul style="list-style-type: none"> Murmurs (auscultation standing, supine, +/- Valsalva) Location of point of maximal impulse (PMI) 			
Pulses <ul style="list-style-type: none"> Simultaneous femoral and radial pulses 			
Lungs			
Abdomen			
Genitourinary (males only) ^b			
Skin <ul style="list-style-type: none"> HSV, lesions suggestive of MRSA, tinea corporis 			
Neurologic ^c			
MUSCULOSKELETAL			
Neck			
Back			
Shoulder/arm			
Elbow/forearm			
Wrist/hand/fingers			
Hip/thigh			
Knee			
Leg/ankle			
Foot/toes			
Functional <ul style="list-style-type: none"> Duck-walk, single leg hop 			

^aConsider ECG, echocardiogram, and referral to cardiology for abnormal cardiac history or exam.

^bConsider GU exam if in private setting. Having third party present is recommended.

^cConsider cognitive evaluation or baseline neuropsychiatric testing if a history of significant concussion.

- ☐ Cleared for all sports without restriction
- ☐ Cleared for all sports without restriction with recommendations for further evaluation or treatment for _____
- ☐ Not cleared
- ☐ Pending further evaluation
- ☐ For any sports
- ☐ For certain sports _____
- Reason _____

Recommendations _____

I have examined the above-named student and completed the preparticipation physical evaluation. The athlete does not present apparent clinical contraindications to practice and participate in the sport(s) as outlined above. A copy of the physical exam is on record in my office and can be made available to the school at the request of the parents. If conditions arise after the athlete has been cleared for participation, a physician may rescind the clearance until the problem is resolved and the potential consequences are completely explained to the athlete (and parents/guardians).

Name of physician, advanced practice nurse (APN), physician assistant (PA) (print/type) _____ Date of exam _____

Address _____ Phone _____

Signature of physician, APN, PA _____

■ PREPARTICIPATION PHYSICAL EVALUATION CLEARANCE FORM

Name _____ Sex ☐ M ☐ F Age _____ Date of birth _____

☐ Cleared for all sports without restriction

☐ Cleared for all sports without restriction with recommendations for further evaluation or treatment for _____

☐ Not cleared

☐ Pending further evaluation

☐ For any sports

☐ For certain sports _____

Reason _____

Recommendations _____

EMERGENCY INFORMATION

Allergies _____

Other information _____

HCP OFFICE STAMP

SCHOOL PHYSICIAN:

Reviewed on _____
(Date)

Approved _____ Not Approved _____

Signature: _____

I have examined the above-named student and completed the preparticipation physical evaluation. The athlete does not present apparent clinical contraindications to practice and participate in the sport(s) as outlined above. A copy of the physical exam is on record in my office and can be made available to the school at the request of the parents. If conditions arise after the athlete has been cleared for participation, the physician may rescind the clearance until the problem is resolved and the potential consequences are completely explained to the athlete (and parents/guardians).

Name of physician, advanced practice nurse (APN), physician assistant (PA) _____ Date _____

Address _____ Phone _____

Signature of physician, APN, PA _____

Completed Cardiac Assessment Professional Development Module

Date _____ Signature _____

State of New Jersey

DEPARTMENT OF EDUCATION

HEALTH HISTORY UPDATE QUESTIONNAIRE

PARAMUS MIDDLE SCHOOLS – EASTBROOK & WESTBROOK

To participate on a school-sponsored interscholastic or intramural athletic team or squad, each student whose physical examination was completed more than 90 days prior to the first day of official practice shall provide a health history update questionnaire completed and signed by the student's parent or guardian.

Student Name _____ Age _____ Grade _____

Date of Last Physical Examination _____ Sport _____

Since the last pre-participation physical examination, has your son/daughter:

1. Been medically advised not to participate in a sport? Yes___ No___
If yes, describe in detail _____
2. Sustained a concussion, been unconscious or lost memory from a blow to the head? Yes___ No___
If yes, describe in detail _____
3. Broken a bone or sprained, strained/dislocated any muscle or joints? Yes___ No___
If yes, describe in detail _____
4. Fainted or "blacked out"? Yes___ No___
If yes, was this during or immediately after exercise? _____
5. Experienced chest pains, shortness of breath or "racing heart"? Yes___ No___
If yes, explain _____
6. Has there been a recent history of fatigue or unusual tiredness? Yes___ No___
7. Been hospitalized or had to go to the emergency room? Yes___ No___
If yes, explain in detail _____
8. Since the last physical examination, has there been a sudden death in the family or has any member of the family under age 50 had a heart attack or "heart trouble"? Yes___ No___
9. Started or stopped taking any prescribed medication, over-the-counter medication or supplements (herbal and nutritional)? Yes___ No___
If yes, name of medication(s) or supplements _____
10. Been diagnosed with Coronavirus (COVID-19)? Yes___ DATE: _____ No___
If diagnosed with Coronavirus (COVID-19), was your son/daughter symptomatic? Yes___ No___
If diagnosed with Coronavirus (COVID-19), was your son/daughter hospitalized? Yes___ No___
11. Has any member of the student-athlete's household been diagnosed with Coronavirus (COVID-19)? Yes___ No___

I CERTIFY THAT THE INFORMATION I HAVE PROVIDED IS ACCURATE TO THE BEST OF MY KNOWLEDGE AS OF THE DATE OF MY SIGNATURE. I UNDERSTAND THAT SCHOOL PERSONNEL WILL RELY ON THE INFORMATION PROVIDED ABOVE.

Signature of Athlete _____ Signature of parent/guardian _____ Date _____

IF YOU ANSWERED YES TO ANY QUESTION 1-7 or 10, FURTHER CLEARANCE FROM THE TREATING PHYSICIAN WILL BE NEEDED BEFORE THE STUDENT WILL BE ELIGIBLE TO PARTICIPATE IN THE SPORT.

Physician, APN, PA, please choose ONE of the following:

___ Cleared for all sports without restrictions

___ Cleared for all sports without restriction with recommendations for further evaluations or treatment for _____

___ Not Cleared

___ Pending further evaluation

___ For any sports

___ For certain sports Reason _____

Signature of physician, APN, PA _____ Date _____

Name and address of physician, APN, PA _____ Phone _____

PARENT/GUARDIAN

CONCUSSION POLICY ACKNOWLEDGMENT FORM

A concussion is a brain injury and all brain injuries are serious. They are caused by a bump, blow, or jolt to the head, or by a blow to another part of the body with the force transmitted to the head. They can range from mild to severe and can disrupt the way the brain normally works. Even though most concussions are mild, all concussions are potentially serious and may result in complications including prolonged brain damage and death if not recognized and managed properly. In other words, even a "ding" or a bump on the head can be serious. You can't see a concussion and most sports concussions occur without loss of consciousness. Signs and symptoms of concussion may show up right after the injury or can take hours or days to fully appear. If your child/player reports any symptoms of concussion, or if you notice the symptoms or signs of concussion yourself, seek medical attention right away.

Symptoms may include one or more of the following:

1. Headache.
2. Nausea/vomiting.
3. Balance problems or dizziness.
4. Double vision or changes in vision
5. Sensitivity to light or sound/noise.
6. Feeling of sluggishness or foggiess.
7. Difficulty with concentration, short-term memory, and/or confusion.
8. Irritability or agitation.
9. Depression or anxiety.
10. Sleep disturbance

Signs observed by teammates, parents and coaches include:

1. Appears dazed, stunned, or disoriented.
2. Forgets plays or demonstrates short-term memory difficulties (e.g. is unsure of the game, score, or opponent)
3. Exhibits difficulties with balance or coordination.
4. Answers questions slowly or inaccurately.
5. Loses consciousness.
6. Demonstrates behavior or personality changes.
7. Is unable to recall events prior to or after the hit.

PARENT/GUARDIAN

CONCUSSION POLICY ACKNOWLEDGMENT FORM

What can happen if my child/player keeps on playing with a concussion or returns too soon?

Athletes with the signs and symptoms of concussion should be removed from play immediately. Continuing to play with the signs and symptoms of a concussion leaves the young athlete especially vulnerable to greater injury. There is an increased risk of significant damage from a concussion for a period of time after that concussion occurs, particularly if the athlete suffers another concussion before completely recovering from the first one. This can lead to prolonged recovery, or even to severe brain swelling (second impact syndrome) with devastating and even fatal consequences. It is well known that adolescent or teenage athletes will often under report symptoms of injuries. And concussions are no different. As a result, education of administrators, coaches, parents and students is the key for student-athlete's safety.

If you think your child/player has suffered a concussion

Any athlete even suspected of suffering a concussion should be removed from the game or practice immediately. No athlete may return to activity after an apparent head injury or concussion, regardless of how mild it seems or how quickly symptoms clear. Close observation of the athlete should continue for several hours.

An athlete who is suspected of sustaining a concussion or head injury in a practice or game shall be removed from competition at that time and may not return to play until the athlete is evaluated by a medical doctor or doctor of Osteopathy, trained in the evaluation and management of concussion and received written clearance to return to play from that health care provider.

You should also inform your child's Coach, and/or School Nurse, if you think that your child/player may have a concussion. And when in doubt, the athlete sits out.

For current and up-to-date information on concussions you can

go to: <http://www.cdc.gov/ConcussioninYouthSports/>

www.nfhslearn.com

Signature of Student-Athlete

Print Student-Athlete's Name

Date

Signature of Parent/Guardian

Print Parent/Guardian's Name

Date

Website Resources

- Sudden Death in Athletes
<http://tinyurl.com/m2gjmva>
- Hypertrophic Cardiomyopathy Association
www.4hcm.org
- American Heart Association 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



American Heart Association

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



New Jersey Department of Education

PO Box 500
Trenton, NJ 08625-0500
(p) 609-292-5935
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



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SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

The Basic Facts on Sudden Cardiac Death in Young Athletes

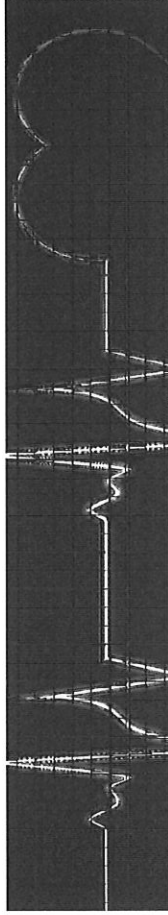
STATE OF NEW JERSEY
DEPARTMENT OF EDUCATION



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American Heart
Association
Learn and Live



SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

Sudden 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.



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-TRIK-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 1½ minute walk from any location and that a call is made to activate 911 emergency system while the AED is being retrieved.

State of New Jersey
DEPARTMENT OF EDUCATION

Sudden Cardiac Death Pamphlet
Sign-Off Sheet

Name of School District: _____

Name of Local School: _____

I/We acknowledge that we received and reviewed the Sudden Cardiac Death in Young Athletes pamphlet.

Student Signature: _____

Parent or Guardian
Signature: _____

Date: _____

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.¹ 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.² **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.**³

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.

¹ 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, December 26, 2013.

² 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, December 26, 2013.

³ Bedinghaus, Troy, O.D., Sports Eye Injuries, 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.

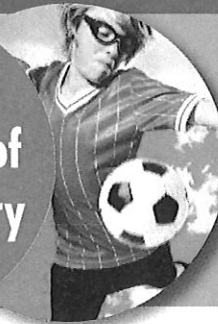
♦ **Corneal abrasions:** Corneal abrasions are painful scrapes on the outside of the eye, or the cornea. Most corneal abrasions eventually heal on their

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.⁴

- 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>.

⁴Bedinghaus, Troy, O.D., Sports Eye Injuries, http://vision.about.com/od/emergencyeyecare/a/Sports_Injuries.htm, December 27, 2013.