Dear Parent/Guardian,

Recently, New Jersey enacted the “Scholastic Student-Athlete Safety Act” (P.L. 2013, c. 71) on June 27, 2013. The intent of the act is to establish measures to ensure the health of student athletes in public and non-public schools.

As of the date of this act, in addition to completing the Preparticipation Physical Evaluation History Form, the student-athlete and parent/guardian must read the “Sudden Cardiac Death in Young Athletes” brochure which is attached to this letter and provided by the New Jersey Department of Education. The bottom of this form is to be signed and dated by BOTH the parent and student-athlete to certify that they have read and understand the brochure and will report any signs or symptoms as suggested. Please keep the brochure for your reference. You may also access the brochure online at the following link:

www.state.nj.us/education/students/safety/health/services/cardiac.pdf

Please return the bottom portion of this form to the School Nurse. Athletic participation may not commence until this form is completed and returned to the School Nurse.

Janine Citer RN, BSN, CSN-NJ
School Nurse
973-838-6390

By signing below, you are acknowledging that you have received and reviewed the pamphlet about sudden cardiac arrest provided by the New Jersey Department of Education (NJDOE).

_____________________________ _________________________________ __________
Signature of Student-Athlete  Print Student-Athlete’s Name   Date

_____________________________ _________________________________ __________
Signature of Parent/Guardian  Print Parent/Guardian Name   Date
SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

The Basic Facts on Sudden Cardiac Death in Young Athletes

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-TRICK-you-lar fib-boo-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).

Website Resources

- Sudden Death in Athletes
  www.cardiachealth.org/sudden-death-in-athletes
- 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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S U D D E N  C A R D I A C  D E A T H  I N  YO U N G  A T H L E T E S

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.
- Other diseases of the heart that can lead to sudden death such as drowning or car accidents. This information 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.

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.

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 Annual Athletic Pre-Participation Physical Examination Form.

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.

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.

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.

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?

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).

Effective September 1, 2014, the New Jersey Department of Education requires that all public and nonpublic schools grades K through 12 shall:

- Have an AED available at every sports event (three minutes total time to reach and return with the AED);
- Have adequate personnel who are trained in basic life support techniques (CPR); and
- Have coaches and athletic trainers trained in AED use present at practices and games.

Why have an AED on site during sporting events?

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- Call 911 immediately while someone is retrieving the AED.