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:

Website Resources

- Sudden Death in Athletes www.cardiachealth.org/sudden-death-in-
- Hypertrophic Cardiomyopathy Association www.4hcm.org
- American Heart Association www.heart.org

Collaborating Agencies:

(p) 609-842-0014 3836 Quakerbridge Road, Suite 108 New Jersey Chapter Hamilton, NJ 08619 American Academy of Pediatrics



www.aapnj.org American Heart Association

(f) 609-842-0015

(p) 609-208-0020 Robbinsville, NJ, 08691 Union Street, Suite 301

www.heart.org

PO Box 500 New Jersey Department of Education

www.state.nj.us/education/ (p) 609-292-5939 Trenton, NJ 08625-0500



New Jersey Department of Health P. O. Box 360

(p) 609-292-7837 Trenton, NJ 08625-0360

www.state.nj.us/health New Jersey Chapter Lead Author: American Academy of Pediatrics

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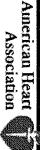
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Sudden Cardiac Death The Basic Facts on nifoung Athletes







seam and Live



What is sudden cardiac death tragedy done to prevent this kind of What, if anything, can be and 19 is very rare.

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

How common is sudden death in young

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

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

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

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

(con-JEN-it-al) (i.e., present from birth) The second most likely cause is congenital attack). abnormalities of the coronary disease," which may lead to a heart (commonly called "coronary artery occur when people get older differs from blockages that may heart in an abnormal way. This the main blood vessel of the arteries. This means that these blood vessels are connected to

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 familles.
- 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 gool 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.

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?

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.

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.

This is why screening evaluations and a review of the family health history need to

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)

Effective September 1, 2014, the New Jersey Department of Education requires that all public and nonpublic schools grades K through 1,2 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 AED use present at practices and games;
- Have coaches and athletic trainers trained in basic life support techniques (CPR); and
- Call 911 Immediately while someone is retireving the AED.