



## ARCHDIOCESE OF BALTIMORE

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### **Catholic Youth Sports SUDDEN CARDIAC ARREST AWARENESS**

Sudden Cardiac Arrest is a potentially fatal condition, caused by several structural and electrical diseases of the heart, in which the heart suddenly and unexpectedly stops beating. An electrical malfunction (short-circuit) causes the bottom chambers of the heart (ventricles) to beat dangerously fast (ventricular tachycardia or fibrillation) and disrupts the pumping ability of the heart. The heart cannot pump blood to the brain, lungs, and other organs of the body. The person loses consciousness (passes out) and has no pulse. Death occurs within minutes if not treated immediately.

Although Sudden Cardiac Arrest in student athletes is rare, student athletes' risk of Sudden Cardiac Arrest is nearly four times that of non-athletes.

#### **What are the signs and symptoms of Sudden Cardiac Arrest?**

- Fainting/blackouts (especially during exercise)
- Dizziness
- Unusual fatigue/weakness
- Chest pain
- Shortness of breath
- Nausea/vomiting
- Palpitations (heart is beating unusually fast or skipping beats)
- Lack of a pulse
- Unresponsiveness to tapping on shoulders or verbal prompts
- Family history of sudden cardiac arrest at age less than 50

The presence of any of these signs or symptoms while exercising may necessitate further evaluation from a licensed health care provider before returning to practice or a game.

#### **What is the treatment for Sudden Cardiac Arrest?**

Time is critical and an immediate response is vital.

- Call 911
- Begin CPR
- Use an Automated External Defibrillator (AED)

## What causes Sudden Cardiac Arrest?

- Heart conditions present at birth:
    - Inherited (passed on from parents/relatives) condition of the heart muscle.
    - Hypertrophic Cardiomyopathy – hypertrophy (thickening) of the left ventricle; the most common cause of Sudden Cardiac Arrest in athletes in the United States.
    - Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) – replacement of part of the right ventricle by fat and scar; the most common cause of Sudden Cardiac Arrest in Italy.
    - Marfan Syndrome – a disorder of the structure of blood vessels that make them prone to rupture; often associated with very long arms and unusually flexible joints.
  - Inherited conditions of the electrical system:
    - Long QT Syndrome – abnormality in the ion channels (electrical system) of the heart.
    - Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT) and Brugada Syndrome – other types of electrical abnormalities that are rare but are inherited.
  - Non-Inherited (not passed on from the family, but still present at birth) heart conditions:
    - Coronary Artery Abnormalities – abnormality of the blood vessels that supply blood to the heart muscle; the second most common cause of Sudden Cardiac Arrest in athletes in the United States.
    - Aortic valve abnormalities – failure of the aortic (the valve between the heart and the aorta) to develop properly; usually causes a loud heart murmur.
    - Non-compaction Cardiomyopathy – a condition where the heart muscle does not develop normally.
    - Wolff-Parkinson-White Syndrome – an extra conducting fiber is present in the heart's electrical system and can increase the risk of arrhythmias.
  - Conditions not present at birth but acquired later in life:
    - Commotio Cordis – concussion of the heart that can occur from being hit in the chest by a ball, puck, or fist.
    - Myocarditis – infection/inflammation of the heart; usually caused by a virus.
    - Recreational/Performance-Enhancing drug use – use of drugs such as cocaine and/or high doses of stimulants can be associated with Sudden Cardiac Arrest.
- Idiopathic – sometimes the underlying cause of Sudden Cardiac Arrest is unknown, even after autopsy.

## What can happen if a student athlete continues to play after experiencing Sudden Cardiac Arrest?

Ignoring symptoms of Sudden Cardiac Arrest and continuing to play leaves young athletes especially vulnerable to greater injury. Sudden cardiac death can result from failing to recognize and take seriously the symptoms of Sudden Cardiac Arrest.

**\*Parents/Guardians: You should inform your child's coach if you think that your child may have a heart condition or has exhibited signs of Sudden Cardiac Arrest. Remember it's better to miss one game than miss the whole season. And when in doubt, the athlete sits out.\***

**I have received and reviewed a copy of the Archdiocese of Baltimore CYS Sudden Cardiac Arrest Information Sheet**

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Student Signature

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Date

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Print Name

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Parent/Guardian Signature

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