Revised February 2014

Name of Student:	

What is Sudden Cardiac Arrest?

- Occurs suddenly and often without warning.
- 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.

What causes Sudden Cardiac Arrest?

- Conditions present at birth
 - Inherited (passed on from parents/relatives) conditions of the heart muscle:
 - ♦ **Hypertrophic Cardiomyopathy** hypertrophy (thickening) of the left ventricle; the most common cause of sudden cardiac arrest in athletes in the U.S.
 - ◆ **Arrhythmogenic Right Ventricular Cardiomyopathy** 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 makes 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 and Brugada Syndrome other types of electrical abnormalities that are rare but are inherited.
 - **NonInherited** (not passed on from the family, but still present at birth) **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 U.S.
 - ♦ **Aortic valve abnormalities** failure of the aortic valve (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.
- ➤ **Idiopathic**: Sometimes the underlying cause of the Sudden Cardiac Arrest is unknown, even after autopsy.

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What are the symptoms/warning signs 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)
- Family history of sudden cardiac arrest at age < 50

ANY of these symptoms/warning signs that occur while exercising may necessitate further evaluation from your physician 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 are ways to screen for Sudden Cardiac Arrest?

- ➤ The American Heart Association recommends a pre-participation history and physical including 12 important cardiac elements.
- > The UIL <u>Pre-Participation Physical Evaluation Medical History</u> form includes ALL 12 of these important cardiac elements and is mandatory annually.
- Additional screening using an electrocardiogram and/or an echocardiogram is readily available to all athletes, but is not mandatory.

Where can one find information on additional screening?

Check the Health & Safety page of the UIL website (http://www.uiltexas.org/health) or do an internet search for "Sudden Cardiac Arrest".

Parent/Guardian Signature	Date	
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