



SUDDEN CARDIAC ARREST IN YOUTH

What is Sudden Cardiac Arrest (SCA)?

- SCA is the condition in which the heart unexpectedly ceases to function. Often this is because of irregular and rapid quivering of the heart's lower pumping chambers (ventricles) called ventricular fibrillation. When this occurs, blood stops flowing to the brain and other vital organs, causing loss of consciousness or seizure-like activity in seconds. If not treated within minutes, SCA results in death.

Resuscitation from SCA

- The normal rhythm of the heart can only be restored with defibrillation through an electrical shock that is safely delivered to the chest by an automated external defibrillator (AED).

Who is at risk for SCA?

- SCA can strike persons of any age, gender or race, including those that seem in good health and at peak physical fitness
- Most youth with undetected heart conditions typically appear very healthy
- Many youth never exhibit any signs or symptoms until SCA occurs
- SCA is the leading cause of death in young athletes

Warning Signs & Symptoms of SCA:

- Fainting (syncope) or seizure during or after physical activity
- Dizziness / lightheadedness during or after physical activity
- Fainting or seizure resulting from emotional excitement, emotional distress or startle
- Unexplained fainting or seizures
- Chest pain or discomfort / racing heartbeat
- Unusual shortness of breath
- Unusual fatigue / tiredness
- Family history of heart disease
- Family history of unexpected sudden death during physical activity or during a seizure, or any other unexplained sudden death of an otherwise healthy family member under age 50





CONT. SUDDEN CARDIAC ARREST IN YOUTH

Most Common Causes of SCA in Seemingly Healthy Youth:

Structural

- Hypertrophic Cardiomyopathy (HCM)
- Arrhythmogenic Right Ventricular Dysplasia (ARVD)
- Congenital Coronary Artery Abnormalities (CAA)
- Dilated Cardiomyopathy (DCM)
- Marfan Syndrome
- Mitral Valve Prolapse (MVP)

Electrical

- Long Q-T Syndrome (LQTS)
- Wolff-Parkinson-White Syndrome (WPW)
- Brugada Syndrome
- Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT)

Other

- Drugs or Stimulants

All Youth Are At Risk While At Play:

- **Comotio Cordis** is a condition that causes SCA if a blow to the chest occurs at a critical point when the heart is electrically recharging. It can occur with impact of very little force. It is usually caused by a baseball, lacrosse ball, or hockey puck despite the use of a chest protector.
- Chest protectors are designed primarily to protect a child from soft tissue damage and bone injury on impact; not as protection from the potentially fatal heart rhythm that can occur as a result of impact. Wearing a chest protector, thus, creates a false sense of security.

Prevention:

- Knowledge of personal and family health history
- Cardiac screenings for early detection of risk factors and conditions associated with SCA
- Learn cardiopulmonary resuscitation (CPR) and how to use an automated external defibrillator (AED)

