

Preventing Sudden Cardiac Death in Your Schools

Medical Emergency Response Plan with AED Program

It is important for all staff members to know: how to recognize a sudden cardiac arrest, that time is critical, who the first responders are, that there is an AED, where the AED is, and enough about the emergency plan to know how to initiate it if they ever witness an unresponsive victim.

Facts About Sudden Cardiac Arrest in the Young

- Each year in the United States, 350,000 Americans die suddenly and unexpectedly due to cardiac arrhythmias. 3,976 of them are young people under age 35 (CDC 2002)
- 1 in 200,000 high school athletes in the US will die suddenly, most without any prior symptoms—*JAMA* 1996; 276
- According to the Centers for Disease Control and Prevention (CDC), deaths from sudden cardiac arrest (SCA) increased 10 percent (from 2,719 in 1989 to 3,000 in 1996) in people between the ages of 15 and 34. In young women, the death rate from SCA increased 30 percent. African Americans are more likely to die from SCA than Caucasians.
- Without immediate treatment from a defibrillator, 80% of SCA victims will die.
- A heart attack is a “plumbing problem” that occurs when the pipes (or arteries) are clogged up. Most often the victim is still conscious and talking. A sudden cardiac arrest is usually an “electrical problem” that most often occurs without warning, and causes unresponsiveness.
 - ♥ Most SCD in children is due to hereditary conditions and, therefore, more than one family member will be at risk. It is extremely important that all family members be tested once one family member is diagnosed.
 - ♥ The symptoms of genetic arrhythmias (like LQTS) are frequently misdiagnosed as vasovagal syncope, asthma or epilepsy without any cardiac evaluation. Thus, the opportunity to diagnose and treat LQTS and related disorders is missed.
 - ♥ Most cardiac arrhythmias and structural defects that may cause sudden death in the young are treatable. With treatment, people with these conditions often have normal life spans and lifestyles.

Facts About Automated External Defibrillators (AED)

- A shock delivered by an automated external defibrillator (AED) within 3-5 minutes may save these lives. Survival rates decrease by 10% with each minute of delay.
- If a shock is not needed, the device will not shock the victim (i.e. if there has been a seizure, injury, or another cause for the victim to collapse). In this case other reasons for the collapse should then be assessed and CPR should be continued if needed.
- AEDs are safe and easy to use. A study published in *Circulation* found that sixth-graders with no training were able to correctly use AEDs, and use them at an only modestly slower pace (90 second versus 67 seconds) than trained EMTs.
- And AEDs work. Survival rates up to 74 percent have been achieved in places that have successfully implemented AED programs.

Why Schools Should be Concerned with Sudden Cardiac Arrest

- Schools are public gathering places where 20% of the general public is present at any given time.
- Unfortunately, anyone can suffer sudden cardiac arrest. SCA is unpredictable and can happen to anyone, anytime.
- The average time it takes emergency crews to arrive is between 8-12 minutes, giving your students and visitors a very minimal chance at survival

How does an Automated External Defibrillator (AED) save lives?

- The only way to effectively treat sudden cardiac arrest (SCA) is with an electrical shock delivered by a defibrillator. Voltage stored by the defibrillator pushes an electrical current through the heart by means of the electrodes placed on the chest. This brief electrical pulse halts the chaotic activity of the heart, giving it a chance to start beating again with a normal rhythm.
- AEDs are extremely easy to use, difficult to misuse and have been designed specifically for lay responders. This enables anyone to give a defibrillation shock that could save a life.

Can the user of an AED or our School District be held liable?

All 50 states in the U.S. have Good Samaritan laws, giving immunity to lay people who help others in distress. AED programs are included under national Good Samaritan laws. In addition, the federal Cardiac Arrest Survival Act (CASA) provides additional Good Samaritan protection, including limited immunity for those who provide emergency treatment with an AED.

Resources for Schools

- Project S.A.V.E. provides help in developing/revising your plan, including lists and protocols. This program promotes a local, comprehensive emergency plan that, if followed, will help facilities acquire the equipment, education, support, and evaluations tools necessary to build a safe environment for children.
- Project A.D.A.M. is a program that trains students, faculty and staff in Wisconsin about the acquisition and use of automatic external defibrillators (AEDs) and provides materials and assistance for programs around the country.
- American Heart Association—AED guidelines, etc. for businesses & schools.
- SADS Foundation—sample emergency plans, links to resources (including the above).

What the SADS Foundation Recommends

1. Every child should have a risk assessment history at regular intervals: preschool, before/during middle school, before/during high school and before participation in organized sports.
The Sudden Arrhythmia Death Syndrome (SADS) Foundation offers a simple, comprehensive risk assessment form, the "Pediatric Sudden Cardiac Death Risk Assessment Form" that you can download from our web site (www.StopSADS.org).
2. Every school should have a medical emergency response plan in place which includes a plan for cardiopulmonary resuscitation (CPR). An automated external defibrillator (AED) in schools is vital.
3. Every school child with a SADS condition should have an individualized care plan in place.
4. Every school with a child who has a diagnosed SADS condition should have an AED program.
5. All high school students should be trained in CPR and AED protocol as a requirement for graduation.
6. Everyone should be aware of the warning signs that may indicate someone is at risk of a sudden cardiac arrest:
 - A family history of unexplained, sudden death in a young person (under age 40)—including drowning suddenly
 - Fainting (syncope) or seizure during exercise, excitement, or following a startle
 - Consistent or unusual chest pain and/or shortness of breath during exercise

The SADS Foundation wants to make sure that each child grows up happy and healthy! Information is available on our website at www.StopSADS.org or by calling 1-800-STOP SAD.