

Project S.A.V.E. Children's Healthcare of Atlanta

Staff Awareness: Sudden Cardiac Arrest

(Recommended for All School Staff Members because Anyone Could Be the Witness)

Goal: Working Together We Can Save Lives

(Prevention of Sudden Cardiac Death and AED Implementation)

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.

What is Sudden Cardiac Death?

1. Statistics and facts about Sudden Cardiac Death (SCD):

- Total SCD numbers: 350,000/year in the US (~1000/day): In the school setting, the victim could be faculty, staff, parents, visitors, or students.
- For children and adolescents, there are at least 600-1,000 deaths per year.
- Sudden cardiac arrest (SCA) in children is usually caused by a previously undiagnosed heart disorder, and more than half of the time it is genetic or hereditary in children and teens.
- Sudden cardiac arrest may also be caused by a blow to the chest at a critical time in the cycle of the heart (commotio cordis), or after certain drugs or stimulants are taken.
- Cardiac arrest can also happen (usually in adults) as part of a heart attack or stroke, usually after symptoms of chest pain or pressure; arm, jaw or back pain; nausea (heart attack) or one-sided numbness, weakness, paralysis or slurred speech (stroke).
- 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.
- In SCA, the heart goes into ventricular fibrillation (ineffective quivering) and can no longer pump blood normally to the brain and other vital organs.
- 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.
- An AED, when properly applied to an unresponsive victim, “looks” for a shockable heart rhythm and delivers a shock, only if needed, so that lay responders can save a life.
- 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.

Staff members identified as responders will attend/have attended a 2-4 hr. CPR/AED class which certifies them in these skills.

- Initial CPR is important to preserve the vital organs for successful resuscitation with the defibrillator.
- Everyone on the staff should know who/where these first responders are.

What does a Sudden Cardiac Arrest look like? How will I know what to do?

- Awareness and early recognition of symptoms of possible sudden cardiac arrest, the need for rapid response and activation of the communication “CODE” used in school are the keys. You may be the only one to witness the event. Don’t waste precious time asking questions, trying to figure out what may have happened:
 - someone on the staff needs to call 911,
 - while a first responder initiates CPR and
 - someone else brings the AED to the scene.
- The victim may complain of:
 - “feeling faint” or may look “wobbly”
 - extreme fatigue
 - shortness of breath
 - chest pain or discomfort
 - want to sit or lie down
 - may appear very pale
 - rapidly slumps or falls down and becomes unconscious/ unresponsive
 - there may be gasping/ shallow/ irregular/ or noisy respirations that are ineffective
 - there may initially be a pulse or seizure-like activity

There may also be no warning signs. The victim may just collapse suddenly. Sudden unresponsiveness means sudden cardiac arrest until proven otherwise with the AED. The victim needs CPR and the AED should be used quickly.
- Be especially aware that this could happen anytime, but is most likely during physical activity--playground, PE, sports activities (practice or games), activities such as Field Day, Jump Rope for Heart, during the after-school program or other extracurricular events. **If a child or adult “goes down” suddenly, respond quickly.**

All faculty and staff at the school can be part of this team. Your job in the chain of survival depends on the school policy. Some are listed here.

- The first responder needs to initiate CPR immediately; someone else should get the AED. Don’t wait for a responder to ask for it. If you see someone “go down” suddenly, make sure someone is getting the AED, even if you’re not sure what has happened. Be aware that some wall-mounted AED units will alarm when opened.
- Know that time is critical, and this requires a rapid response from everyone involved. Seconds count.

- One person should be responsible and designated to call 911/EMS. Using a land line is best for this, but using a cell phone is OK if it's quicker. Be prepared to give the school's full address and let them know you have an unresponsive victim.
- One person should go outside or stay near the front door to direct EMS responders to the scene.
- Use any communication tools you have: walkie-talkie, cell phone, etc. to notify others who may be closer to the AED to bring it.
- Someone who is not a first responder can get the AED and bring it to the scene.
- One person should stand by the scene in case rescuers need anything else.
- Others should remove other children from the scene and ensure safety for all.
- This emergency response should be practiced regularly, with drills conducted at least twice a year.
- The policy and procedures or guidelines should be shared with everyone on staff, including the communication plan that will be activated.

Comprehensive pre-participation sports physicals for student athletes are important to identify students who may be at risk and need further evaluation.

The Georgia High School Association has adopted and endorsed such a form, available at www.ghsa.net (or www.choa.org/projectsave)

Everyone should be aware of the warning signs that may indicate someone is at risk or is having a sudden cardiac arrest:

- **Fainting, near-fainting, dizziness, especially during or right after exercise**
- **Excessive, unexpected, unexplained fatigue with exercise**
- **Excessive, unexpected, unexplained shortness of breath with exercise**
- **Chest pain or discomfort with exercise**
- **Family history of any relative with a sudden, unexpected, unexplained death (sudden cardiac death, drowning, unexplained motor vehicle accident) before age 50.**

If any of these warning signs are observed in a student, the school nurse and/or family should be notified.

If you have any further questions, please talk to your school nurse or AED coordinator.