

Safety Scene

Sudden Cardiac Arrest: You've Got 10 Minutes

by Molly E. Butz uring a recent vacation, I received an urgent text message from my husband

Your knowledge of SCA could save a life.



inquiring about my location. We were meeting some friends for lunch and I'd gotten a few steps ahead of him along the way. My cell phone bleeped at me and showed: "Are you already at the restaurant?!!" "Yes," I replied and, suspecting that he was having trouble finding either me or the restaurant itself, I added "all the way in the back." I later learned that as he was entering the establishment he came across a large group of patrons gathered around a man that had collapsed on the floor, apparently having experienced sudden cardiac arrest. I'm proud to say that, partially because he couldn't see and mostly because he knows how seriously I take my Red Cross First Aid and CPR Certification, he thought it was me methodically applying chest compressions until an AED was located and/or EMS arrived. It didn't happen to be me that day, but it certainly could have been. Then I was pleasantly surprised to find that upon my return to the office, a sparkling new AED had been installed. These combined events got me to thinking...

Sudden Cardiac Arrest, or SCA, can happen anywhere at any time to virtually anyone, young or old. In the U.S., more than 325,000 people experience SCA every year which equates to roughly 900 people every day. Sadly, without immediate treatment, more than 95 percent of these victims die before they ever reach the emergency room. AEDs, or automated external defibrillators, are medical devices that can reverse SCA by analyzing the victim's heart rhythm and applying an electric shock if appropriate. Making an AED available in your facility can significantly increase the survival rate of any SCA victim in your workplace.

SCA vs. Heart Attack

Though frequently used synonymously, it's important to point out that while a heart attack can cause SCA, the terms are not interchangeable. The heart has two systems; think of them as "plumbing" and "electrical." A heart attack is caused by a blockage in one of the plumbing pipes, or arteries. In most cases, heart attacks start slowly; the victim is generally awake and experiences symptoms such as chest pain and shortness of breath. SCA, on the other hand, is most often caused by a problem with the electrical system, called an arrhythmia, and occurs when the heart stops pumping and begins rapid, chaotic quivering called ventricular fibrillation (VF). SCA happens quickly, and is distinguished by only one immediate symptom: sudden loss of consciousness. An SCA victim will collapse and have little or no breathing and no pulse.

Understanding the difference is critical in applying the correct treatment. And although immediate medical attention is vital in both situations, an AED will do no good in helping an alert heart attack patient unless he/she also suddenly experiences cardiac arrest.

A-E-D, Easy as 1-2-3

While the thought of applying a medical-level electrical shock to a co-worker, family member or even a stranger at the mall may seem intimidating, the manufacturers of

No AED? It is important to remember that if there is no AED available, CPR can still help! Yes, time is limited. Yes, ventricular fibrillation, the most common cause of SCA, can only be reversed by an appropriate electric shock. However, performing CPR until that shock is available can double or even triple the victim's chances of survival by keeping blood flowing to the victim's brain, potentially delaying brain damage or brain death.

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blood flow to the brain.

at a glance

☐ Heart attacks and sudden cardiac arrest

□ SCA is often caused by an arrhythmia,

■ An AED is an electronic device that admin-

isters electric shock to an SCA victim.

☐ If no AFD is available. CPR can be per-

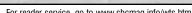
formed on an SCA victim to maintain

ing and starts to quiver rapidly.

(SCA) are not necessarily synonymous.

and occurs when the heart stops pump-





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How long do I have to save an **SCA vietim?**

Defibrillate within three minutes and the chances of survival are 70 percent. After ten minutes, the chances of survival are negligible. Brain death can begin to occur in four to six minutes. [Source www.aednow.com]

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AEDs have made the process very easy. Moreover, when SCA occurs, time is of the essence as death can occur within minutes if the necessary shock is not provided immediately. Waiting for Emergency Medical Services (EMS) to arrive is often far too long.

AEDs are fairly easy to spot simply because they are usually stored in a cabinet, most of which look very similar (see above). In addition, a standardized looking sign is posted above or near an installed AED that includes a heart/lightning bolt logo as shown on page 14. OSHA suggests installing AEDs in locations that "ensure response within 3-5 minutes." [Source: OSHA 3185-09N, Saving Sudden Cardiac Arrest Victims in the Workplace.] Generally an easy to access, central location is ideal. (For example, our AED is located in our main floor lobby.) And it's never a bad idea to occasionally remind the folks in your facility where your AED is located!

Once an AED is activated, its voice (yes, they talk) and display screen lead the rescuer through step-by-step instructions. These simple prompts will include directions on how and exactly where to apply the electrodes to the victim's chest. Then the machine will analyze the rhythm of the victim's heart and instruct the rescuer to apply the electrical shock if appropriate. It's really that easy.

All of that being said, ideally the person operating the AED has also been trained. It's not absolutely critical, but training provides additional skills for the rescuer including knowledge of what the Red Cross describes as the Cardiac Chain of Survival (www.redcross.org):

• Step one: Call 911 or other emergency services

• Step two: Early CPR

• Step three: Early defibrillation

• Step four: Early advanced cardiac life support, as needed

CPR skills can enhance the victim's chances of survival and also lessen their likelihood of developing brain damage. And, a little training can go a long way in giving a person the confidence necessary to make a move to rescue a co-worker. Additionally, most states have "Good Samaritan" laws that protect people that use an AED who are acting "in a good faith attempt to save a person from death."

Training can come from a variety of resources. As I mentioned, my first aid and CPR training came from attending a Red Cross course at work; other resources include the American Heart Association, your local/regional safety professionals and several online training courses (Google: CPR/AED class).

Equal parts of me are glad and sad it wasn't me who saved that man's life on my vacation, but I feel empowered when I say I could have and certainly you can too. The cost of an AED (usually \$1500 or less for a good, basic model) and basic training for a handful of your employees can literally be the difference between life and death. It's time...safety first! **SBC**

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