


Automated External Defibrillators (AEDs)

Did you know nearly 350,000 people die of sudden cardiac arrest each year? Currently, the chances of surviving sudden cardiac arrest (SCA) without the aid of an automatic external defibrillator (AED) are one in twenty. However, with an AED, chances of improve to one in three. The use of AEDs could save 100,000 lives per  survival year!

What is SCA?

The heart normally has a rhythmic beat which causes the blood to move in a consistent, predictable way. When someone has an SCA event, the heart begins to pump irregularly and ineffectively. This is called ventricular fibrillation (VF). VF is not to be confused with the heart attack where blood flow to the heart muscle is blocked. With VF, the blood stops circulating adequately, breathing stops, and eventually the victim will die.

Another SCA event is ventricular tachycardia (VT), when the heart muscles start to “quiver” instead of working together to push blood through the system.



CPR alone does not replace defibrillation in an SCA incident. CPR can only assist the victim for a short time until medical help arrives. However, medical assistance can be many minutes away. According to the American Heart Association, the chances of survival decrease 10 percent with each passing minute that the heart beat is not returned to normal. Very few people have survived SCA after 10 minutes with no medical treatment. Unfortunately, we don't know why SCAs occur, nor how to prevent them. We do know, however, how to fix them if they occur—AEDs.

What is an AED?

You've seen full-sized defibrillators on television. When the doctor shouts “Clear” and shocks the victim, they are using a defibrillator. The AED works the same—it shocks the heart back into a normal rhythm to restore a pulse. Manufacturers have developed lighter, smaller, battery-operated, computer-controlled models which nearly anyone can use. You can find them located in your facility.

Signs and symptoms of SCA

Symptoms of SCA are very sudden and dramatic. Typically, the victim will collapse, and show no sign of a pulse. At this point, emergency medical help must be summoned, and the AED used. The victim's chest is bared, all visible jewelry or medicine patches are removed, and the electrode pads are attached. Once the electrical pads are attached, the AED is turned on. Many AEDs will prompt the operator through the necessary steps to use it. If the AED does not sense a shockable event, no shock is given. Others will function automatically, applying a shock to the victim after sounding a warning alarm.

Laws and liability

In May 2000, Congress passed the Cardiac Arrest Survival Act to establish a national standard that provides Good Samaritan immunity for cardiac arrest care providers, trainers, and owners of property where AEDs are kept. A legal trend is starting to appear which suggests that failing to provide AEDs to respond to an SCA incident may be deemed as negligent.