

Sudden cardiac arrest and AEDs

- Sudden cardiac arrest (SCA) is one of the leading causes of death in North America. It strikes more than 200,000 Americans each year, nearly one death every two minutes.
- SCA is caused by ventricular fibrillation, a condition in which the heart's electrical impulses suddenly become chaotic, causing the heart to cease pumping blood effectively. Many victims of SCA have no prior symptoms. SCA can strike anyone at any time. Victims of SCA will quickly lose consciousness, often without warning, and unless there is quick intervention, death will occur within a few minutes.
- SCA is treatable using an AED (Automated External Defibrillator).

The problem: Ineffective planning

survival rates remain low – because organizations do not have an effective defibrillator plan in place.

How does an AED work?

An AED is a device that analyzes the heart's rhythm for abnormalities and, if necessary, delivers an electric shock (called defibrillation) which may help re-establish a normal rhythm. (Note: an AED will not deliver a shock to a person who is in asystole (flatline) where the heart has no electrical activity.)

AEDs require little training to use. The machine automatically diagnoses the heart rhythm and determines if a shock is needed. Automatic models will administer the shock without the user's command. Semi-automatic models will tell the user that a shock is needed but the user must activate the shock.

AEDs can even be used on children – all that is required is the use of pediatric pads. The American Heart Association recommends that if pediatric pads are not available, adult pads should be used to determine if the child is in a shockable rhythm. There is insufficient evidence to suggest that a child, in a shockable cardiac arrest, can be hurt by an adult defibrillation energy setting.

AED Equipment: Types, Selection, Cost And Maintenance

- Two sub-types of AEDs are currently available – monophasic and biphasic. Older defibrillators use a monophasic high energy electrical impulse, while newer AEDs deliver two lower energy shocks, one from the chest pad, and one from the back or rib pad. Earlier models have caused cardiac injury in some situations, while use of the newer model results in fewer complications and reduced recovery time.
- There are several AED manufacturers to choose from – research them well and choose based on your particular needs. Major manufacturers include: *HEARTSINE TECHNOLOGIES -LAERDAL MEDICAL CORPORATION-MEDTRONIC, EMERGENCY RESPONSE SYSTEMS-PHILIPS MEDICAL SYSTEMS-WELCH ALLYN/MLR-ZOLL MEDICAL CORPORATION*
Detailed information on these and other AED manufacturers can be obtained on the manufacturer websites
- Costs for AED machines are currently in the \$1500 - \$2000 range.
- It is important to keep AEDs in a state of readiness. A regular AED inspection and maintenance program is required to determine whether machines are readily available, in good working order, and that there are adequate supplies on hand.

Implementing An AED Plan In Your Workplace

A critical first step for developing a comprehensive AED plan is assessment. This involves reviewing issues such as location(s), training, equipment selection, and funding. Placement tips and training can be provided by information only, official AHA certification, or as an in-service. In as little as 30 minutes CPR & First Aid Training Southeast Texas can prepare employees for AED use during a cardiac emergency.

Legal Issues and State Legislation Issues

- Concern from individuals about being sued for improper use of an AED:
Good Samaritan laws exist in all states. This means that no one can be held liable for the harm of a victim by providing improper or inadequate care if the harm was not intentional. There are no known cases of persons being sued for trying to help, although there have been cases where people have been sued for not helping when they could.
- Use of AEDs by trained non-EMT (Emergency Medical Technician) first responders:
While most states require EMTs (e.g., firefighters and police) to know how to use AEDs as part of their job description, these states also permit the use of AEDs by non-EMT first responders and laypersons under certain conditions.

AED resources

For more information on AEDs schedule an in-service or training with CPR & First Aid SETX or consult the following excellent resources HYPERLINK "<http://www.early-defib.org/>" National Center for Early Defibrillation HYPERLINK "<http://www.redcross.org/services/hss/courses/aed.html>" American Red Cross: Saving a Life is as easy as A-E-D HYPERLINK "<http://www.fda.gov/hearthealth/treatments/medicaldevices/aed.html>" FDA Heart Health Online: AED



EVERY MINUTE COUNTS! THE SOONER CHEST COMPRESSIONS ARE STARTED AND AN AED IS USED

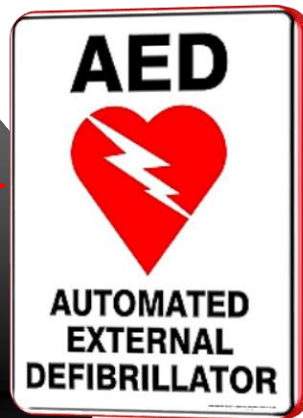
Time from Call to Shock	Survival Rate
Immediate defibrillation (1-2mins)	90%
Early defibrillation (6mins)	49%
Early defibrillation (7mins)	30%
Delayed defibrillation (>10mins)	<5%



HAVE YOU EVER NOTICED SIGNS POSTED

WITH LETTERS **AED**?

- HAVE YOU WONDERED WHAT EXACTLY IS AN **AED**? WHY DO I SEE THESE SIGNS HANGING IN PUBLIC SCHOOLS, GROCERY STORES, MALLS, AIR PORTS, WATER PARKS, YOUR WORKPLACE AND MANY OTHER LOCATIONS?
- THE REASON YOU MAY HAVE FOUND YOURSELF NOTICING **AED**'S MORE FREQUENTLY IS BECAUSE **AED'S ARE SAVING LIVES!**
- AS SIMPLE AS THE PUSH OF A BUTTON! AND FOLLOWING STEP BY STEP INSTRUCTIONS BY VOICE PROMPTS ANYONE CAN SAVE A LIFE! USED QUICKLY ON A VICTIM OF CARDIAC ARREST AED'S DOUBLE OR TRIPLE CHANCES OF



- Each year in the U.S., there are AED approximately 326,200 cardiac arrests outside of a hospital setting (in public) and on average **not even 11% of victims survive**. Cardiac arrest affects people of all ages.
- Using an **AED ALONG WITH CPR, IS THE ONLY WAY** to restore the victim's heart rhythm to normal.
- **SURVIVAL RATES WITH AED ARE REPORTED AS FIVE TIMES HIGHER COMPARED WITH CPR ALONE.**
- Each minute without CPR and AED (defibrillation) chances of survival decrease by 7-10%
- 2017 Studies by NIH & AHA show most cardiac arrests occurring in public places are "shockable" arrhythmias. **MEANING PEOPLE WHO DIED COULD HAVE LIVED** had a bystander used an AED. AEDs in public places are highly valuable for the lives that will be saved.
- Despite studies & statistics proving the benefit of AED use & training there are still not enough AEDs or people trained or at least knowledgeable in AED use. What is your excuse for not learning how to provide this lifesaving treatment? Not knowing or expecting someone else to know what to do results in lost opportunities to save family members, children, coworkers and strangers
- Lack of awareness, lack of available information is why according to AHA as of early 2018 **64%** of Americans have never even seen an AED. Share, like, comment to help others be aware of the resource available to anyone to aid in saving life. Schedule a family, office, group or individual training with CPR & First Aid Training Southeast Texas. Make yourself aware of AED locations, teach others the benefit. We are here to answer any questions

Visit www.cprclassesnow.com
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AED QUICK REFERENCE FACTS & FAQ

≥ 9 of 10 cardiac arrest victims who receive a shock from an **AED in the first minute live**. Why should people who operate an AED receive CPR training? Early CPR is an integral part of providing lifesaving aid for sudden cardiac arrest. CPR helps to circulate oxygen-rich blood to the brain. After the AED is attached and delivers a shock, the AED will **prompt the operator to continue CPR** while the AED continues to analyze the victim

≥ Sudden **cardiac arrest** is the sudden, unexpected loss of **heart** function, breathing & consciousness caused by an electrical disturbance in **THE heart** that disrupts pumping then **stops blood flow** to the rest of your body.



≥ If AEDs are so easy to use, why do **people need CPR training**? An AED operator must know signs of cardiac arrest **SO THEY KNOW** when to get THE AED. **KNOWING** when & how to do **CPR IMPROVES CHANCES OF SURVIVAL**. **TRAINING** allows familiarity with AED'S & helps to successfully operate it in an emergency. **Training also teaches the operator how to avoid potentially hazardous situations.**

≥ Can **AEDs be used on children? YES FOR 8YRS & UP** AHA recommends the pediatric pads **IN MOST AED KITS BE USED ON 1-8YR OLDS**. *Infants <1 year a manual defibrillator is preferred. If a manual defibrillator is not available, an AED with a dose attenuator may be used.*

Formal training in the use of an AED is not required, it is recommended to help the rescuer increase their comfort and level of confidence. However, AEDs are intended for use by the general public. Most AEDs use audible voice prompts to guide the user through the process.

Source: 2017, AHA Mediagenic Survey Results; 2017, AHA with Edelman Intelligence; 2017, AHA with BLR Media; Postgrad Medical Journal, October 2007



What is an AED?

The automated external defibrillator (AED) is a computerized medical device. An AED can check a person's heart rhythm. It can recognize a rhythm that requires a shock. And it can advise the rescuer when a shock is needed. The AED uses voice prompts, lights and text messages to tell the rescuer the steps to take. AEDs are very accurate and easy to use. With a few hours of training, anyone can learn to operate an AED safely. There are many different brands of AEDs, but the same basic steps apply to all of them. The AHA does not recommend a specific model.

What's the AHA position on placement of AEDs? The AHA strongly advocates that all EMS first-response vehicles and ambulances be equipped with an AED or another defibrillation device (semiautomatic or manual defibrillator). The AHA also supports placing AEDs in targeted public areas such as sports arenas, gated communities, office complexes, doctor's offices, shopping malls, etc. When AEDs are placed in the community or a business or facility, the AHA strongly encourages that they be part of a defibrillation program in which: • *Persons that acquire an AED notify the local EMS office.* • *A licensed physician or medical authority provides medical oversight to ensure quality control.* • *Persons responsible for using the AED are trained in CPR and how to use*

Persons that acquire an AED notify the local EMS office. A licensed physician or medical authority provides medical oversight to ensure quality control. Persons responsible for using the AED are trained in CPR and how to use an AED.

Workforce Training: focus AED

CPR & First Aid Training Southeast Texas provides thorough AED training with various practice AED's. The various brands, pads & prompts provided in class ensure students will recall training effectively when it matters.

Is your workforce prepared to respond to a workplace cardiac or first aid emergency?

Are you one of the 50% who can locate an automated external defibrillator (AED) at work?

With 10,000 cardiac arrests annually in the workplace, a simple in-service has the potential to save thousands of lives. Immediate CPR and use of an AED can double survival rates.

If you're unsure our highly rated employee training will provide you and employees confidence & skills needed to save a life. CPR & First Aid Training Southeast Texas provides high quality training at your location, at your convenience.

New AHA research shows that 50% of U.S. workplaces & employees are not prepared to handle health emergencies simply because they lack training in CPR and First Aid. — Take, Make or provide the opportunity to gain the knowledge and skills necessary

VISIT 

<https://www.cprclassesnow.com>

<https://m.facebook.com/CPRclassesnow/>

LEARN CPR LEARN HOW TO USE AN AED LEARN BASIC FIRST AID



Activate 911 immediately in an emergency -Help your community by advocating placement of AEDs in public places - Know your personal and family health history that may identify risk factors. Schedule your training for: workplace, home, social group, family, community today. Statistics are facts. Statistics about survival rates are very real and an AED used on you or your family member by a knowledgeable bystander could mean an increase in survival rate statistics. The bystander who may have learned about how to react during an emergency from the training you schedule.

Why should people who are responsible for operating an AED receive CPR training? Early CPR is an integral part of providing lifesaving aid to people suffering sudden cardiac arrest. CPR helps to circulate oxygen-rich blood to the brain. After the AED is attached and delivers a shock, the typical AED will prompt the operator to continue CPR while the device continues to analyze the victim.

If AEDs are so easy to use, why do people need formal training in how to use them? An AED operator must know how to recognize the signs of a sudden cardiac arrest, when to activate the EMS system, and how to do CPR. It's also important for operators to receive formal training on the AED model they will use so that they become familiar with the device and are able to successfully operate it in an emergency. Training also teaches the operator how to avoid potentially hazardous situations.

Can anyone buy an AED? AEDs are manufactured and sold under guidelines approved by the Food and Drug Administration (FDA). The FDA may require someone who purchases an AED to present a physician's prescription for the device

How much does an AED cost?

The price of an AED varies by make and model. Most AEDs cost between \$1,500-\$2,000.

What steps should an organization take to buy an AED for its premises?

Any person or entity wanting to buy an AED may first need to get a prescription from a physician (ask ambulance service). For more information about

● **Automated External Defibrillator (AED)**

● **Get your AED program up and running.**

● **AED Implementation**
visit www.cprclassesnow.com