What is an AED?

Unlike the models of defibrillators intended for use by health care professionals (and the ones seen most often on TV), AEDs are designed to allow minimally trained laypersons to respond to cardiac emergencies, particularly sudden cardiac arrest (SCA). AEDs are about the size of a lunch box and have adhesive electrode pads that deliver brief, but powerful electrical stimulation to the chest, interrupting the abnormal rhythm and helping to restore the heart’s natural rhythm. The devices are pre-programmed with the expertise needed to analyze the heart’s electrical function. They also use voice prompts and screen displays to instruct the user on how to operate the device.

Who can use an AED?

A wide variety of people in the United States and around the world are using AEDs, including police and security officers, firefighters, athletic trainers, flight attendants and lifeguards. Newly developed AEDs offer greater ease of use and are designed to allow trained laypersons to respond to cardiac emergencies in public places. Anyone who has completed a short (usually about four hours) training course that covers both AED use and cardiopulmonary resuscitation (CPR) can use an AED.

New Federal laws augment existing state “Good Samaritan” laws by providing some immunity protection for users and purchasers of AEDs.

How safe are AEDs?

AEDs are very accurate and are designed not to deliver therapy to someone who is not in cardiac arrest. When used properly and with appropriate precautions, AEDs are very simple to operate and pose no risk to either the rescuer or the patient.

Is sudden cardiac arrest the same as a heart attack?

No. A heart attack occurs when a blood vessel feeding the heart itself is blocked by plaque or a blood clot. The longer the blood flow is interrupted, the more extensive the damage done. The majority of heart attack victims survive the first attack. Treatment for heart attack includes angioplasty — using a tiny balloon to widen blocked blood vessels — and “clot-busting” drugs known as thrombolytics.

Sudden cardiac arrest involves problems with the heart’s electrical system, which can cause it to stop beating entirely. When that happens, blood flow to the rest of the body is interrupted, and the victim passes out. Defibrillation is the only known treatment for this condition, and AEDs are the quickest and most efficient way to reach individuals with this life-saving therapy.
Haven’t AEDs been in the news recently?

Yes, AEDs have been in the news recently related to the following:

- Results from the largest-ever clinical trial studying the outcome of public access to defibrillation (PAD) were presented in November of 2003 at the American Heart Association’s annual Scientific Sessions conference and published in the New England Journal of Medicine in August 2004. The data indicate that the use of AEDs by trained volunteers can significantly improve the probability of saving lives that otherwise might be lost to SCA. In the PAD Trial, the number of survivors from SCA in public locations approximately doubled when laypersons were trained to call 911 and administer CPR and AED therapy.

- Under the Public Health Security and Bioterrorism Preparedness and Response Act passed in June 2002, the government now provides millions of dollars to support the implementation of PAD programs across the country.

- The American Heart Association recently recommended adoption of a resolution seeking placement of the devices in public buildings.

- The U.S. Occupational Safety and Health Administration (OSHA) recently encouraged employers to take advantage of AED technology, noting that 13 percent of workplace fatalities reported to OSHA in 1999 and 2000 resulted from cardiac arrest.

- Two studies reported in the October 2000 issue of the *New England Journal of Medicine* show that persons with minimal training can successfully use simple, portable defibrillation devices in public places to save lives that might otherwise be lost.

- Passed in 2000, the Cardiac Arrest Survival Act was the nation’s first legislation to recognize the lifesaving role played by AEDs. This law requires the Secretary of Health and Human Services to develop recommendations and guidelines for AED placement and use in federal buildings nationwide and in post offices and other buildings that house federal agencies.

Where can I get more information?

For additional information about sudden cardiac arrest, visit the American Heart Association’s website at [www.americanheart.org](http://www.americanheart.org). For more information on starting a defibrillation program in your workplace or community, call the National Center for Early Defibrillation’s toll-free consumer resource hotline at **1-866-AED-INFO**. For more information about AEDs, visit [www.aedhelp.com](http://www.aedhelp.com).

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