

What is an AED and when it is needed?

An automated external defibrillator (AED) is used to deliver an electrical shock to the heart (defibrillation) of a victim suffering from the most common cause of Sudden Cardiac Arrest (SCA). Sudden cardiac arrest occurs when the heart's electrical impulses suddenly become chaotic, causing the heart to abruptly stop pumping blood effectively - known as ventricular fibrillation. The victim becomes unresponsive, has no detectable pulse and stops breathing. The only definitive treatment to restore an effective heart rhythm of the most common cause of SCA is defibrillation.

Does sudden cardiac arrest really happen in the workplace?

Yes - sudden cardiac arrest can strike virtually anyone - man or woman, young or old - anywhere, anytime and often without warning. In fact, **approximately 13** percent of workplace fatalities are from sudden cardiac arrest.

Many factors in the workplace can increase the risk of SCA or limit the timely delivery of potentially lifesaving defibrillation therapy:

- An aging work force, particularly in industrial companies;
- Work sites with high voltage equipment;
- Urban locations, which may be difficult for emergency responders to reach due to the need to negotiate traffic, staircases, elevators, escalators or crowds of people;
- Industrial campuses that may have tight security controls or spread out facilities;
- Relatively remote locations, which may result in longer response times by emergency medical services.

If SCA does occur in a work environment isn't it the responsibility of the emergency services?

Helping to save lives is a shared responsibility. A corporation's "in-house" emergency response program should complement, not replace, the existing first aid procedure. Working in partnership with the ambulance service, a company's first responders can help keep a victim alive for ambulance officers to treat when they arrive. Training employees in cardiopulmonary resuscitation (CPR) and the use of AEDs can minimise time-to-defibrillation when every minute counts. For the best chance of survival, a shock to the heart should be delivered within the first 5 minutes. The likelihood of successful resuscitation decreases by approximately 10 percent with every minute that passes. After 10 minutes without defibrillation, few attempts at resuscitation are successful. Sadly, the average response time for emergency medical services in a typical

community is nine minutes. AEDs can be strategically placed within a workplace, similar to the convenience of fire extinguishers, so that responders have immediate access to this potentially lifesaving equipment.

Why should corporations purchase defibrillators?

Of the 20 000 sudden cardiac arrest that occur in Australia, more than 10 000 might have been saved if an AED had been available in the first few minutes.

The person that collapses in the work place is most likely to be a witnessed arrest. In this case early defibrillation would increase survival rates from less than 5% to more than 50%.

The life saved could be yours!

How safe are AEDs?

AEDs are designed to deliver a shock **only** to someone who is suffering from the most common cause of 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 victim.

Who in our company could use the AED's?

HeartStart Defibrillators require minimal training. Safety officers, on-site physicians and nurses, security guards, office and industrial workers have all safely used HeartStart Defibrillators. Laerdal Medical provides comprehensive training solutions through a network of qualified training organisations to assist with preparing employees to use AEDs.

Is maintenance time consuming?

HeartStart Defibrillators have long-life batteries and perform comprehensive daily, weekly and monthly self-tests to help ensure readiness. A visual and audible status indicator allows responders to immediately see whether the device has passed its last self test and is ready for use.

Are AED's expensive?

Training and equipping targeted responders with AEDs represents an efficient use of existing resources and is an effective means of enhancing in-house emergency medical services. Through technological advances in defibrillation design, circuitry and battery technology, purchasing an AED for your corporation is more

affordable. HeartStart Defibrillators with supplies can now be purchased from \$2790 per unit.

Is there an increased risk of liability for using an AED?

To date there has been no case of companies or individuals being successfully sued in Australia following the use of an AED.

Given the high level of safety in the HeartStart range and the associated training it is highly unlikely that any liability will be taken over for the use of the HeartStart.

The community and public access use of AEDs is widespread and in this setting, it is difficult to see how a person attempting to save someone's life can be seen as negligent. Australian courts still maintain the Good Samaritan principle of one person assisting another when life and limb are imperilled.

Are HeartStart AEDs optimised for the 2005 guidelines?

Laerdal Medical and Philips are proud of the extent to which our AEDs are already optimised for the guideline recommendations. Our scientists reviewed extensive clinical data and anticipated the new emphasis on CPR reflected in the Guidelines. The more than 410,000 HeartStart AEDs in service today can already be configured for a protocol of a single shock, followed by a 2-minute CPR interval, making them largely compliant now.

Philips recognised early the importance of minimising interruption to chest compressions, and delivering a shock as quickly as possible after CPR. As a result, Philips is the only manufacturer with Quick Shock, the ability to deliver a shock in under 10 seconds (typical) after the end of CPR. Guidelines 2005 recognise the importance of minimising the time to shock after CPR. In addition, the HeartStart FR2+ is the only device with SMART CPR, the ability to assess a shockable rhythm and automatically determine if the patient is best served with an immediate shock (in the case of a rhythm typical of the first few minutes of cardiac arrest), or CPR first, followed by a shock (which may better serve patients who have been in cardiac arrest longer than 4-5 minutes).

Guidelines 2005 now suggest that medical directors consider a protocol where shocks are delivered early in cardiac arrest and CPR is performed before a shock when the patient has been in arrest longer than 4-5 minutes.