

# How to use a Defibrillator

The Automated External Defibrillator (AED) All that is required to use an AED is to recognise that someone who has collapsed may have SCA and to attach the two adhesive pads (electrodes) that are used to connect the AED to the patient's bare chest. Through these pads the AED can both monitor the heart's electrical rhythm and deliver a shock when it is needed.

The AED provides audible instructions and most models also provide visual prompts on a screen. The AED will analyse the heart's electrical rhythm and if it detects a rhythm likely to respond to a shock, it will charge itself ready to deliver a shock. Some devices then deliver the shock automatically without needing any further action by the operator; others instruct the operator to press a button to deliver the shock (these are often referred to as 'semi-automatic' AEDs).

After this the AED will tell the rescuer to give the victim CPR. After a fixed period (two minutes in current guidelines), the AED will tell the rescuers not to touch the victim while it checks the heart rhythm and a further shock is given (if it is needed).

Using an AED in this way allows the provision of effective treatment during the critical first few minutes after SCA, while the emergency services are on their way. Modern AEDs are very reliable and will not allow a shock to be given unless it is needed. They are, therefore, extremely unlikely to do any harm to a person who has collapsed in suspected SCA.

They are also safe and present minimal risk of a rescuer receiving a shock. AEDs require hardly any routine maintenance or servicing; most perform daily self-checks and display a warning if they need attention. Most AEDs currently offered for sale have a minimum life-expectancy of ten years. The batteries and pads have a long shelf-life, allowing the AED to be left unattended for long intervals.

These features of AEDs make them suitable for use by members of the public with little or no training.

As well as having an AED on site (and people trained to use it) it is also vital that as many people as possible learn basic skills in cardiopulmonary resuscitation. This entails recognising that someone may have suffered SCA, calling the emergency services (999 or 112), and then performing chest compressions and rescue breaths. This basic first aid will maintain an oxygen supply to the brain and other organs and make it more likely that the heart can be re-started by defibrillation. The priority in the early stages is to provide chest compressions, and if a rescuer is unable or unwilling to provide rescue breaths uninterrupted chest compressions should be given.

**By the Resuscitation Council (UK) and British Heart Foundation**

[www.bhf.org.uk/heart-health/nation-of-lifesavers/about-defibrillators](http://www.bhf.org.uk/heart-health/nation-of-lifesavers/about-defibrillators)