



Use of Automated External Defibrillators (AED's)

Frequently Asked Questions

With thanks to Sheffield City Council, HR Service

Use of Defibrillators – Frequently Asked Questions

What is a defibrillator?

A defibrillator, sometimes known as an Automated External Defibrillator (AED) is a small electronic device designed to allow minimally trained people to provide lifesaving defibrillation (electric shock to the heart) to victims of sudden cardiac arrest.

The device analyses and looks for shockable heart rhythm, advises the rescuer of the need for defibrillation and delivers a shock if needed.

A defibrillator applies a brief pulse of electrical current allowing the heart's normal electrical system to resume normal control. (Please note that a 100% success rate cannot be guaranteed, but this could be the casualty's best and only chance of survival)

When should the defibrillator be used?

All that is required to use the defibrillator is to recognise that someone who has collapsed has had a sudden cardiac arrest. This is done by establishing the casualty is unresponsive and not breathing normally. Most cases of sudden cardiac arrest are due to an abnormality in the hearts electrical rhythm. The heart stops beating and it ceases to pump blood around the body.

Death is inevitable unless the condition is recognised promptly and defibrillation is carried out. This allows the pumping action of the heart to resume.

AED's do not guarantee a patient being brought back to life; they are merely increasing the chances of a successful outcome. There remains a chance that the patient may still not recover despite perfect first aid and timely defibrillation delivery

An AED should **not** be attached to a person who is responsive or breathing normally.

Will I harm the casualty by using the Defibrillator?

When used on people who are unresponsive and not breathing, the AED is extremely safe. The AED makes shock delivery decisions based upon the casualty's heart rhythm, and will only defibrillate a shockable rhythm.

How successful are Defibrillators?

Statistics show that where defibrillators are used promptly there is a significant increase the chance of an individual's survival as below:

Used within

- 3 mins – 70% survival rate
- 5 mins – 50% survival rate
- 8 mins – 20% survival rate

The response time for a paramedic and/or ambulance to a cardiac arrest should be within 8 minutes; therefore prompt action will give the casualty a greater chance of survival.

Is a sudden cardiac arrest (SCA) the same as a heart attack?

No, SCA occurs when there is an abnormality in the heart's electrical rhythm. A heart attack occurs when an artery becomes blocked and the blood supply to the heart is stopped. Heart attack victims (usually but not always) experience chest pain and remain conscious. Heart attacks are serious and will sometimes lead to SCA. However, sudden cardiac arrest may occur independently of a heart attack, without warning symptoms. SCA results in death if not treated immediately.

In an emergency situation, what action should I take?

It is important to call 999 immediately to summon the assistance of the ambulance service first of all. If you are not a trained first aider, a first aider should be summoned too and then the reception area where the defibrillator is stored for the defibrillator to be brought to you.

Do I have to be first aid trained? What training do I need?

Training to use an AED is an extension of First Aid skills, although AEDs have been successfully used by untrained persons. A lack of training should not be a deterrent to their use.

However, there is no contractual obligation on any employee to use the defibrillator if they do not feel able to.

Familiarisation sessions will be held for any member of staff who is interested in finding out more about AEDs.

In house council first aid training will incorporate a small section on the use of AEDs.

Are they easy to use?

Defibrillators are easy to use, compact, portable and very effective. They are designed to be used by lay persons; the machine will guide the operator through the process by verbal instructions and visual prompts.

What if I forget all of the steps for using an AED?

The steps for shocking a sudden cardiac arrest victim are simple and straightforward. The defibrillator provides visual and audio prompts required for the entire resuscitation process. The most difficult part is recognising the need for defibrillation.

Sudden cardiac arrest (SCA) is a high stress situation. Even experienced health care providers do not do everything perfectly. In SCA, performing Cardiopulmonary resuscitation (CPR) and using a defibrillator can only help the casualty. CPR will ensure that blood continues to circulate around the body and the defibrillator will restart the heart.

The defibrillator is designed to help improve the quality of CPR delivered, which can only be a good thing as far as the casualty is concerned.

Should I perform CPR if I have not been specifically trained?

The delivery of CPR is an important factor when using the defibrillator. The defibrillator will administer a shock if needed and will then give an instruction to start CPR. There are visual and verbal prompts to help with this, but the ambulance service will remain on the telephone line and will talk you through the process, providing ongoing support until help arrives.

Are there any legal or insurance implications?

There are no legal or insurance risks associated with using a defibrillator. There have been no cases of anyone being sued in the UK and no instances of claims from people receiving poor first aid attention in the UK; this is a health and safety myth.

Can I get it wrong?

Defibrillators are reliable and safe and will not allow a shock to be delivered unless the hearts rhythm requires it. They are therefore extremely unlikely to do any harm to a person who has suspected sudden cardiac arrest.

You cannot worsen the casualty's condition and the AED cannot make the situation worse than it is. For further information on the legal status for those that attempt resuscitation see the [Resus Council's](#) document "A Guide to AEDs."

Are they safe for the operator to use?

They are safe and present minimal risk of a rescuer receiving a shock.

AEDs are extremely safe when used properly. The electric shock is programmed to go from one electrode pad to the other through the victim's chest. Basic precautions, such as verbally warning others to stand clear and visually checking the area before and during the shock, will ensure the safety of rescuers.

Do I need to remove the electrode pads before performing CPR?

No. The electrode pads remain on throughout the resuscitation and until the victim is transferred to advanced care providers such as the paramedics. If the electrode pads are in their correct locations on the victim's chest, they will not interfere with proper hand placement or compressions.

Should I use the AED if the victim has a pacemaker or is pregnant?

Yes, never withhold the use of an AED on a person with sudden cardiac arrest for any reason.

Checks and Maintenance

They are designed to be stored for long periods of time without use and require very little routine maintenance. The AEDs are self-checking devices with an indicator that shows the battery is charged and ready for use. Additionally the device will give early warning of when the battery requires replacing and also when the pads are nearing their expiry date.

Identified personnel in each building will carry out daily visual checks.

Ongoing Support

The Yorkshire Ambulance Service will provide a debrief for anyone involved in a resuscitation. Additionally SCC has an employee assistance programme that is available 24 hours a day, 7 days a week provided by Health Assured Ltd.