



Sheep Dip Lane
Academy



Exceed Learning Partnership
• EVERY CHILD • EVERY CHANCE • EVERY DAY •

Defibrillator (AED) Policy Sheep Dip Lane Academy



Responsible Governing Board	Local Governing Board
Responsible Persons	Principal
Date of last review	28th September 2021, Nov 22 & 23
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Defibrillator (AED)

An AED is a machine used to give an electric shock when a person is in cardiac arrest, i.e. when the heart stops beating normally. Cardiac arrest can affect people of any age and without warning. If this happens, swift action in the form of early cardiopulmonary resuscitation (CPR) and prompt defibrillation can help save a person's life. Research has shown that an individual's chance of survival following the onset of a cardiac arrest decreases by 7–10% for every minute of delay in commencing treatment. Lack of blood circulation for even a few minutes may lead to irreversible organ damage – including brain damage.

Early intervention by bystanders, even those with little or no first aid training, can therefore buy time until professional help arrives, improving the chance of a successful outcome. The AED will analyse the individual's heart rhythm and apply a shock to restart it, or advise that CPR should be continued. Voice and/or visual prompts will guide the rescuer through the entire process from when the device is first switched on or opened. These include positioning and attaching the pads, when to start or restart CPR and whether or not a shock is advised.

Cardiac arrest and heart attacks

It is important to understand the distinction between a heart attack and cardiac arrest as they are not the same, and require different interventions. CPR and/or the use of an AED is not appropriate for an individual experiencing a heart attack and who is conscious, as the heart will still be beating, and the device will not administer a shock in these circumstances. However, a heart attack is still a life-threatening situation, and the emergency services should be alerted immediately. A heart attack can also very quickly lead to cardiac arrest, in which case administration of CPR and use of an AED may help to save the person's life.

Cardiac arrest

Cardiac arrest is when the heart stops pumping blood around the body. It can be triggered by a failure of the normal electrical pathway in the heart, causing it to go into an abnormal rhythm or to stop beating entirely. Oxygen will not be able to reach the brain and other vital organs. When a cardiac arrest occurs, the individual will lose consciousness and their breathing will become abnormal or stop. If basic life support is not provided immediately, the chances of survival are greatly reduced. Cardiac arrest can happen at any age and at any time.

Possible causes include:

- heart and circulatory disease (such as a heart attack or cardiomyopathy)
- loss of blood
- trauma (such as a blow to the area directly over the heart)
- electrocution
- sudden arrhythmic death syndrome (SADS; often caused by a genetic defect)

When a cardiac arrest occurs, CPR can help to circulate oxygen to the body's vital organs. This will help prevent further deterioration so that defibrillation can be administered.

Heart attack

A heart attack (sometimes referred to as a myocardial infarction), is caused by a clot forming in one of the arteries that supply blood to the heart muscle. This prevents oxygen from getting to a particular region of the heart. As a result, cells in this region start to die. The longer this continues, the more damage is caused to the muscle. This damage is permanent. However, as the heart is still beating, CPR and defibrillation are not appropriate.

Not all people experiencing a heart attack will experience pain or discomfort. They will often remain conscious throughout. However, a heart attack is a serious, life-threatening emergency that requires immediate treatment and can trigger a cardiac arrest. If a person experiences a heart attack, the correct course of action is to call 999 immediately.

All trained Academy AED users will make the person comfortable, ideally seated on the floor supported by a wall or a person knelt behind them, and reassured until the ambulance arrives. Heart attacks are very rare among children, but the number of incidents in the adult population means that coronary heart disease (the most common cause of heart attacks) is the leading cause of death in the UK.

Common symptoms of a heart attack include:

- chest pain or tightness, like a belt or band around the chest, and which is not relieved by rest
- pain which may spread to neck, jaw, back and arms
- feeling sick, sweaty, short of breath, lightheaded, dizzy or generally unwell along with discomfort in the chest

The chain of survival In the event of a cardiac arrest, defibrillation can help save lives, but to be effective, it should be delivered as part of the chain of survival. There are four stages to the chain of survival, and these should happen in order. When carried out quickly, they can drastically increase the likelihood of a person surviving a cardiac arrest. They are:

1. Early recognition and call for help. Dial 999 to alert the emergency services. The emergency services operator can stay on the line and advise on giving CPR and using an AED
2. Early CPR – to create an artificial circulation. Chest compressions push blood around the heart and to vital organs like the brain. If a person is unwilling or unable to perform mouth-to-mouth resuscitation, he or she may still perform compression-only CPR.
3. Early defibrillation – to attempt to restore a normal heart rhythm and hence blood and oxygen circulation around the body. Some people experiencing a cardiac arrest will have a ‘non-shockable rhythm’. In this case, continuing CPR until the emergency services arrive is paramount.
4. Early post-resuscitation care – to stabilise the patient.

Anyone is capable of delivering stages 1 to 3 at the scene of the incident. However, the Academy has 10 members of staff trained to deliver the AED effectively. It is important to emphasise that life-saving interventions such as CPR and defibrillation (stages 2 and 3) are only intended to help buy time until the emergency services arrive, which is why dialling 999 is the first step in the chain of survival. Unless the emergency services have been notified promptly, the person will not receive the post-resuscitation care that they need to stabilise their condition and restore their quality of life (stage 4).

The chain as a whole is only as strong as its weakest link. Defibrillation is a vital link in the chain and, the sooner it can be administered, the greater the chance of survival.

Defibrillation and cardiopulmonary resuscitation (CPR)

When a person suffers a cardiac arrest, it is essential for effective CPR to be initiated as soon as possible; only dialling 999 should take precedence. The person performing CPR should not stop except where this is necessary in order to attach the pads or when instructed to do so by the AED, usually before it delivers a shock. If possible, somebody else should attach the pads to the patient while CPR continues.

An AED will only administer a shock if the patient's heart is in a shockable rhythm. The application of CPR can maximise the opportunities for defibrillation to be administered effectively. The AED will continue to analyse the patient's heart rhythm after each shock and will provide ongoing instructions about continuing CPR.

Some cardiac arrest patients will not present with a shockable rhythm (i.e. one which is suitable for defibrillation), and the AED will not administer a shock. In such cases, it is essential that CPR is maintained until the emergency services arrive.

Location and access

Choosing a location in view of the importance of responding swiftly to a cardiac arrest, AEDs should be located strategically to ensure that they can be accessed quickly in an emergency. Where complete coverage cannot be provided, devices should ideally be situated no further than a maximum of two minutes' brisk walk from the areas where they are most likely to be needed. This might include sports facilities and play areas (physical activity is linked to an increased likelihood of cardiac arrest), as well as the routine locations of any pupils or staff known to have existing heart conditions.

Location of defibrillator – Admin office on it's own shelf

Safety considerations

The Academy's AEDs is safe to use for all those involved, and will give a verbal warning instructing the rescuer to stand back when analysing heart rhythm and prior to delivering a controlled electric shock. A rescuer may accidentally be subjected to a defibrillation shock if he or she does not heed this warning, but this is unlikely to cause significant harm.

Standard AEDs are suitable for use on people of all ages, except small children aged under 12 months.

For children aged 1–8, it is recommended that AEDs be used in paediatric mode or with paediatric pads. However, adult pads may be used if paediatric pads are not available.

Rescuers should not hesitate to use an AED on a pregnant woman in cardiac arrest, as resuscitation of the pregnant mother is the only way to keep her unborn child alive. Early defibrillation can therefore help provide the best chances of survival for both the unborn child and the mother. When calling 999, it is advisable to notify the operator that the casualty is pregnant as this may determine which response crew/vehicle is required.

Regular maintenance

The Academy's AED will self-test and, if a problem is detected, this will indicate by means of a warning sign or light on the machine. The AED is tested weekly by a designated person, Mr Baker on our Parago platform. This check will be recorded at the time of the check. Any warnings to be notified to the Academy Business Manager immediately.

Training

The following staff have undertaken AED training;

Mr Baker
Mrs Parkhurst
Miss Pounder
Mrs Steeper
Mr Storey
Mrs Vose
Mrs Bradley
Mr Cocker
Mrs Cook
Mr Copestick
Mrs Davenport
Mrs Frost
Mrs Gamblin
Miss Hinchliffe
Mrs Sparrow
Mrs Willis
Mrs Cosa
Mrs Matthews
Mrs Spiers
Mrs Mason
Mrs Rhodes
Mr Storey
Mrs Wilson
Mrs Winter
Mrs Worth

CPR & Defibrillator (AED) Course

Course contents covered:

- Heart attack early recognition and actions
- Chain of Survival" protocols (theory)
- Treatment of casualty in cardiac arrest
- Resuscitation protocols (theory) ILCOR 2010
- Cardio Pulmonary Resuscitation (CPR practical) Adult & Baby
- AED descriptions and usage
- Heart arrhythmias - Asystole, VF, VT, PEA.
 - Defibrillation protocols (theory) ILCOR 2010
- AED Scenarios (Practical Workshops)