

Frequently Asked Questions

Sudden Cardiac Arrest and Automatic External Defibrillators.

What is sudden cardiac arrest (SCA)?

The killer of more than 5,000 people in Ireland and 7 million people globally per annum. Sudden cardiac arrest (SCA) causes the heart's normal heart rhythm to suddenly become chaotic. The heart can no longer pump the blood effectively and the victim instantly collapses, stops breathing, becomes unresponsive, and has no detectable pulse. SCA can strike anyone, anytime. Children, teenagers, athletes, senior citizens can all suffer SCAs. Although the risk of SCA increases with age and in people with heart problems, a large percentage of the victims are people with no known risk factors.

Is SCA the same as a heart attack?

No. Both the heart attack (myocardial infarction) and a sudden cardiac arrest have to do with the heart, but they are different problems. SCA is an electrical problem; a heart attack is a "plumbing" problem relating to a blocked supply of oxygenated blood to the heart muscle. Sometimes a heart attack, which may not be fatal though damaging can trigger a sudden cardiac arrest.

The Treatment for SCA

What is the recommended treatment for SCA?

Defibrillation. It is the only treatment proven to restore a normal heart rhythm. When used on a victim of SCA, the automated external defibrillator (AED) can be used to administer a lifesaving electric shock that restores the heart's rhythm to normal. AEDs are designed to allow non-medical personnel to save lives.

How much time do I have to respond if someone has a sudden cardiac arrest?

Only minutes. Defibrillate within three minutes and the chances of survival are 70 percent. After 10 minutes, the chances of survival are negligible. The sooner a shock is administered the more likely it is that the victim will be resuscitated.

I know CPR; would it help?

Yes. CPR, or cardiopulmonary resuscitation, is a critical emergency procedure performed when a person's heart stops beating or they stop breathing. Immediate CPR can **double or triple the chances of survival** after cardiac arrest by keeping blood circulating to vital organs until professional help arrives, such as paramedics or hospital staff. In out of hospital cardiac arrest in Ireland, we have very high bystander CPR rates with treatment being given in over 80% of cases before the Ambulance arrives.

Do I have to perform mouth to mouth or the “kiss of life” on a victim?

No. In more recent year's medical evidence has shown that there is sufficient oxygen in the blood stream to last for up to 8 minutes with CPR being provided; the primary goal is to oxygenate the brain, over all other organs. Once effective CPR is being done this alone buys time until a shock from a defibrillator is available.

Click here to see PHECC [CPR tips without the lips](#).

The Need for an AED

How does an AED work?

Two electrodes (pads), connected to the AED, are placed on the patient's chest. A computer inside the AED analyses the patient's heart rhythm and determines if a shock is required to save the victim. If a shock is required, the AED uses voice instructions to guide the user through saving the person's life. The most commonly shockable rhythm is called Ventricular Fibrillation (VF), hence DE-fibrillation. This is a chaotic irregular rhythm where the heart does not work in the correct sequence to pump blood.

Will an AED shock someone who has ‘flatlined’.

A truism is that in Movies and on TV ECG cardiac arrest is often shown as a ‘flatline’, medically known as Asystole. This in fact is not a shockable rhythm. Asystole follows on from untreated Ventricular Fibrillation and is too late for a successful resuscitation attempt to be made. An AED will correctly advise whether to deliver a shock to a victim with this rhythm.

Are AEDs safe, will it accidentally deliver a shock?

It is very unlikely. Studies show that AEDs interpret the victim's heart rhythm more quickly and accurately than many trained emergency professionals. If the AED determines that no shock is needed, it will not allow a shock to be given.

Once an AED is applied to someone who is unresponsive, unconscious and not breathing, AEDs are 100% safe.

Why do we need AEDs?

AEDs save lives!! Seattle or Dublin Airport survival rates are much higher and in excess of 70%. This demonstrates that availability of more AEDs saves more lives. When a person has a sudden cardiac arrest, the heart becomes arrhythmic and cannot circulate blood around the body. Every second and minute that the heart is not beating lowers the odds of survival by 7-10 percent. After 10 minutes without defibrillation, very few people survive without advanced medical interventions. Surviving neurologically intact is generally associated with a quicker time to first shock. [Bystander CPR up to 10 minutes after cardiac arrest may protect brain function | American Heart Association](#)

With the best intentions Emergency Services may not arrive in time, due to distances and availability. Rest assured they will prioritise these calls and move as quickly as possible but SCA does not allow for delays in treatment.

Effectively Sudden cardiac arrest is effectively a community issue, one that a motivated and prepared community can address very effectively and easily.

What does the Irish Heart Foundation say about AEDs?

The Irish Heart Foundation strongly supports having AEDs in public areas such as sports arenas, office complexes, schools, doctors' offices, shopping centres, airports, and other public places and with mobile volunteers in Community First Responder (CFR) programmes. If you are interested in starting a CFR programme, then the National Ambulance Service will help you get established. Irish CFR Programmes are highly effective when it comes to Cardiac Arrest treatment.

Easy to Use

Is an AED complicated to use?

All AEDs are very easy to use. An AED can be used by practically anyone who has been shown what to do. In fact, there are several cases where people with no training at all have saved lives. Many programmes, such as the initiative in Dublin Airport, demonstrate how both fire extinguishers and AEDs can be made accessible to the public, rather than restricted to trained DAA personnel.

Can a non-medical person make a mistake when using an AED?

AEDs are safe to use by anyone, training is not legally required, though of course recommended. The AED's voice guides the rescuer through the steps involved in saving someone; for example, "apply pads to patient's bare chest" (the pads themselves have pictures of where they should be placed) and "press red shock button." Furthermore, safeguards have been designed into the unit precisely so that non-medical responders can't use the AED to shock someone who doesn't need a shock.

Some AEDs such as the DEFIBTECH LIFELINE VIEW even provide step by step full colour video which help providers know exactly what and when to perform each step.

Where can I find an AED?

When an emergency call is made the Despatcher can tell you if there is an available AED near you, how to manage other responders, provide CPR and how and when to apply the AED.

The key word here is "IF" an AED is available. Although there are many more thousands of AEDs available there are still many areas where one is not available. The only way to ensure your environment is protected is to have your own AED either in your local community or at your workplace. There is always a fire extinguisher in case of fire so why not have an AED where there are fire extinguishers?

Can I be sued if I help someone suffering SCA?

No. The 2011 Good Samaritan Act in Ireland, specifically the Civil Liability Act 1961, protects lay individuals who provide assistance in emergencies from liability for negligence. This means that a person who helps someone in need, such as

performing CPR, is generally not held personally liable for any harm caused while providing assistance, provided they acted in good faith and without gross negligence. The rules for professional responders are different as they must act within the scope of their qualification and training.

Has anyone been revived by using a Defibtech AED?

Defibtech AEDs have saved many hundreds of lives since they were introduced to the market in 2003. In 2005 for example, a Defibtech AED supplied by OxygenCare saved a life just two days after it was delivered to a Concert venue.

Maintenance

How often must I change batteries?

AEDs supplied by OxygenCare come with non-rechargeable batteries with between 4- and 7-year standby life depending on the model. If the unit is used frequently, the battery pack may naturally have to be replaced more often. Some other AEDs require a battery change every time they are used. The AED will inform the user when the battery pack needs to be replaced.

What else do I need to do to keep my AED in working order?

The defibrillation electrodes (pads) must be replaced on expiry, typically every two years. Some of our devices will advise when the pads require replacement however in general it is advisable to insert the date of expiry of both the pads and battery in your calendar as a reminder. In addition, the AED performs automatic self-checks daily to test its operational readiness. If anything is not fully functional, the unit will make a loud chirp and flash a red light warning the owner that servicing may be required. For larger programmes OxygenCare can provide connected monitoring solutions for centralised monitoring and alerts when device status changes.

Do AEDs need regular servicing?

No formal servicing is required beyond replacing pads and batteries as needed. However, a quick visual check during routine safety inspections is always recommended. For some corporate clients who require external validation for audit purposes OxygenCare can provide annual testing and certification through our large product support department.

Can I run a manual self-test?

Manual self-tests are only required after each use **(when a shock is delivered)**. Manual self-tests are not required as part of routine maintenance and should be avoided to preserve battery life. The AED is already checking itself on a daily/ weekly / monthly basis. If the device reports a fault, then a manual self-test is advised with some models which will report their fault audibly or in text.

Compliance and Safety

Where should an AED be installed?

In an ideal world, AEDs should be installed wherever there are people. AEDs should be easily accessible and visible in high-footfall areas, such as reception desks, corridors, sports facilities, at lift lobbies on hotel floors or community halls. Many organisations also place them outside in weatherproof cabinets for 24/7 public access. The gold standard is that you should be able to reach an AED within one minute of fast walking, however where there are a limited number of AEDs available, they should be placed strategically bearing in mind visibility and access. If there are secure areas in a facility where only certain staff are permitted this area should have its own AED and ensure that Emergency Response Teams have access to all areas. Use of additional signage indicating where the nearest AEDs can be very helpful in an emergency.

What about outdoor AED Storage?

If placed outdoors, the AED should be stored in a temperature controlled and ventilated cabinet. Lockable cabinets are not recommended as this often delays access which can be detrimental to outcomes. However, where a lockable cabinet is required, it can be provided. The Cabinet should be placed out of the direct path of sunlight which can cause large temperature fluctuations within the cabinet risking formation of condensation.

In Ireland temperatures rarely exceed what is known as the storage temperature range of an AED, but colder temperatures lead to earlier depletion of the battery. An unventilated cabinet poses the risk of formation of condensation which can lead to a shorter service life. Manufacturers recommended storage conditions should be observed to ensure warranty coverage.

As regards operational temperature ranges some AEDs cannot be used in sub-Zero temperatures with indoor models limited to temperatures above 5C. Ensure you

purchase an AED which is suitable for intended usage in your programme. Many AEDs can be used in sub zero temperatures when coming from ambient storage.

Why are IP ratings important for an AED?

An IP Rating is a standard which explains what level of protection a piece of equipment has against water and dust ingress, both of which can destroy electrical circuits. OxygenCare AED products range from IP54 to IP66. Generally, these ratings are sufficient for storage indoors and outdoors. For more extreme environments such as in marine or wilderness environments the higher IP ratings are necessary

Bear in mind that an AED which is stored indoors may be used outdoors and as such should be able to cope with that environment.

Please see this table for further explanation.

Environmental Tolerances for AEDs supplied by OxygenCare

Ingress Protection (IP) ratings, indicate how well a device is protected against foreign bodies such as dust and moisture. This value is represented by a two-digit code which follows the letters IP. The first of these relates to dust and the second is against liquids. The higher the numbers the better the level of protection.

AED Model	Storage Temperature	Operational Temperature	IP RATING	Humidity
DEFIBTECH LIFELINE AED	0°C to 50°C	-20°C (one hour from ambient) to 50c	IP54	5% to 95% non-condensing
DEFIBTECH VIEW AED	0°C to 50°C	-20°C (one hour from ambient) to 50c	IP55	5% to 95% non-condensing
Corpuls AED	-40°C to 85°C MAX	-10°C to 55°C	IP66	Max 95% non-condensing

IP First number – Protection against solid objects	IP Second number – Protection against liquids
0. Non-protected	0. Non-protected
1. Protected against solid foreign objects of 50 mm diameter and greater	1. Protected against vertically falling water drops
2. Protected against solid foreign objects of 12.5 mm diameter and greater	2. Protection against vertically falling water drops when enclosure tilted up to 15°
3. Protected against solid foreign objects of 2.5 mm diameter and greater	3. Protected against spraying water
4. Protected against solid foreign objects of 1.0 mm diameter and greater	4. Protected against splashing water
5. Dust protected 0.1mm	5. Protected against strong water jets
6. Dust tight 0.01mm	6. Protected against powerful water jets

Should I register my AED?

Yes, you can register your AED with the National Ambulance Service. THE NAS will make emergency callers aware of the location of the nearest AED and provide a PIN code if it's in a locked cabinet. This information is also shared with Dublin Fire Brigade who respond across the Dublin Area.

Registration link: https://surveys.hse.ie/t/AED_Form/

Also check if manufacturer registration is required to enable warranty coverage. OxygenCare completes this process on behalf of our customers.

What should I do after using an AED?

Replace the used pads, check the battery, and download the event data if required by the patients' doctors. Then return the device to its normal ready-to-use state.

Buying an AED

Can anyone buy an AED?

Yes, anyone can buy an AED in Ireland.

What features should I look for in an AED?

Look for

- 1) an AED that is easy for non-medical people to use, with an uncluttered design and clear prompts.
- 2) an AED that is technically reliable and suitable for your environment with a reputable and responsive back up service.
- 3) one that offers good value and quality. AEDs supplied by OxygenCare meet these requirements.

How do I buy AEDs from OxygenCare?

Access the OxygenCare Web Shop at [Shop - OxygenCare](#) or email us on

Republic of Ireland

sales@oxygen-care.ie or call us on 01 2769 700 to chat with our product specialist.

Northern Ireland

salesni@oxygen-care.ie or call us on +44 (0) 289 0665539 for Defibtech AED products.