

Frequently asked questions about defibrillators

What is a defibrillator?

A defibrillator is a life-saving device used to treat Sudden Cardiac Arrest (SCA), a condition that occurs when the heart unexpectedly stops pumping due to a sudden knock or an underlying medical condition. When a defibrillator analyses the heart rhythm and recognises an abnormal rhythm, it will decide whether a shock is required to be delivered or not. A defibrillator is also known as an automated external defibrillator (AED) or simply a 'defib'.

What is defibrillation?

Defibrillation is the process of attempting to restore the heart's normal rhythm and is crucial in the first five minutes following a SCA to maximise the person's chance of survival.

What is Sudden Cardiac Arrest (SCA)?

A Sudden Cardiac Arrest is a condition that occurs when the heart unexpectedly stops pumping.

- *Each year, SCA strikes approximately 30,000 Australians. Unfortunately, fewer than 5% survive, often because help cannot reach them in time. The average ambulance response time is between 9-14 minutes.*
- *SCA is not gender or age specific.*

What are the benefits of using an AED during a SCA?

- *Without defibrillation, for every minute that passes, the chance of survival is reduced by 10%.*
- *Application of an AED within minutes increases the survival rate.*

When is a defibrillator used?

In accordance with the DRSABCD Action Plan, if a person is not breathing, cardiopulmonary resuscitation (CPR) should be commenced. A defibrillator should be applied whenever CPR is performed. If the person is breathing, regardless of whether they are responsive (conscious) or not responsive (unconscious), a defibrillator is not required.

How does a defibrillator work?

A defibrillator delivers a set amount of electrical shock to the heart after it analyses the heart rhythm. It determines whether a shock is required to the heart via adhesive electrode pads attached to the person's chest. The shock delivered by a defibrillator interrupts the chaotic rhythm of the heart and gives the heart the chance to return to its normal rhythm.

Are there different types of defibrillators?

There are different manufacturers of AEDs, which mean there are slight differences in how they operate. However, they all instruct you on what to do and operate in a very similar manner.

Examples of AEDs:

- **Automated defibrillators** – there are two categories – semi-automated (SAED) and fully automated (AED).
 - SAED – when a shock is required to be delivered to a person, the operator will be prompted to press a button on the machine to activate the shock.
 - AED – the machine automatically delivers the shock when required.
- **Manual defibrillators** are used by health professionals trained to interpret data provided by the AED device, and to manage the person. Ambulance services and ER departments also use this type of AED. This is the most common perception of a defibrillator and you may see this type of AED on a television show.

Who can use a defibrillator?

Anyone can use a defibrillator – it is just a matter of following the voice prompts provided by the unit. However, [training](#) is recommended to give the user greater confidence.

What if I attached the AED to a conscious person? Can I harm them?

If there is normal heart rhythm, an AED will not allow a shock to be delivered.

For example, if a person thinks the casualty is not breathing but the heart is beating, an AED will assess whether there is a heart rhythm and advise by voice command that a shock is not required. The AED will not allow a shock to be delivered.

Do I have to be a healthcare worker to use an AED?

No. An AED guides the user step-by-step through the defibrillation process with visual and voice prompts. The AED **will not** deliver a shock unless it detects a shockable rhythm, e.g. the heart is not beating regularly.

Can a heart stop beating after an AED has got it beating again? How would I know?

Once a shock is delivered, an AED will continue to monitor the person's heart rhythm. If the analysis reveals that the heart has stopped beating, it will advise that a shock is required. Follow the prompts given by the AED.

Can I shock a person accidentally?

No. The AED assesses the status of a person's heart and will not shock a normal heart beat.

Why don't I just wait until an ambulance arrives?

Defibrillation is most effective when carried out as quickly as possible in the first few minutes after SCA.

Do I need training to use an AED?

St John Ambulance recommends that you attend training as it will give you greater confidence in the use of a defibrillator.

Where can I get AED training?

St John Ambulance Australia is a national self-funded not-for-profit organisation, active in every state and territory. As Australia's largest First Aid Registered Training Organisation (RTO), St John provides practical life-saving skills to more than 400,000 people each year.

St John Ambulance Australia offers a combination of CPR and AED hands-on [courses](#) to train participants in this life-saving skill.

What maintenance does the AED require?

- **Self-maintenance and visual inspection**
 - All AEDs perform self-maintenance checks on a daily, weekly and monthly basis to ensure that they are ready for use. In the event that the machine fails part of the test, it will 'beep' to alert you that there is a fault.
 - St John recommends a weekly inspection be performed on the machine to ensure it has not failed a self-check. This inspection only takes a minute to complete.
 - In standby mode, maintenance is simply a visual inspection.
- **Replacement of consumables:**
 - Pads – every 2 years
 - Battery – every 4 years

Note: The HeartStart defibrillator units supplied by St John Ambulance have an 8 year warranty (excludes pads and battery).

What is the St John iPhone app – *Resuscitate*?



Resuscitate is an iPhone app that makes it easier to find publicly accessible defibrillators nearest to you.

It has the potential to reduce the time it takes to find a defibrillator by using the built-in Google Maps function.

Resuscitate is available for [download](#) at the iTunes store.

SUMMARY

- AEDs are reliable, easy to use, simple to maintain, portable, durable and cost effective.
- AEDs put companies and groups in a unique position to have a dramatic impact on the lives of SCA casualties – whether they are employees, family members, associates, clients or customers.
- An on-site emergency response plan and trained responders will enhance the likelihood of a better outcome for casualties of any emergency.



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