

# General FAQ

## What is Sudden Cardiac Arrest?

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Sudden cardiac arrest (SCA) means that the heart unexpectedly & abruptly begins to beat in an abnormal or irregular rhythm (arrhythmia), which inhibits blood from circulating.

This is most of the time caused by an abnormal heart rhythm called ventricular fibrillation (VF).

## What is VF?

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VF is an abnormal heart rhythm often seen in SCA. This rhythm is caused by an abnormal and very fast electrical activity in the heart. VF is chaotic and unorganized; the heart just quivers and cannot effectively pump blood. VF will be short lived and deteriorate to asystole (a flat line) if not treated promptly.

## What is AED?

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AED, also known as Automated External Defibrillator, is a medical device that can automatically analyze cardiac arrhythmias of SCA patients through electrodes, advise the rescuer of the need for defibrillation, and deliver a shock if needed.

AEDs are often used for SCA, which is a condition in which the heart suddenly stops pumping blood and quivers erratically; this typically happens without any warning signs. The chances of surviving cardiac arrest decrease by 7-10% with every minute that passes after a person's heart stops beating.

## Why do I need an AED?

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The American Heart Association has documented a simple but powerful 4-step "Chain of Survival". Defibrillation within 3–5 min of collapse can produce survival rates as high as 50–70%. This can be achieved by public access and onsite AEDs.

The "Chain of Survival" steps must all occur within 5 minutes:

1. Early Access to get help – Call Emergency services
2. Early CPR to buy time
3. Early Defibrillation to restart the heart
4. Post resuscitation care to restore quality of life

The only successful treatment of SCA is early defibrillation.

## What if I forget the steps for using an AED?

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Mindray BeneHeart C Series AED has incorporated the unique ResQNav<sup>™</sup> technology to guide you through the entire resuscitation process. It provides users with interactive rescue guidance based on the user's proficiency, and enables continuous CPR encouragement to help them perform CPR with more confidence.

Specifically, the ResQNav technology keeps the voice guidance simple and concise for skilled rescuers in order to improve resuscitation efficiency.

For unskilled rescuers with limited resuscitation experience, the ResQNav can determine their proficiency based on the time spent at each step, and provides appropriate, step-by-step animation and voice guidance throughout the resuscitation process in order to enhance rescuers' confidence and improve resuscitation outcome.

Following the instruction of the latest AHA/ERC guidelines, and designed around the fatigue curve, the ResQNav provides continuous CPR encouragement by reminding the rescuers how many compressions are left.

## Should I perform CPR first or apply electrode pads from the AED?

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Do CPR until the AED arrives. Apply the electrode pads to the patient's bare chest and follow the voice prompts and messages of the AED.

## If defibrillation is so important, why should I do CPR?

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CPR provides a mechanical circulation of oxygenated blood to the patients' heart and brain. This circulation delays both brain death and the death of heart muscle. CPR also makes the heart more likely to respond to the shock and this will result in a higher chance of successful defibrillation.

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

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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.

## Can an AED be used on children?

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Yes, Use pediatric AED pads and/or equipment, if available. It is equally recommended to use pediatric/adult 2-in-1 pads. All the AED products of Mindray BeneHeart C Series are compatible with both types of pads. There is an adult/pediatric switch key on the AED for users to select the corresponding patient mode, and the energy level and CPR prompt will be adjusted accordingly to meet the patient's need.

# Product FAQ

## How do I use an AED?

Mindray BeneHeart C Series AEDs are all very intuitive. The device will automatically power on once opening the lid. From there, it's as simple as following the AED's voice and visual prompts (visual prompts available in selected versions) which include directions such as "Apply pads as shown on Pads " and "Start CPR immediately". An important feature about Mindray BeneHeart C Series is process encouraging mechanism, which means the device will give you different prompts during the resuscitation process according to different usage reactions.

Mindray BeneHeart C series AED itself will determine whether a shock is necessary, and if it is, will prompt the rescuer to push the shock button (in semi-automated model) and give a clear warning before shocking the patient. If you are using the fully automated model, just simply stay clear and follow the prompts from the AED, the device will deliver a shock accordingly.

Since these devices guide a person through the entire rescue process, they can be used by people that haven't been trained in CPR/AED usage, however, it is highly recommended that every user has been trained on CPR and use of the AED.

## What are the differences between Mindray BeneHeart C Series AEDs?

In September 2019, Mindray officially launched four models of the BeneHeart C Series AEDs.

BeneHeart C1A	Semi-Automated External Defibrillator with yellow cover, without screen
BeneHeart C1A Fully Automated	Fully-Automated External Defibrillator with yellow cover, without screen
BeneHeart C2	Semi-Automated External Defibrillator with black cover, with screen
BeneHeart C2 Fully Automated	Fully-Automated External Defibrillator with black cover, with screen

## What's the size and screen resolution of Mindray BeneHeart C Series AED?

Size (width × depth × height) for BeneHeart C Series AED is 21.0 cm×28.6 cm×7.8 cm (± 2cm).

As for the models with screen, the screen size is 7 inch, and resolution is 800×480 pixels.

When did the BeneHeart C Series get CE mark?

August, 2019

## When was the BeneHeart C Series firstly launched, in what region?

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BeneHeart C Series was launched firstly in Europe and other selected countries in September 2019.

## How are the BeneHeart C Series data storage capability?

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Waveform storage up to 5 hours of ECG waveforms.

Events up to 500 events.

Voice recording up to 1 hour.

CPR data up to 5 hours.

Self-test reports up to 1000 records.

## What's the IP rating of Mindray BeneHeart C Series AED and what does it mean?

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The IP rating means degree of protection against dust and water.

For Mindray BeneHeart C Series AED the IP rating is IP55, which means:

Degree of protection against harmful ingress of solid is IP5X.

Degree of protection against harmful ingress of water is IPX5.

### Here is the reference for IP rating level:

Proof Level from Dusts (Indicated by the first X)

0: Without protection

1: Free from large solid objects

2: Free from medium-size solid objects

3: Free from tiny solid objects

4: Free from tiny solid objects whose diameters are bigger than 1mm

5: Preventing the gathering of harmful dusts and motes

6: Free from dusts and motes completely.

Proof Level from Water (Indicated by the second X)

0: Without protection

1: Free from negative influences when water drops hit the outside of the instrument.

2: Free from negative influences caused by water drops when the outside case slants to an angle of 15 degrees

3: Free from negative influences caused by water or rain from an angle of 60 degrees

4: Free from negative influences caused by liquid splashes from any directions.

5: Free from negative influences when flushed with water

6: Can be used in such circumstances as ship cabin.

7: Can be soaked deep 1m in water for a short time

8: Can be soaked in water under certain pressure for a long time.

## What should I do if I have a technical fault with a Mindray AED device?

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For any technical problems, please contact your local distributor, the Mindray service team at your region or the Mindray global technical service team on 400 700 5652 / (86-755) 81888998 or [service@mindray.com](mailto:service@mindray.com).