

## Automated External Defibrillators (AED)

### *Desfibrilador externo automático (DEA)*

Ventricular fibrillation (VF), consisting in the ineffectiveness of heart beats to maintain adequate blood flow, is the most common type of arrhythmia responsible for sudden cardiac arrest.

#### WHAT IS AN AUTOMATED EXTERNAL DEFIBRILLATOR (AED)?

The AED is a first-aid portable device that diagnoses and evaluates the need of delivering an electric shock, providing the user with instructions on how to operate it.

Using an AED does not require much training, since the device provides step-by-step instructions on how to use it safely and effectively.

#### HOW DOES IT WORK?

It works by delivering a direct current shock to the heart to restore normal rhythm in a victim of sudden cardiopulmonary arrest caused by VF.

#### WHO NEEDS AN AED?

Any individual with cardiopulmonary arrest (cessation of breathing and heartbeat) caused by different reasons.

#### HOW IS IT USED?

The AED is used when the patient is unconscious, not breathing and without a pulse. The patient is placed on a hard, flat surface (avoiding contact with water or conductive materials). The chest is then uncovered and the AED is turned on.

#### TREATMENT STEP BY STEP

**CALL FOR HELP** Ask someone to call the emergency system (SAME in Argentina, dialing 107 in the Autonomous City of Buenos Aires, or the Federal Police at 911 in the province of Buenos Aires) to bring an AED. If you are alone, make the call yourself and ask for an AED as soon as possible.

**START** Turn on the power button. Follow the voice prompts provided by the AED. Remove all the clothing items covering the victim's chest.

**ATTACH THE ELECTRODE PADS** Remove the electrode pads from the package and attach them firmly to the victim's bare chest on the places pictured on them. (Figure 1)

**SHOCK BUTTON** The device determines the cardiac rhythm of the victim. If necessary, the AED prompts you to press the blinking shock button. (Figure 2) Make sure no one, not even you, is touching the victim.

Resume firm and quick compressions in the middle of the chest immediately after the shock. Stop if the victim starts recovering or moving.

The AED will analyze the rhythm every two minutes and prompt you to deliver a new shock if necessary.

If the victim's heart rhythm is back to normal, the device indicates the rescuer to check the victim's breathing and pulse, indicating that cardiopulmonary resuscitation should be started if necessary.

**NOTE:** If the AED does not prompt a shock and the victim continues unresponsive, keep doing firm and quick compressions in the middle of the chest until advanced help arrives. Do not interrupt cardiopulmonary resuscitation or disconnect the device until the emergency system arrives.

#### WORDS OF CAUTION

In case the surface is wet, shocks may be diverted to the wet parts of the body or reach the rescuer, with the resulting danger.

Interference can occur if the AED is used close to devices that work with high radiofrequency.

#### CONCLUSIONS

Sudden cardiac arrest is a leading cause of death worldwide.

Many victims can survive if bystanders act immediately by providing an electric shock with an AED.

The most adequate locations to have available AEDs are places where large numbers of people gather, such as airports, train stations, subway stations, casinos, sports centers, gyms, etc.

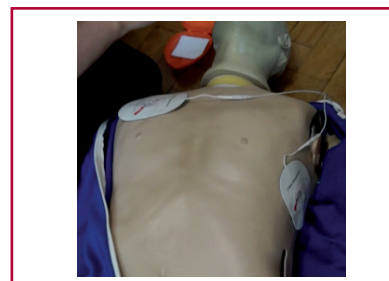


Fig. 1



Fig. 2

RAC  
Copy for  
patient

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#### REFERENCES

- Video produced by the Argentine Journal of Cardiology <http://bit.ly/1Q9sctC>
- Hands-Only CPR video by the American Heart Association
- <http://international.heart.org/es/re-sources>
- <http://desfibrilador-externo-automatico/desfibrilador-externo-automatico>

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