

Basic Life Support & Automated External Defibrillation

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CPR

Objectives

At the end of the lecture , participants should be able to demonstrate :

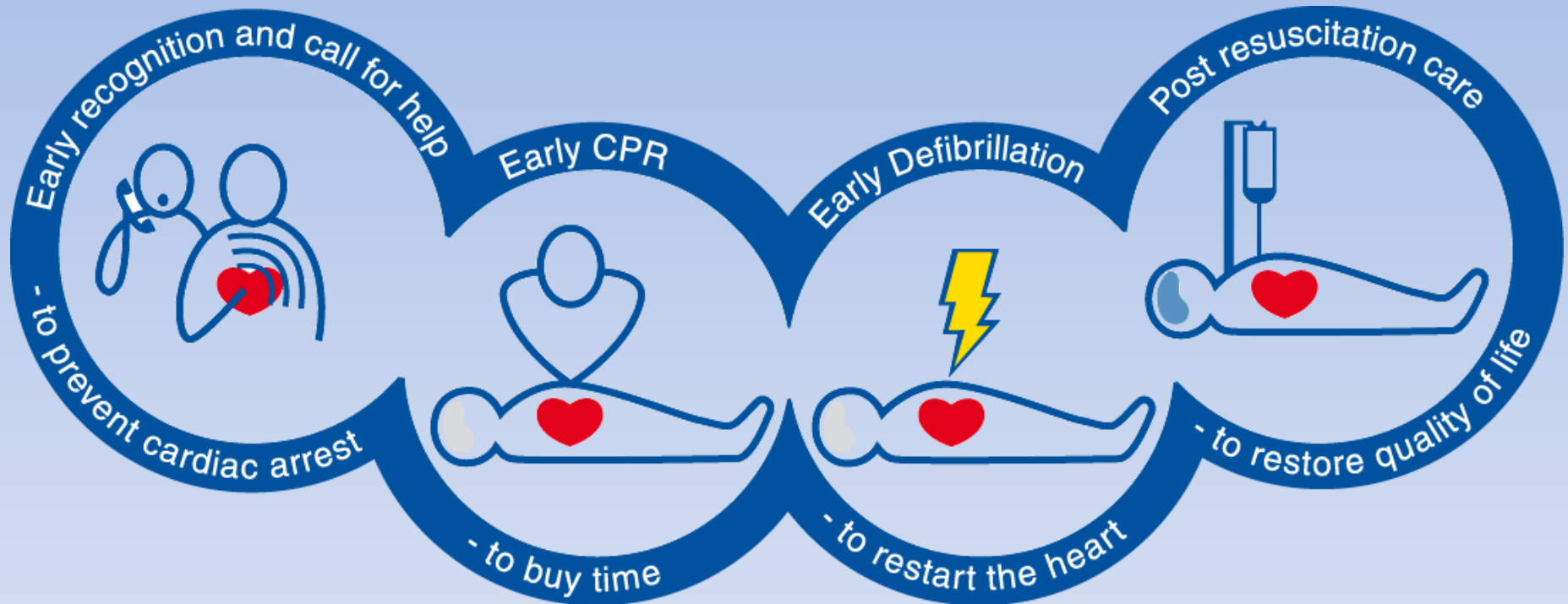
- How to assess the collapsed victim.
- How to perform chest compression and rescue breathing.
- How to operate an Automated External Defibrillator safely.
- How to place an unconscious breathing victim in the recovery position.

* REFERENCES : AHA AND EUREPEAN RESUSCITATION
COUNCIL GUIDLINES

Background

- Survival to hospital discharge presently approximately 5-10%
- Bystander CPR is a vital intervention before arrival of emergency services
- Early resuscitation and prompt defibrillation (within 1-2 minutes) can result in >60% survival

Chain Of Survival



C-A-B



BLS for Healthcare Providers Quick Reference

C-A-B (Not A-B-C)



**Chest
Compressions**



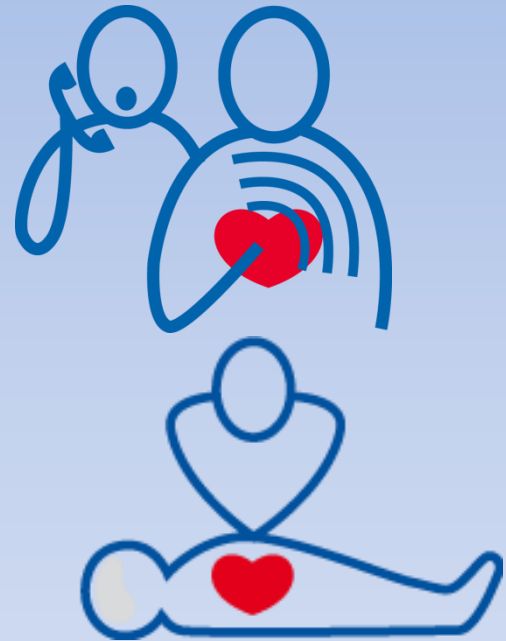
Airway



Breathing

The three SSS's: safety, shake, shout

- **Safety : Approach safely**
- **Shake : Check response**
- **Shout for help**
- **30 chest compressions**
- **2 rescue breaths**



Approach Safely!

Scene

Rescuer

Victim

Bystanders

Check Response and Breathing



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Call For Help



Check Carotid Pulses



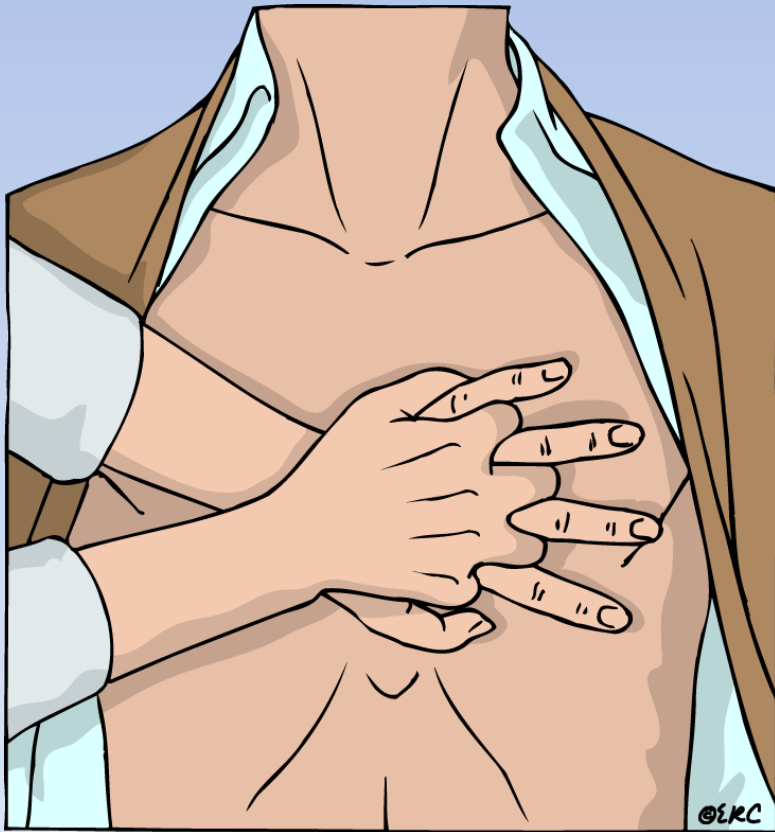
Start a High-Quality CPR

- Start compression within 10 seconds of recognition of cardiac arrest .
- Push Hard, Push Fast.
- Allow complete chest recoil
- Minimize interruption .
- Give effective breaths that make the chest rise.
- Avoid excessive ventilation .

30 Chest Compressions

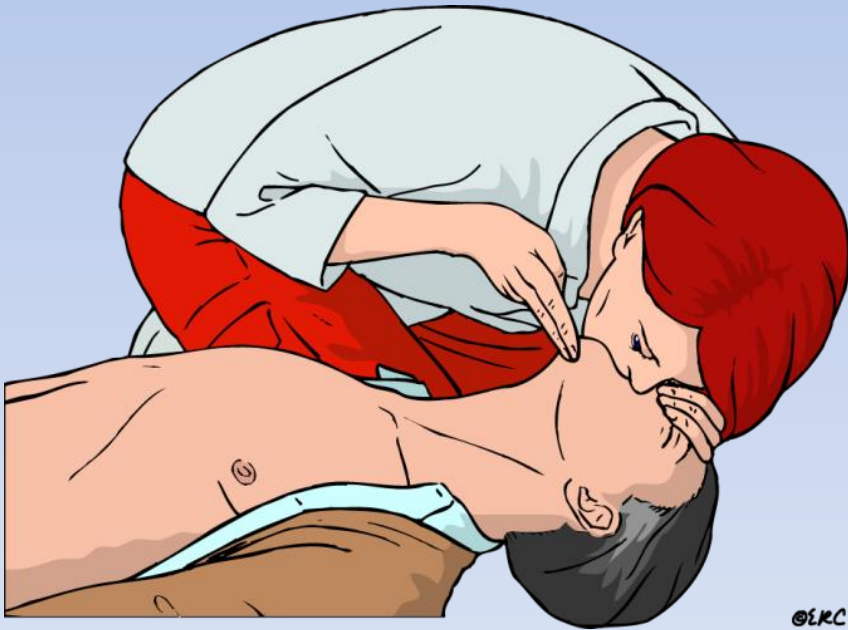


Chest Compressions



- Place the heel of one hand in the centre of the chest
- Place other hand on top
- Interlock fingers
- Compress the chest
 - Rate 100 min^{-1} (100-120)
 - Depth 5-6 cm
 - Equal compression : relaxation
- When possible change CPR operator every 2 min

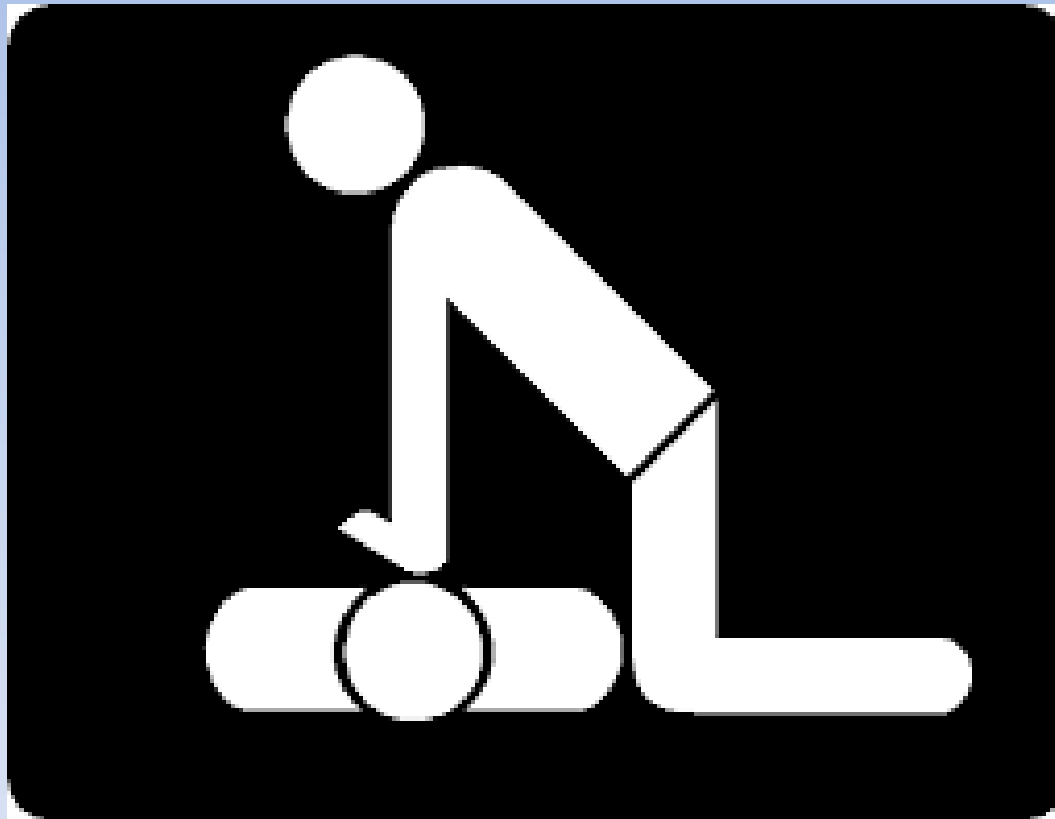
2 Rescue Breaths

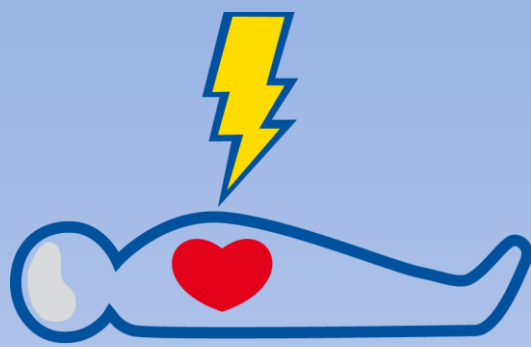


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Continue CPR for 2 min





Defibrillation

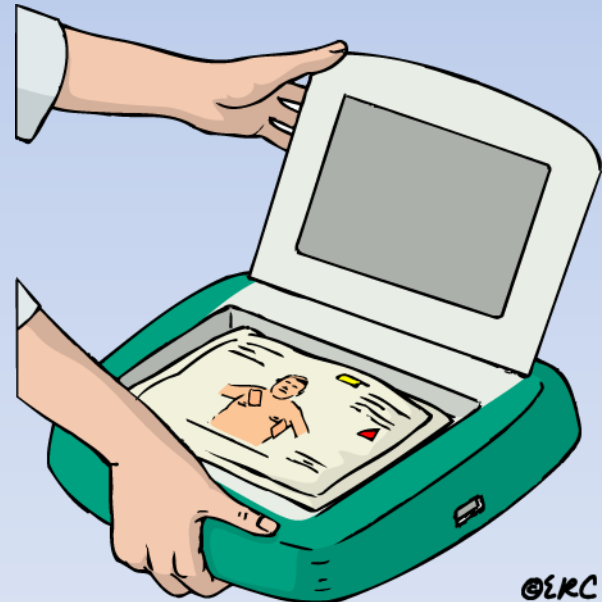
Attach AED



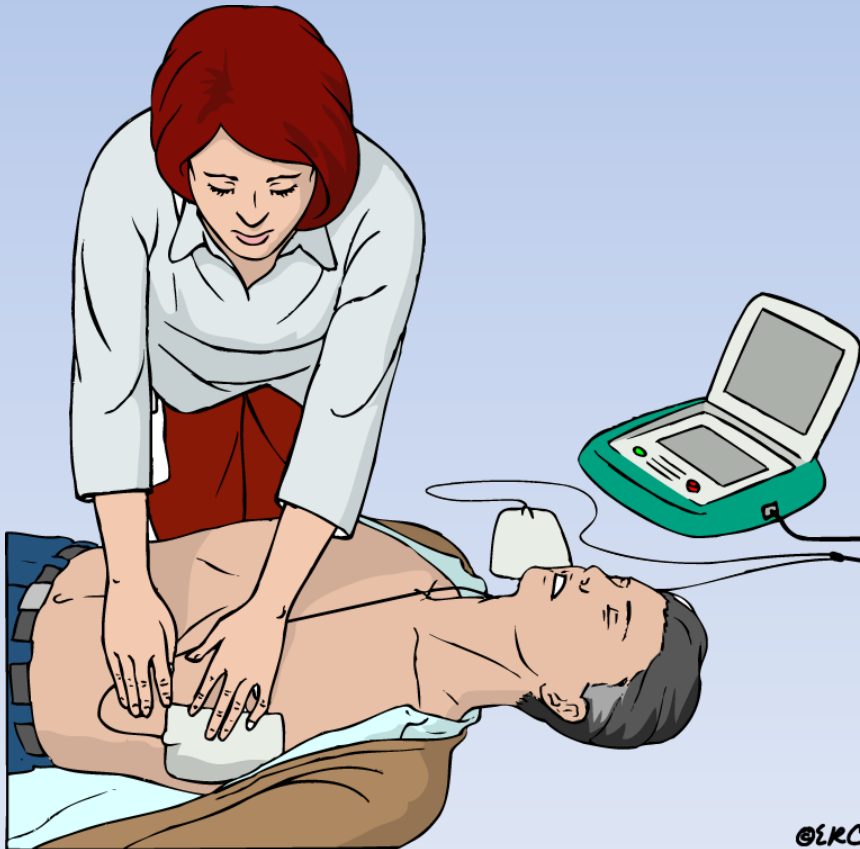
Follow voice prompts

Switch on AED

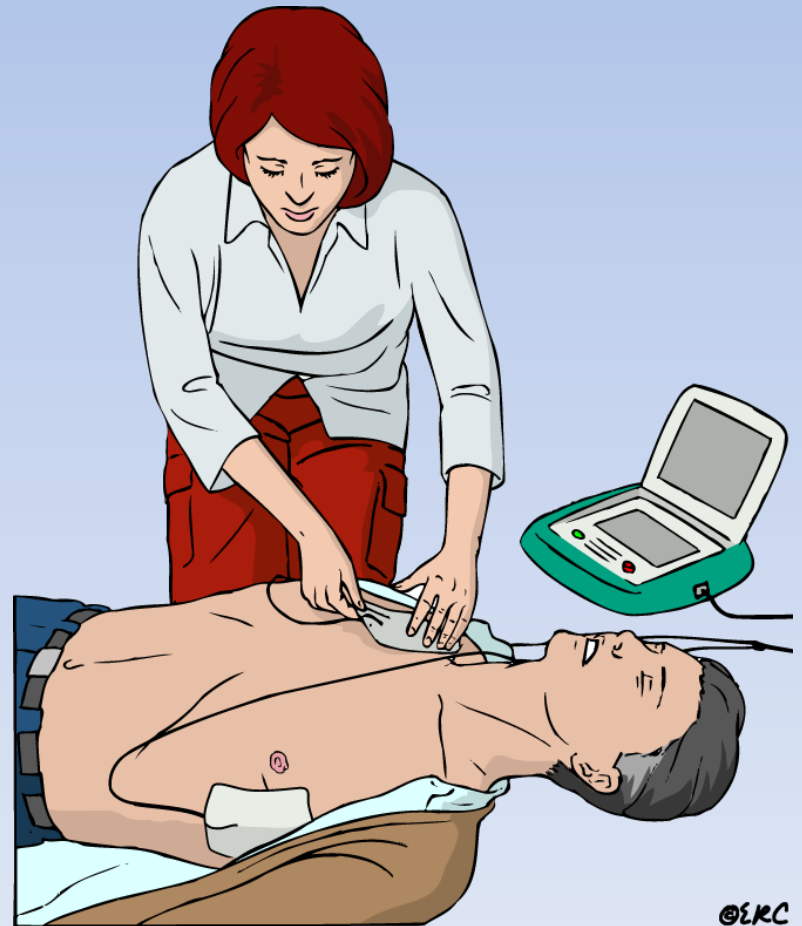
- Some AEDs will automatically switch themselves on when the lid is opened



Attach Pads to Victim's Bare Chest

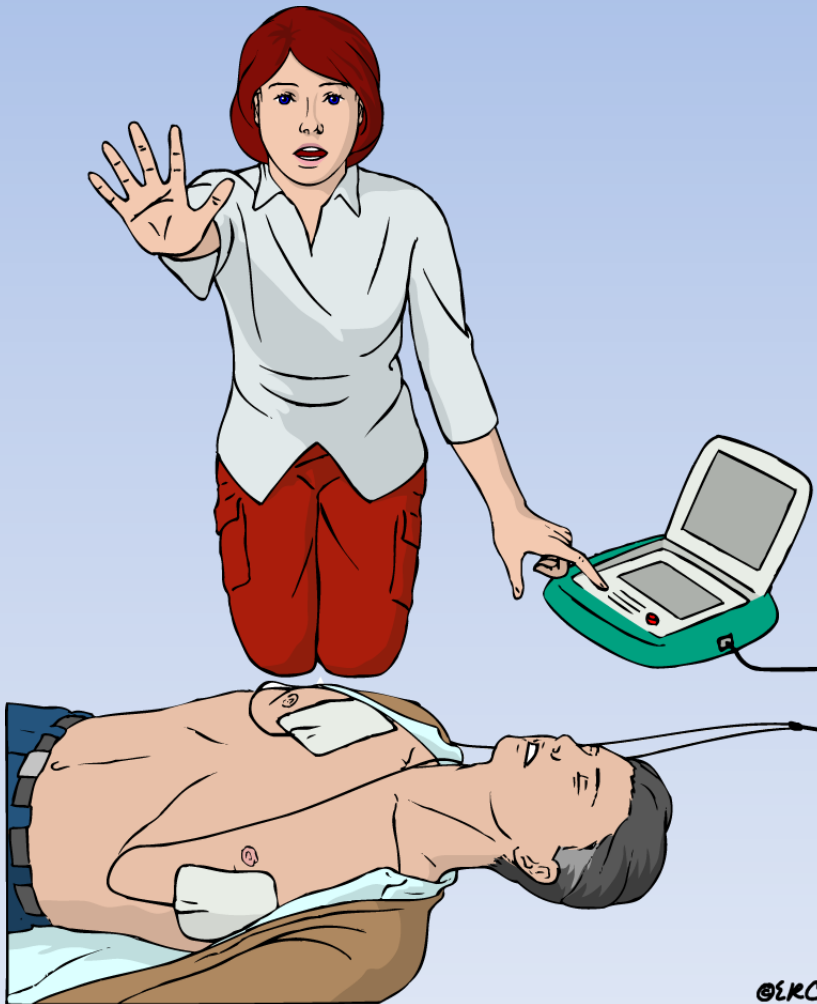


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Shock Indicated



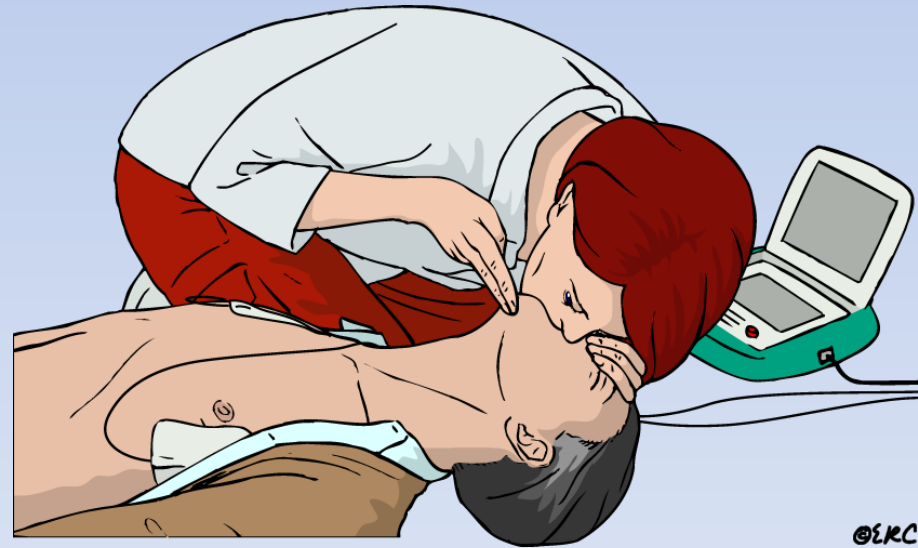
- Stand Clear
- Deliver Shock

Shock Delivered OR No Shock Advised Follow AED Instructions



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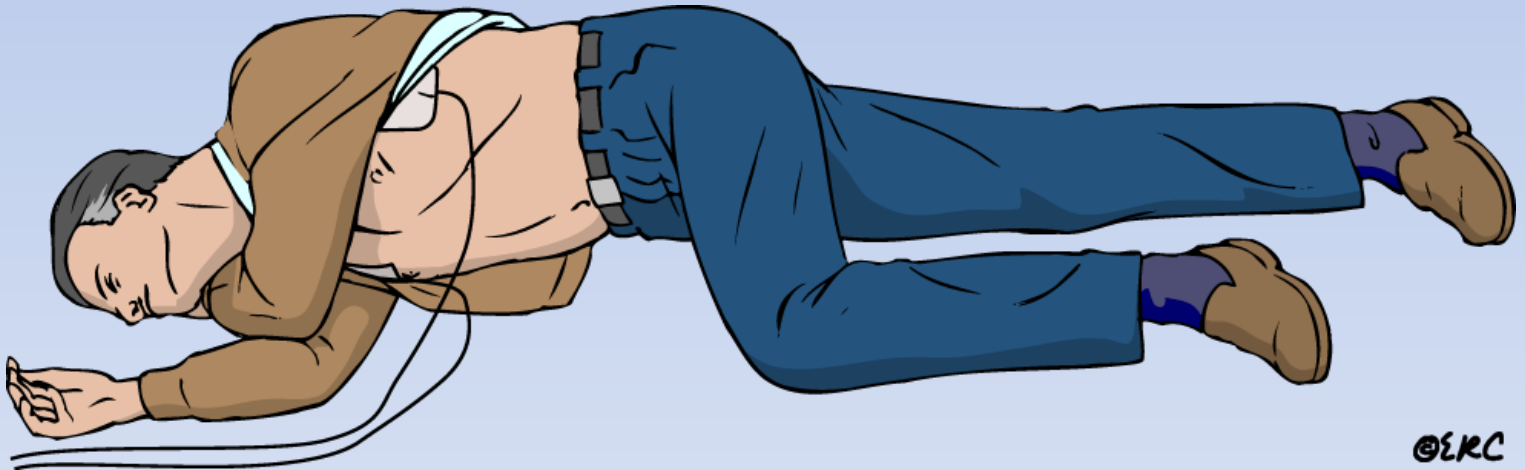
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Manual Defibrillation 150 J



If the victim starts to breathe **NORMALLY**
place him in the Recovery Position





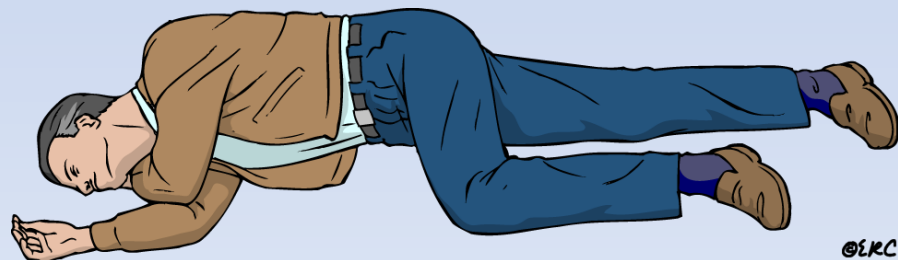
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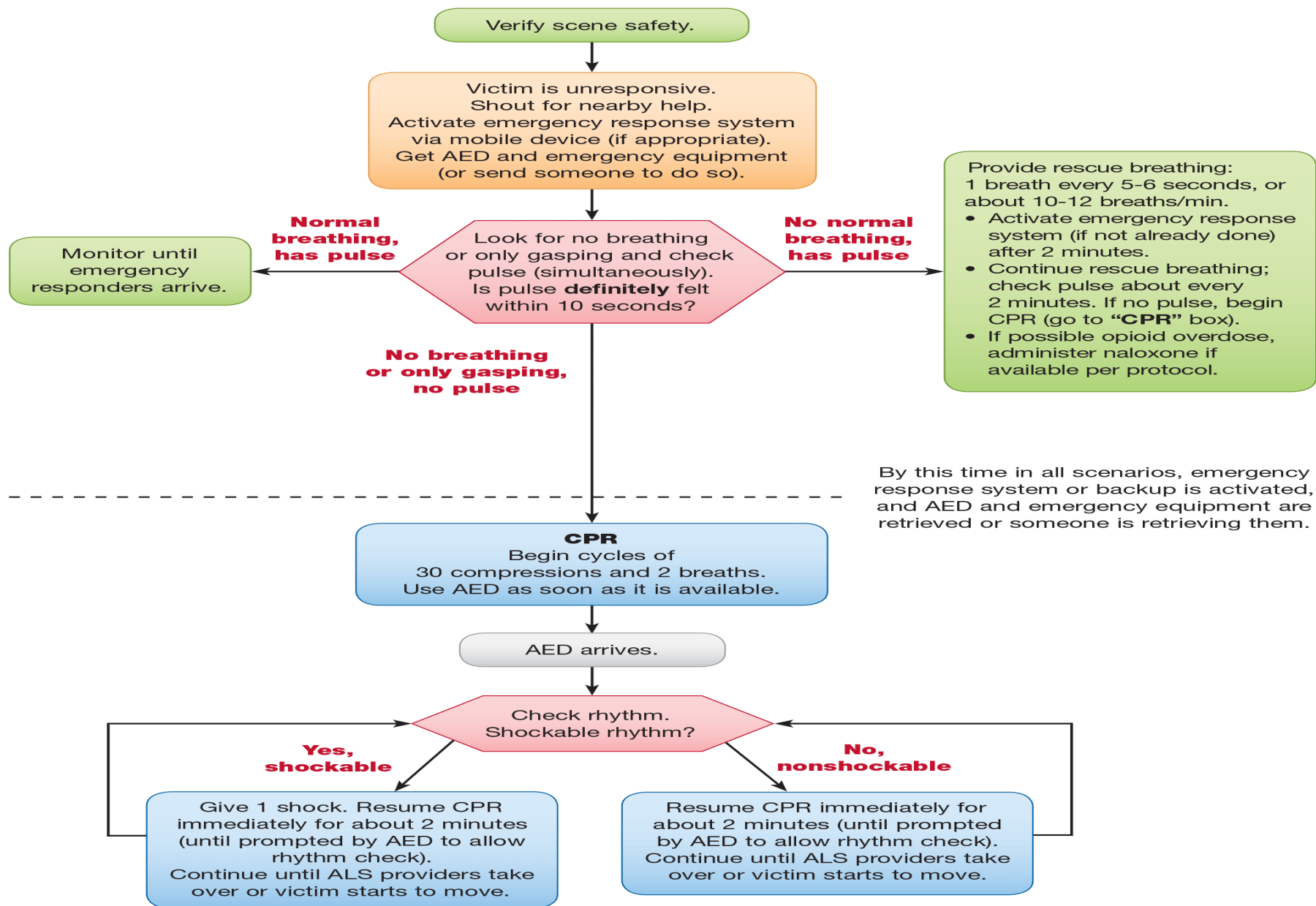


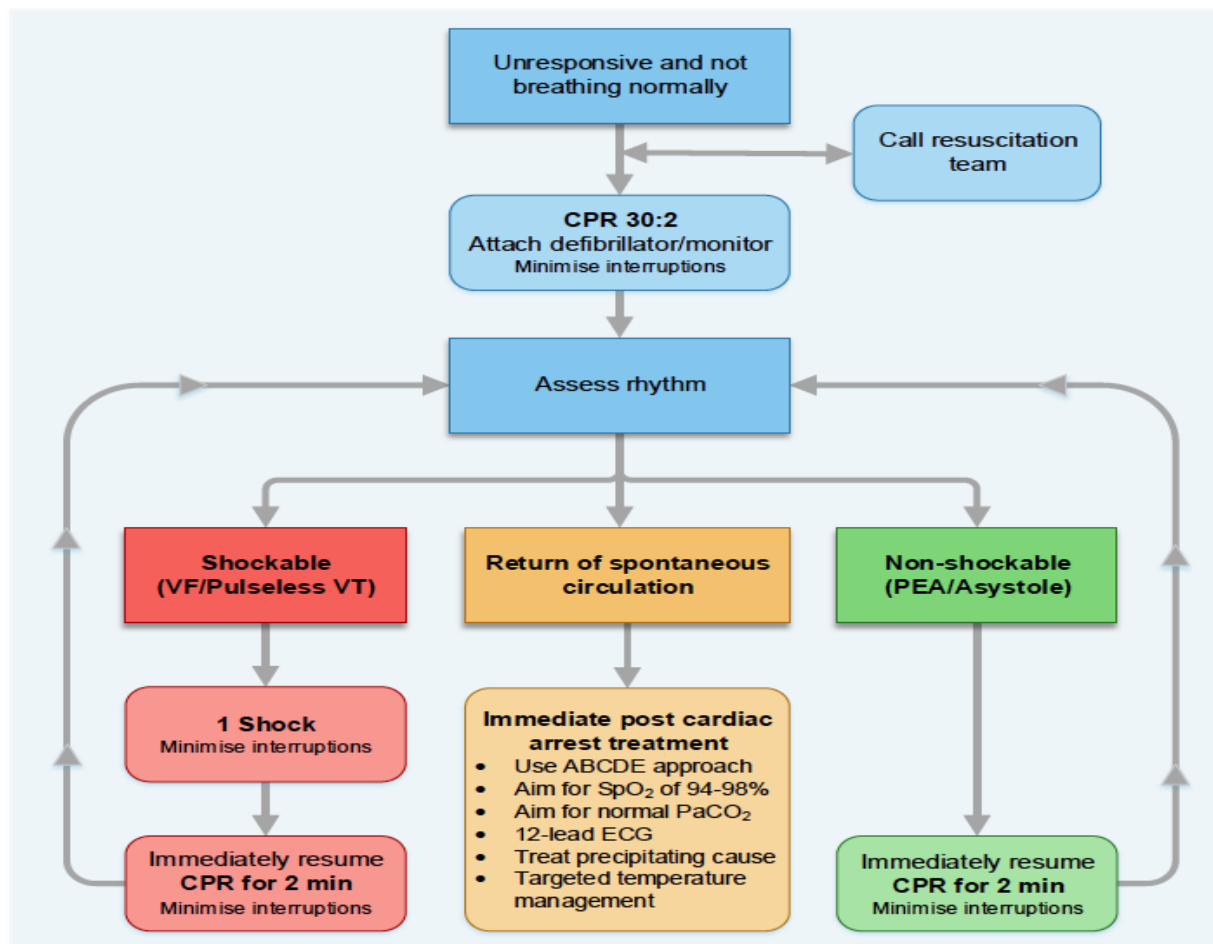
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BLS Healthcare Provider Adult Cardiac Arrest Algorithm — 2015 Update





During CPR

- Ensure high quality chest compressions
- Minimise interruptions to compressions
- Give oxygen
- Use waveform capnography
- Continuous compressions when advanced airway in place
- Vascular access (intravenous or intraosseous)
- Give adrenaline every 3-5 min
- Give amiodarone after 3 shocks

Treat Reversible Causes

- Hypoxia
- Hypovolaemia
- Hypo-/hyperkalaemia/metabolic
- Hypothermia
- Thrombosis - coronary or pulmonary
- Tension pneumothorax
- Tamponade – cardiac
- Toxins

Consider

- Ultrasound imaging
- Mechanical chest compressions to facilitate transfer/treatment
- Coronary angiography and percutaneous coronary intervention
- Extracorporeal CPR

Questions



Summary

