



# Basic Life Support & Automated External Defibrillation Course

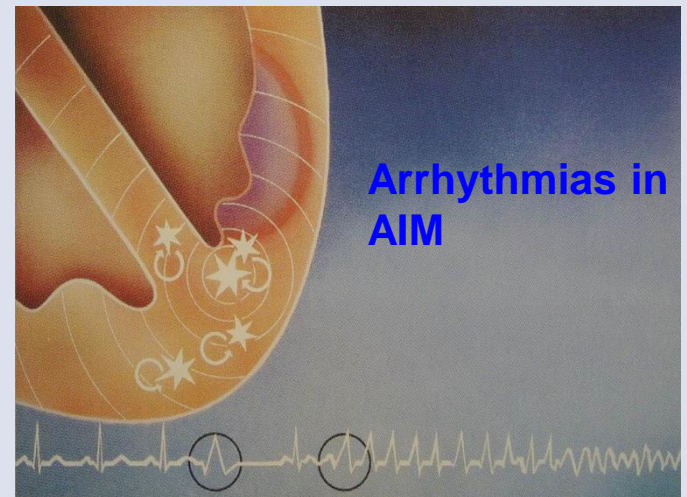
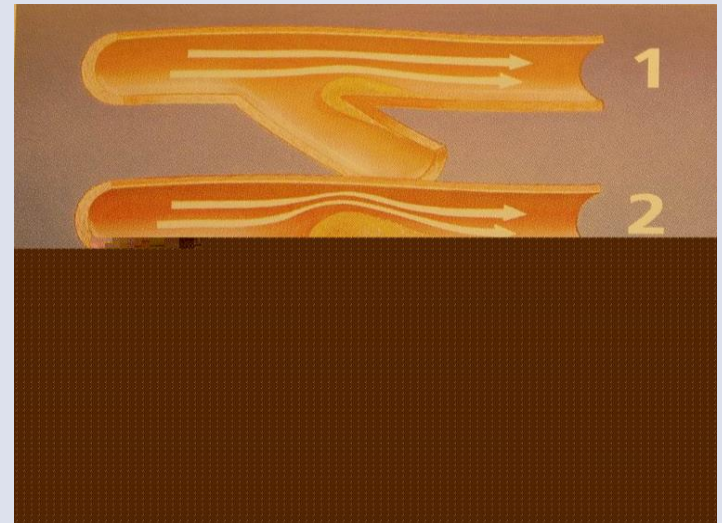


## ■ ■ ■ OBJECTIVES

- At the end of the winter term participants should be able to demonstrate:
  - How to assess the collapsed victim.
  - How to perform chest compression and rescue breathing.
  - How to place an unconscious breathing victim in the recovery position.



# MOST FREQUENT CAUSES OF CARDIAC ARREST

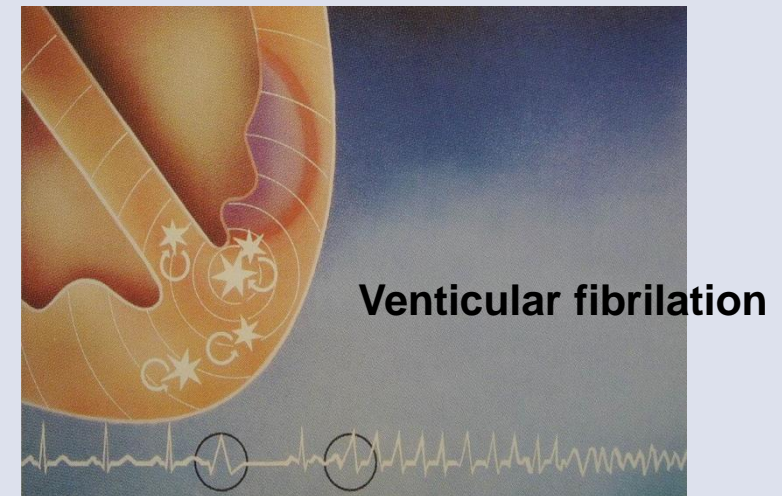
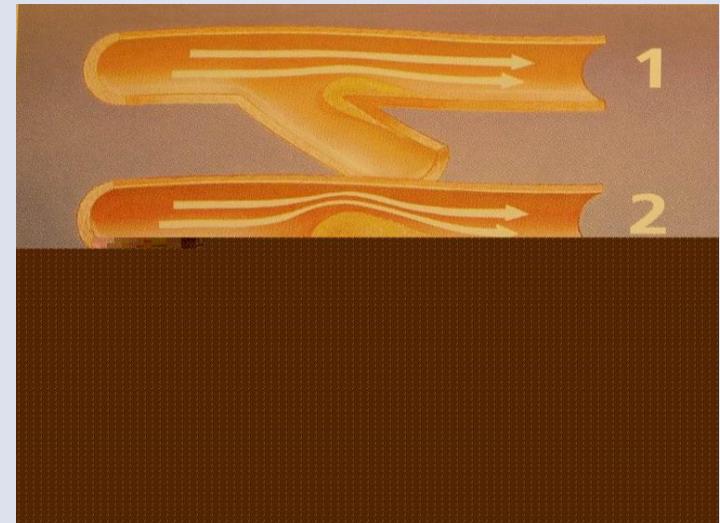


Arrhythmias in AIM



# Most common causes of cardiac arrest

- 1. place **IHD...Myocardial infarct,**
- **Trauma**
- **Poisoning**
- **Drowning**
- **Hypotermia...**





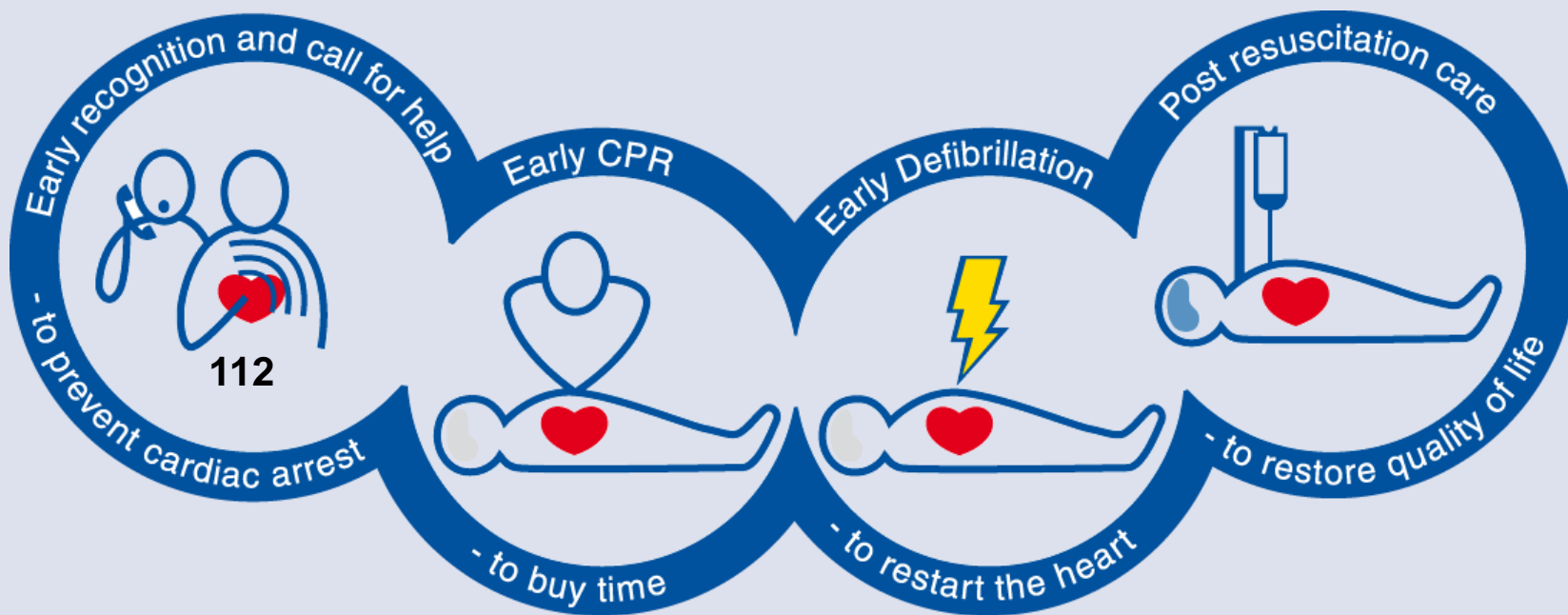
- ➔ Basic life support
- ➔ Advanced life support



1961: Peter Safar



# CHAIN OF SURVIVAL





## ■ ■ ■ BASIC LIFE SUPPORT

**A**irway

**B**reathing

**C**irculation

**(CAB)**



**Approach safely**

**Check response**

**Shout for help**

**Open airway**

**Check breathing**

**Call 112**

**30 chest compressions**

**2 rescue breaths**







## ■ ■ ■ APPROACH SAFELY!

Scene  
Rescuer  
Victim  
Bystanders

**Approach safely**

**Check response**

**Shout for help**

**Open airway**

**Check breathing**

**Call 112**

**30 chest compressions**

**2 rescue breaths**



## ■ ■ ■ CHECK RESPONSE



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Approach safely

**Check response**

Shout for help

Open airway

Check breathing

Call 112

30 chest compressions

2 rescue breaths



## ■ ■ ■ CHECK RESPONSE



Shake shoulders gently  
Ask “Are you all right?”

If he responds

- Leave as you find him.
- Find out what is wrong.
- Reassess regularly.



## SHOUT FOR HELP



Approach safely

Check response

**Shout for help**

Open airway

Check breathing

Call 112

30 chest compressions

2 rescue breaths



## OPEN AIRWAY



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Approach safely

Check response

Shout for help

**Open airway**

Check breathing

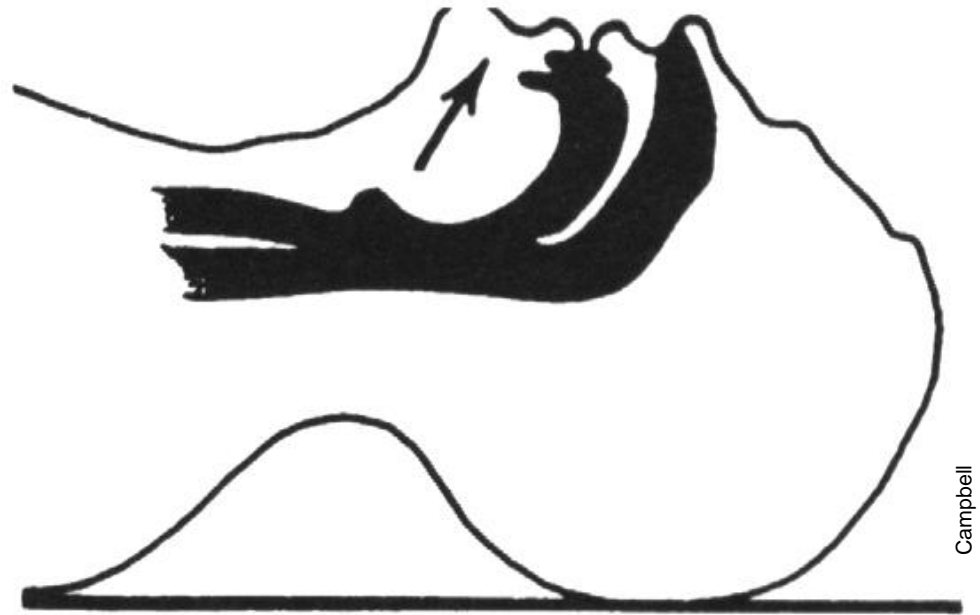
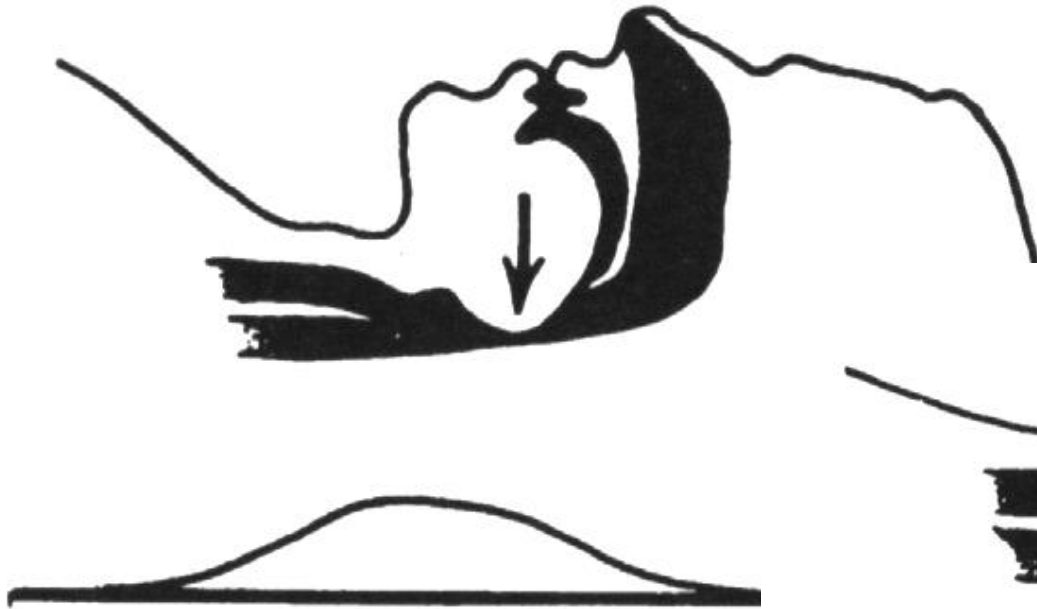
Call 112

30 chest compressions

2 rescue breaths



# AIRWAY OPENING BY NECK EXTENSION





## ■ ■ ■ CERVICAL SPINE INJURY

- **Jaw thrust (no for lay rescuer) for open airway**





## ■ ■ ■ CHECK BREATHING



©ERC

Approach safely

Check response

Shout for help

Open airway

**Check breathing**

Call 112

30 chest compressions

2 rescue breaths





## ■ ■ ■ CHECK BREATHING



- **Look, listen and feel** for **NORMAL** breathing
- Do not confuse agonal breathing with **NORMAL** breathing



## ■ ■ ■ AGONAL BREATHING

- Occurs shortly after the heart stops in up to 40% of cardiac arrests
- Described as barely, heavy, noisy or gasping breathing
- Recognise as a sign of cardiac arrest



**Approach safely**

**Check response**

**Shout for help**

**Open airway**

**Check breathing**

**Call 112**

**30 chest compressions**

**2 rescue breaths**



## 30 CHEST COMPRESSIONS



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Approach safely

Check response

Shout for help

Open airway

Check breathing

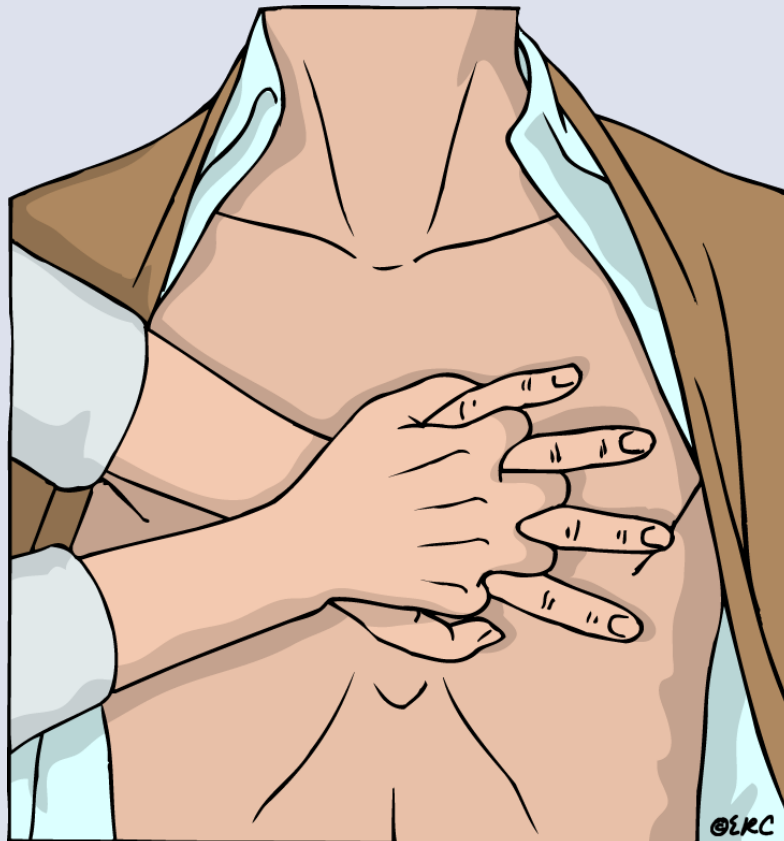
Call 112

**30 chest compressions**

2 rescue breaths



## ■■■ CHEST COMPRESSIONS



- Place the heel of one hand in the centre of the chest (lower half of sternum)
- Place other hand on top
- Interlock fingers
- Compress the chest
  - Rate 100 -120 min<sup>-1</sup>
  - Depth 5-6 cm
  - Equal compression : relaxation
- When possible change CPR operator every 2 min



30 : 2

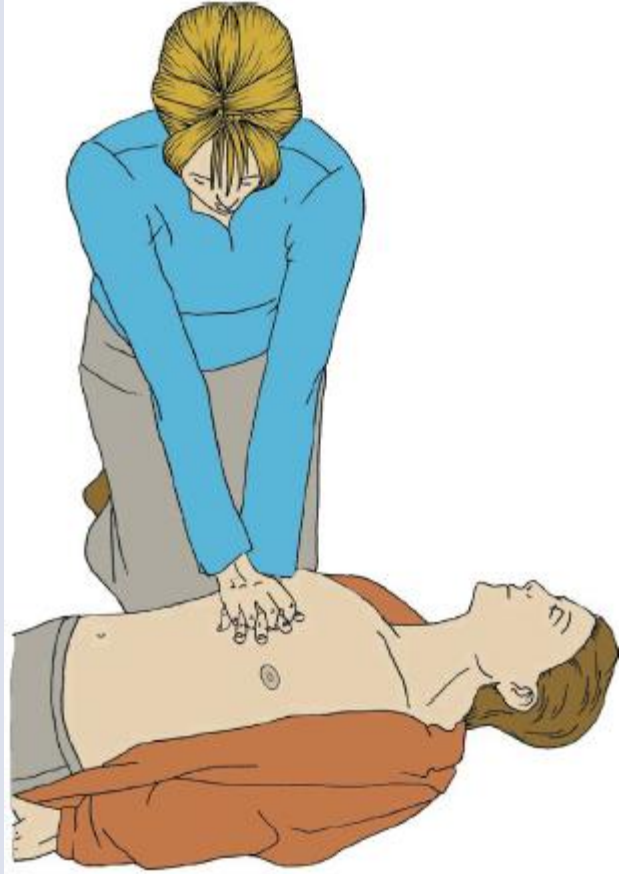


Figure 2.10 Interlock the fingers of your hands. © 2005 European Resuscitation Council.

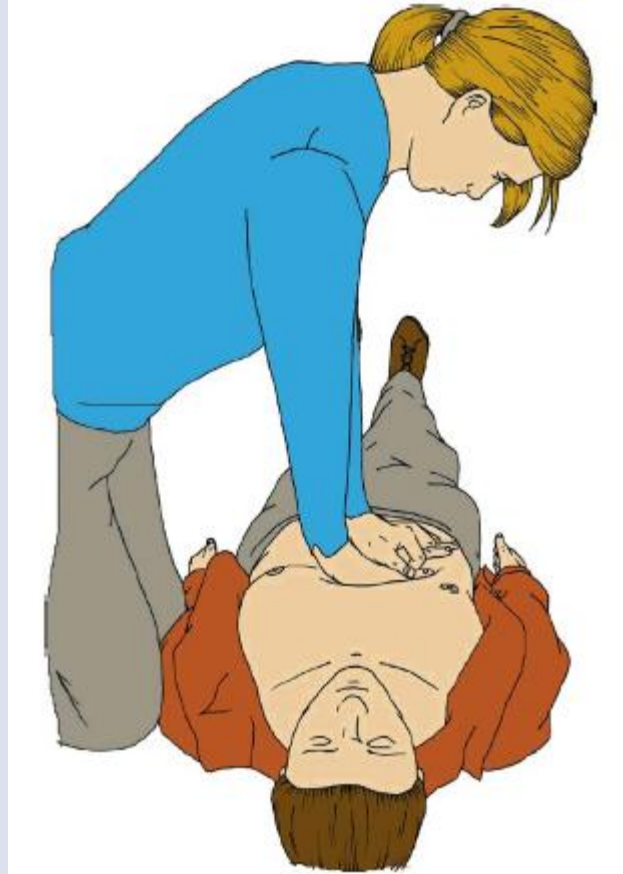
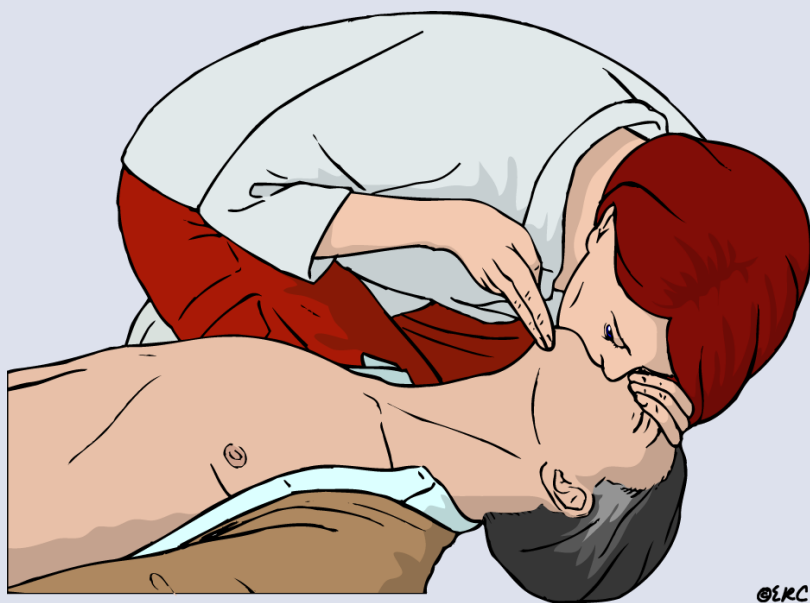


Figure 2.11 Press down on the sternum 4–5 cm. © 2005 European Resuscitation Council.



## RESCUE BREATHS



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Approach safely

Check response

Shout for help

Open airway

Check breathing

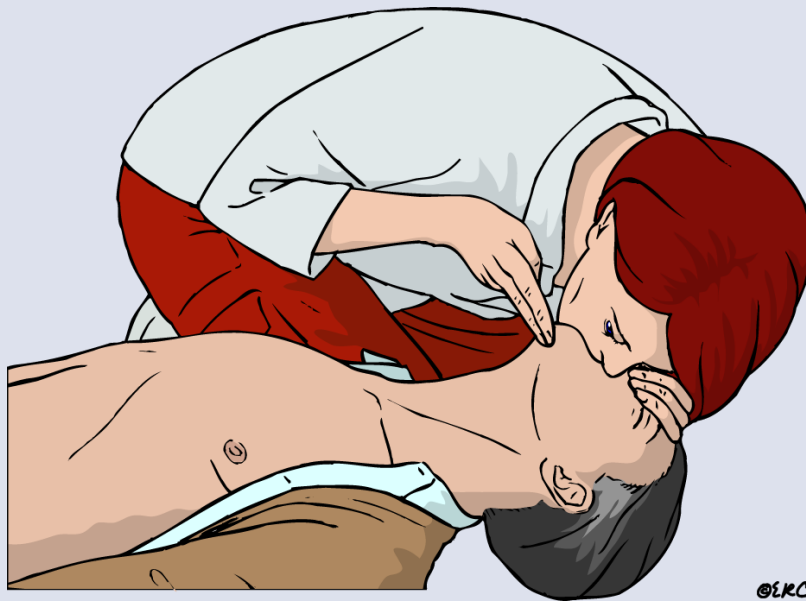
Call 112

30 chest compressions

2 rescue breaths



## RESCUE BREATHS



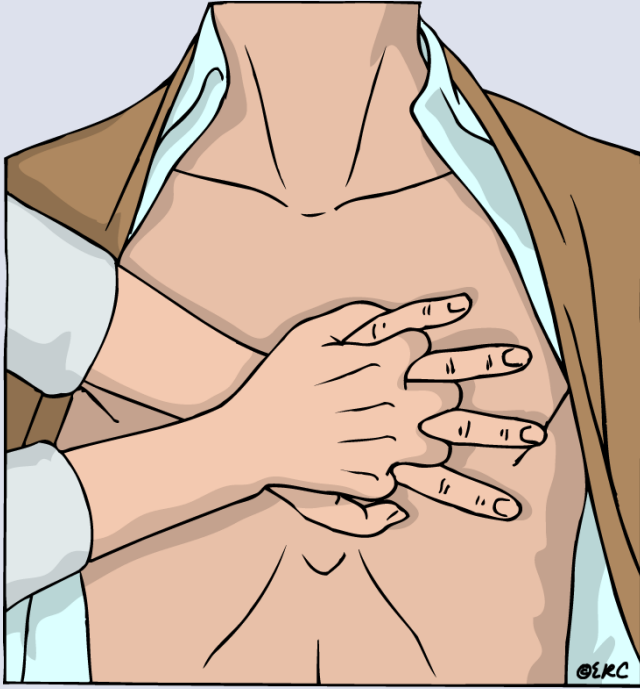
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- Pinch the nose
- Take a normal breath
- Place lips over mouth
- Blow until the chest rises
- Take about 1 second
- Allow chest to fall
- Repeat

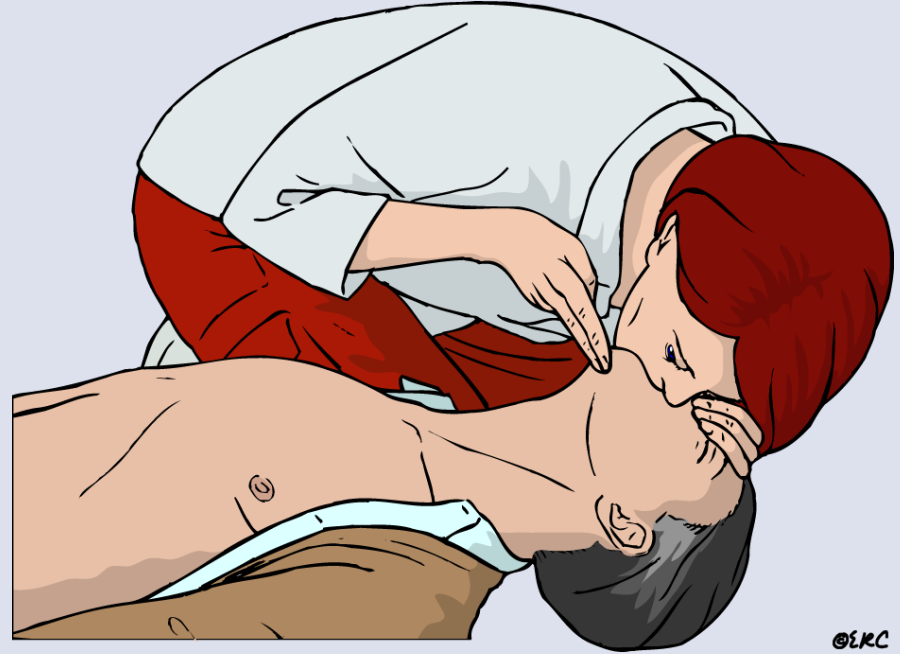




## CONTINUE CPR



30



2



## If initial rescue breath does not make the chest rise:

- Check the victim mouth and remove any visible obstruction
- Recheck that there is adequate head tilt and chin lift



Go on combining 30 chest compressions with 2 rescue breaths.

Only stop when:

- Professional help takes over
- You are exhausted
- The victim starts breathing normally



## Continuous chest compressions - only





# The use of protective devices is recommended



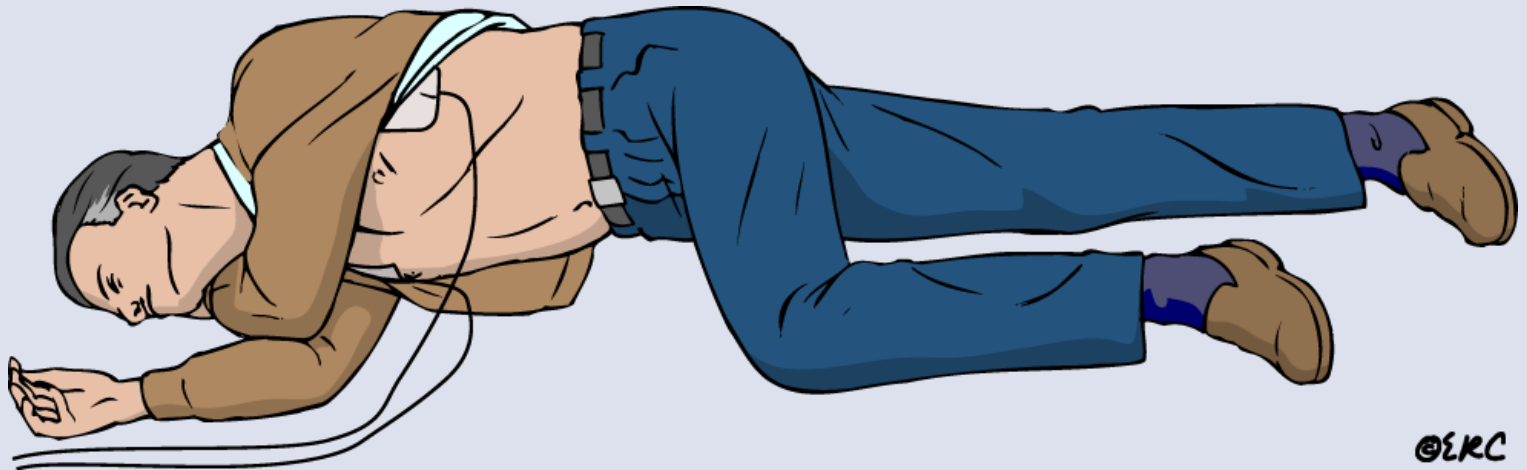


## CONTINUOUS CHEST COMPRESSIONS

- If you are **not able** or you are **unwilling** to give rescue breaths, give chest compressions only (rate 100-120 min<sup>-1</sup>, depth 5-6 cm).



## IF VICTIM STARTS TO BREATHE NORMALLY PLACE IN RECOVERY POSITION



- It ensures the tongue is held in forward position
- It reduces the chance of inhalation of any expelled gastric contents



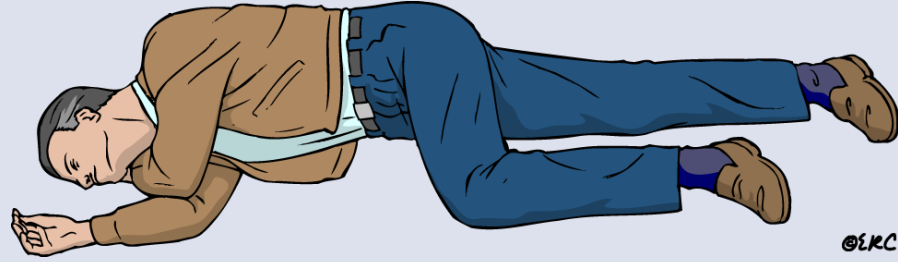
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## CHOKING FOREIGN BODY AIRWAY OBSTRUCTION

- **Mild airway obstruction**  
(effective cough, breathe,  
conscious, speak)



Encourage continued coughing,  
observing for relief of the  
obstruction





## CHOKING FOREIGN BODY AIRWAY OBSTRUCTION

**Severe airway obstruction – conscious  
(unable to speak, to breathe, to cough)**



**5 back blows  
5 abdominal thrust**





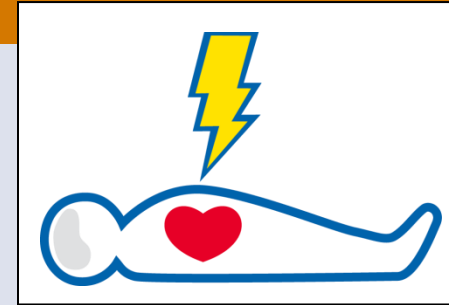
## CHOKING FOREIGN BODY AIRWAY OBSTRUCTION

**Severe airway obstruction – unconscious**



**Start CPR  
(even if the puls is present)**





**Approach safely**

**Check response**

**Shout for help**

**Open airway**

**Check breathing**

**Call 112**

**30 chest compressions**

**2 rescue breaths**

**Approach safely**

**Check response**

**Shout for help**

**Open airway**

**Check breathing**

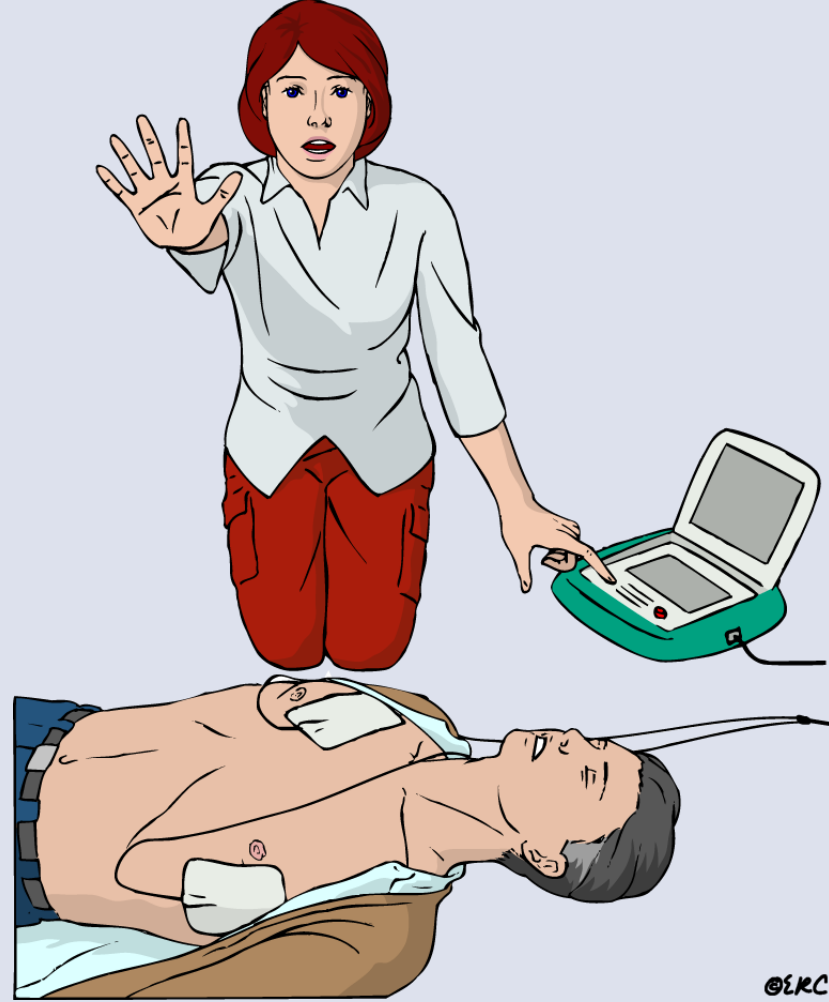
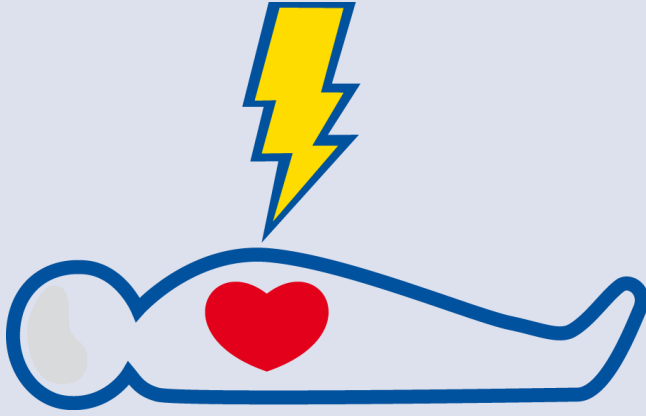
**Call 112**

**Attach AED**

**Follow voice prompts**



# DEFIBRILLATION





**Approach safely**

**Check response**

**Shout for help**

**Open airway**

**Check breathing**

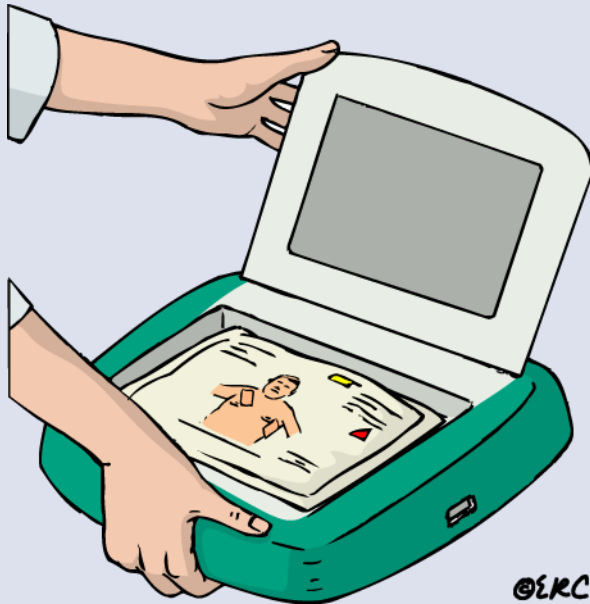
**Call 112**

**Attach AED**

**Follow voice prompts**



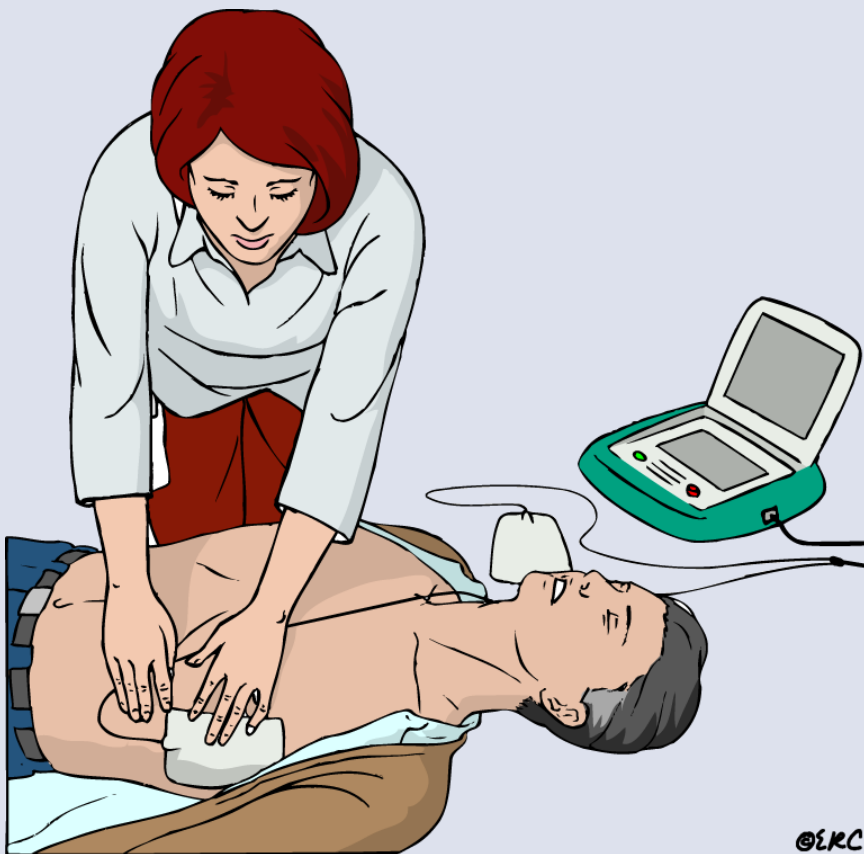
## ■ ■ ■ SWITCH ON AED



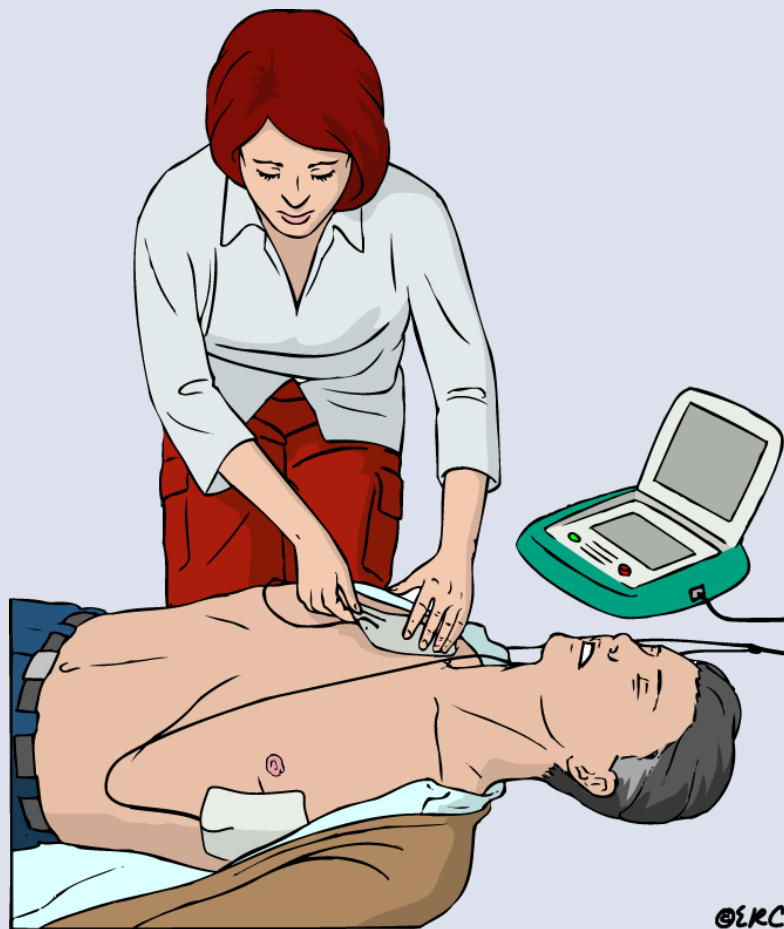
- Some AEDs will automatically switch themselves on when the lid is opened



## ATTACH PADS TO CASUALTY'S BARE CHEST



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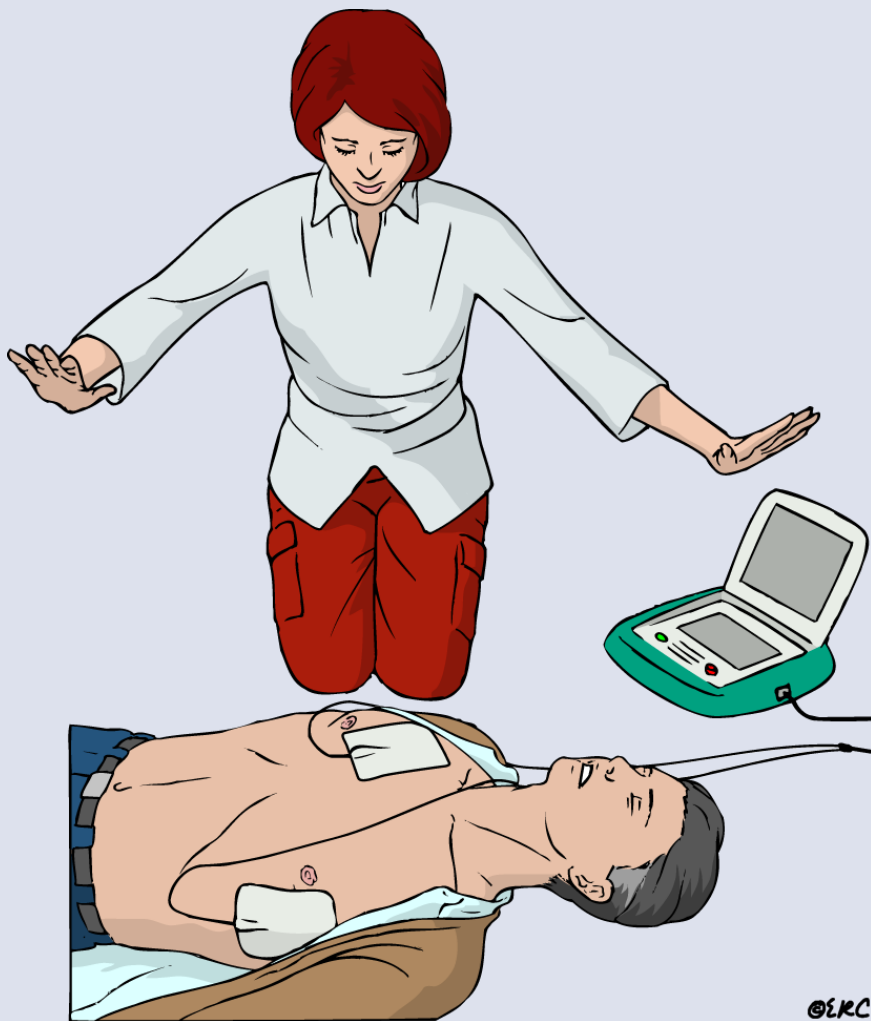


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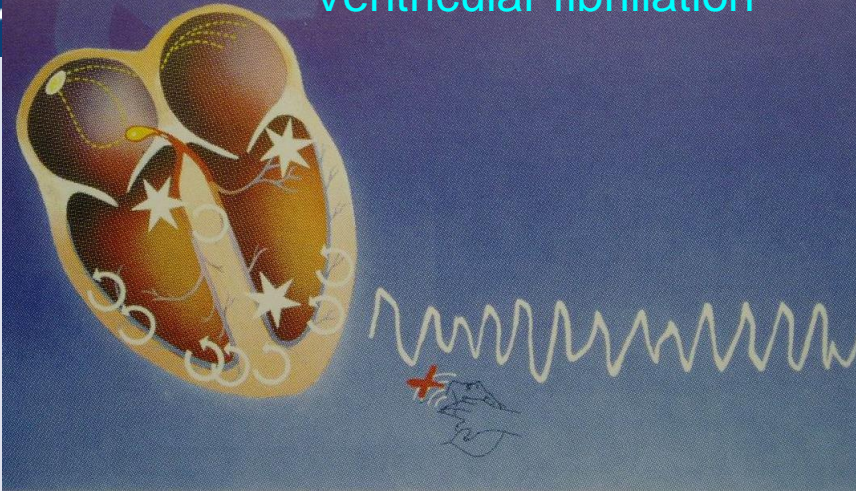


## ANALYSING RHYTHM DO NOT TOUCH VICTIM

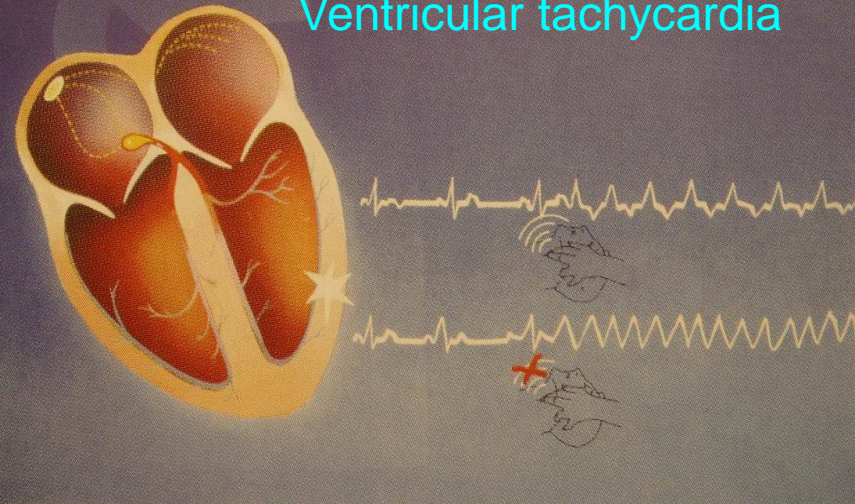




Ventricular fibrillation



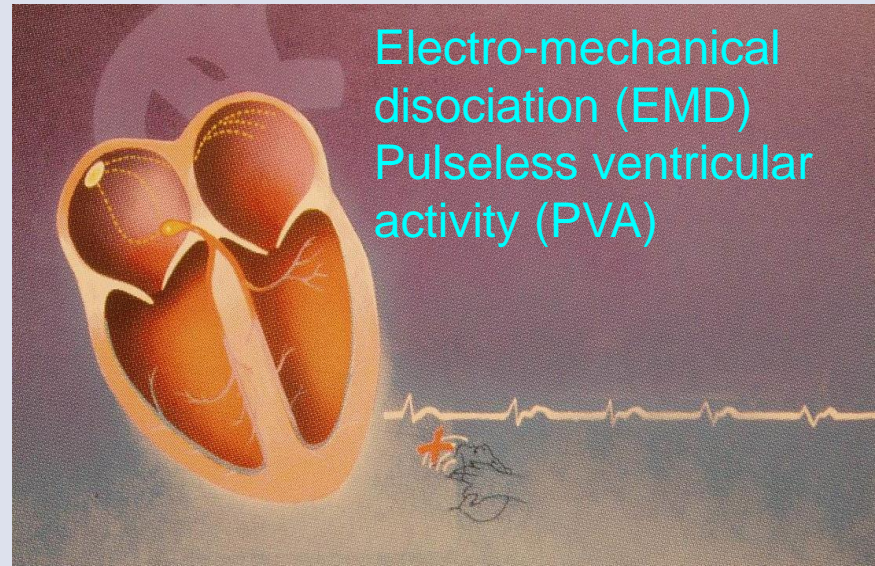
Ventricular tachycardia



Asystole

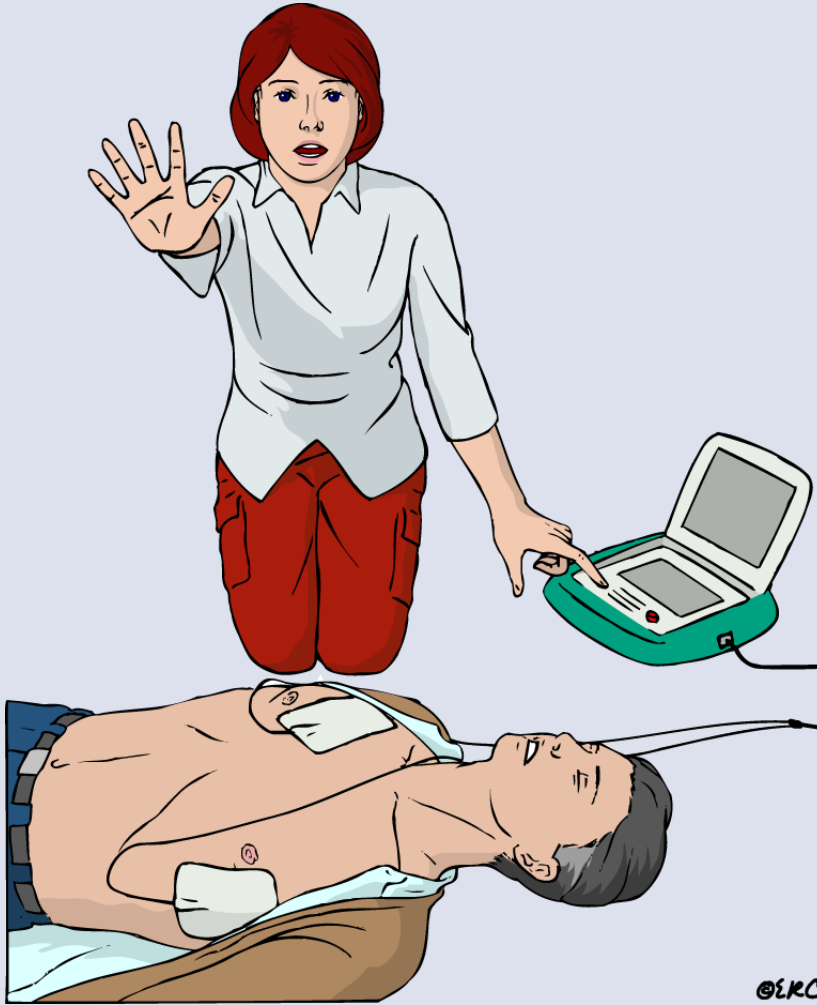


Electro-mechanical dissociation (EMD)  
Pulseless ventricular activity (PVA)





## SHOCK INDICATED



- Stand clear
- Deliver shock (press shock button)

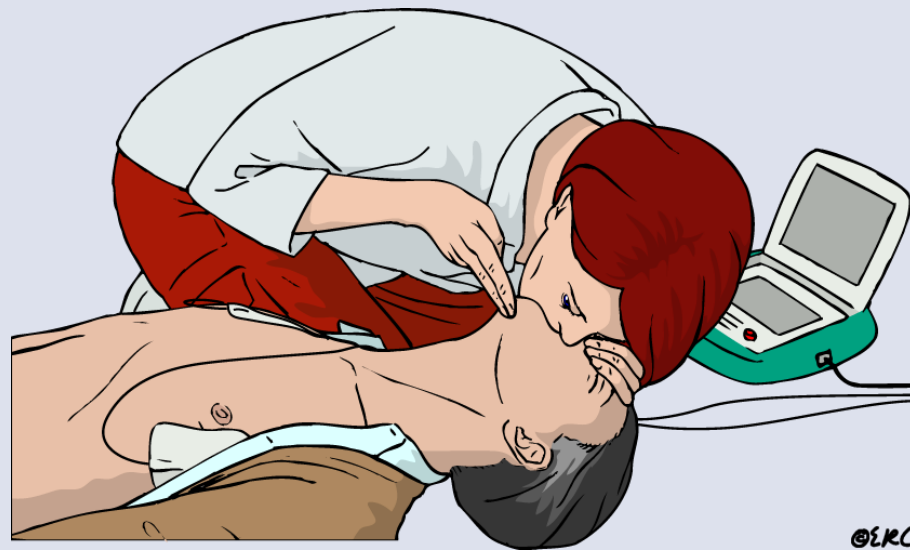


# SHOCK DELIVERED FOLLOW AED INSTRUCTIONS



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30



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2



**NO SHOCK ADVISED**

**FOLLOW AED INSTRUCTIONS**



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**30**



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**2**

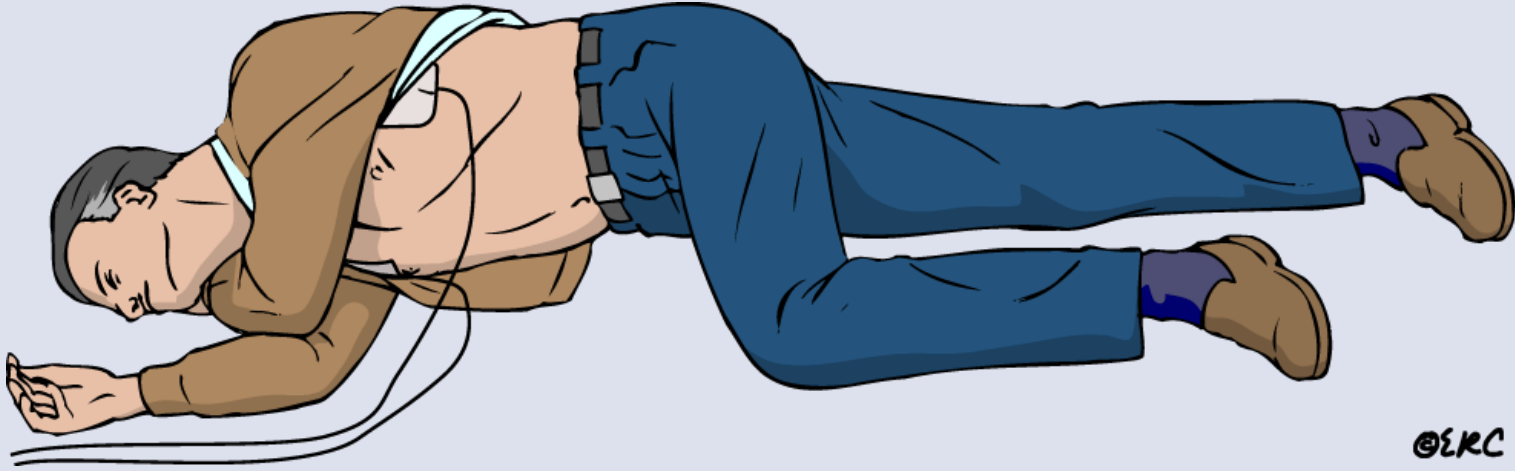


## SAFETY OF RESCURER

- Do not touch the victim during analysis, charging or delivery of a shock
- Use protective gloves



■ ■ ■ IF VICTIM STARTS TO  
BREATHE NORMALLY PLACE  
IN RECOVERY POSITION



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- [www.erc.edu](http://www.erc.edu)
- [http://www.lf.upjs.sk/kaim/pregradualne\\_vzdelavanie.html](http://www.lf.upjs.sk/kaim/pregradualne_vzdelavanie.html) - first aid lectures
- [www.resus.org.uk](http://www.resus.org.uk)
- Moule P., Albarran J., 2009: Practical resuscitation for healthcare professionals  
[www. books.google.com](http://www.books.google.com)

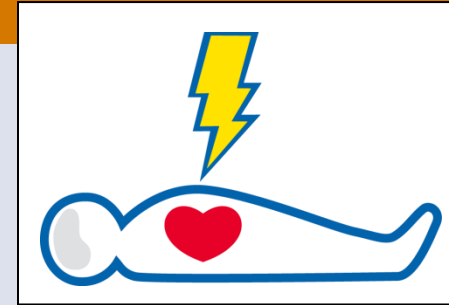




**ANY QUESTIONS?**



**Thank you !**



**Approach safely**

**Check response**

**Shout for help**

**Open airway**

**Check breathing**

**Call 112**

**30 chest compressions**

**2 rescue breaths**

**Approach safely**

**Check response**

**Shout for help**

**Open airway**

**Check breathing**

**Call 112**

**Attach AED**

**Follow voice prompts**