



# CARDIO PULMONARY RESUSCITATION (CPR)

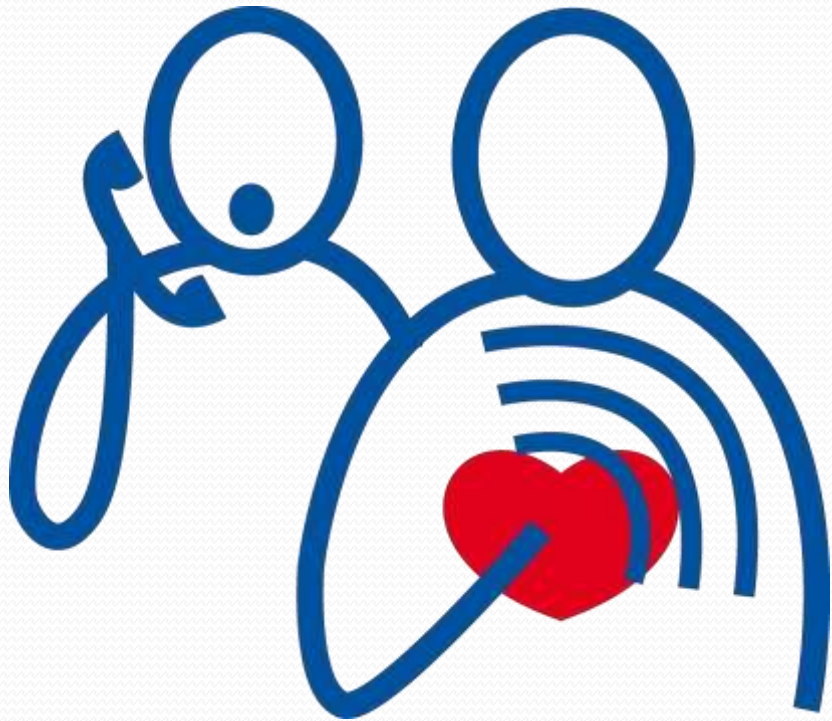
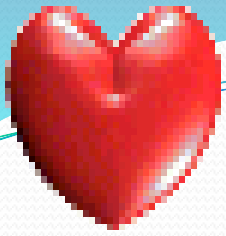
OR

## Basic Life Support (BLS)-2

*(It will be performed in our college skill lab, )*

**By**  
**Dr Gul Muhammad**





**Approach safely**

**Check response**

**Shout for help**

**Open airway**

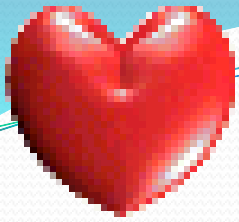
**Check breathing**

**Call 1122**

**30 chest compressions**

**2 rescue breaths**





# 30 CHEST COMPRESSIONS



©ERC

Approach safely

Check response

Shout for help

Open airway

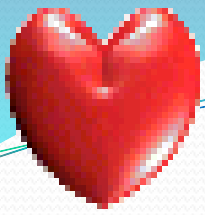
Check breathing

Call 108

**30 chest compressions**

2 rescue breaths





# CHEST COMPRESSIONS

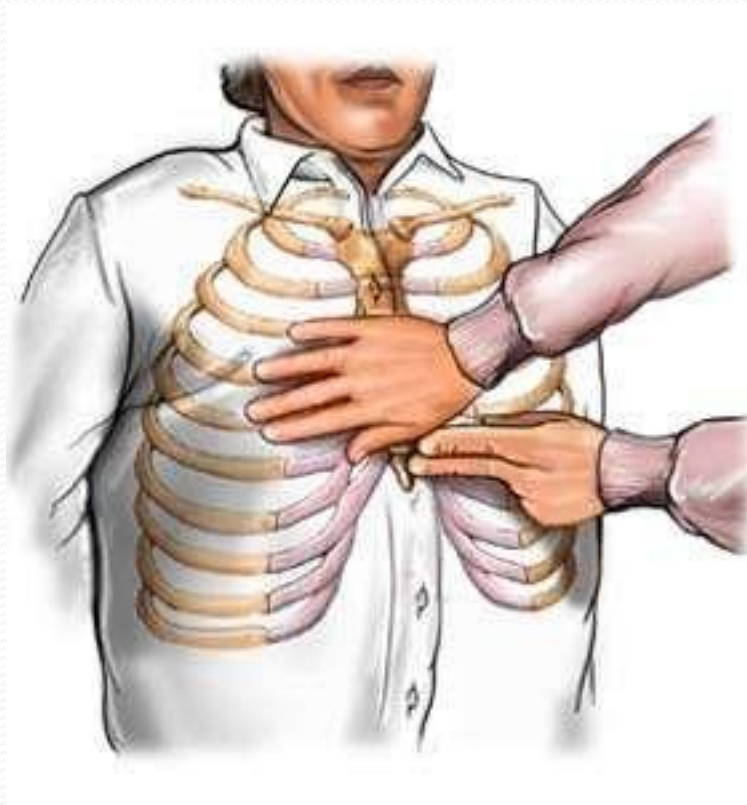


- Place the heel of one hand in the centre of the chest
- Place other hand on top
- Interlock fingers
- Compress the chest
  - Rate 100 min<sup>-1</sup>
  - Depth 4-5 cm (1.5 to 2 inch)
  - Equal compression : relaxation
- When possible change CPR operator every 2 min



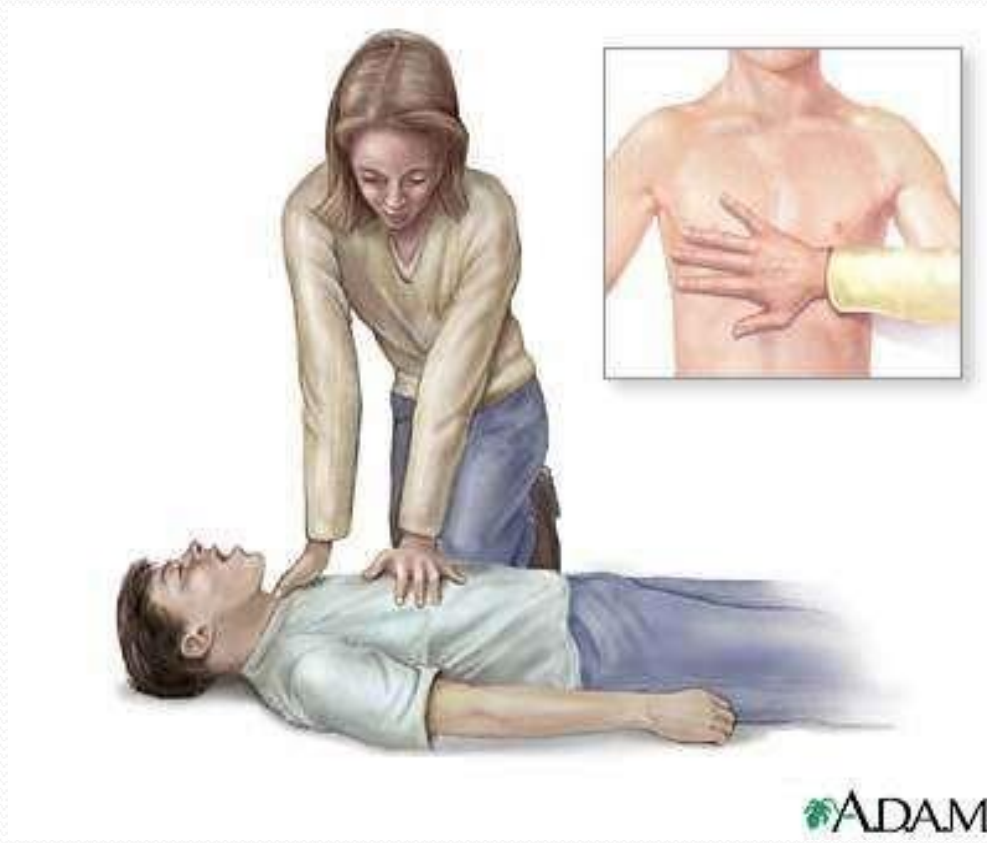


## ➤ IN ADULT



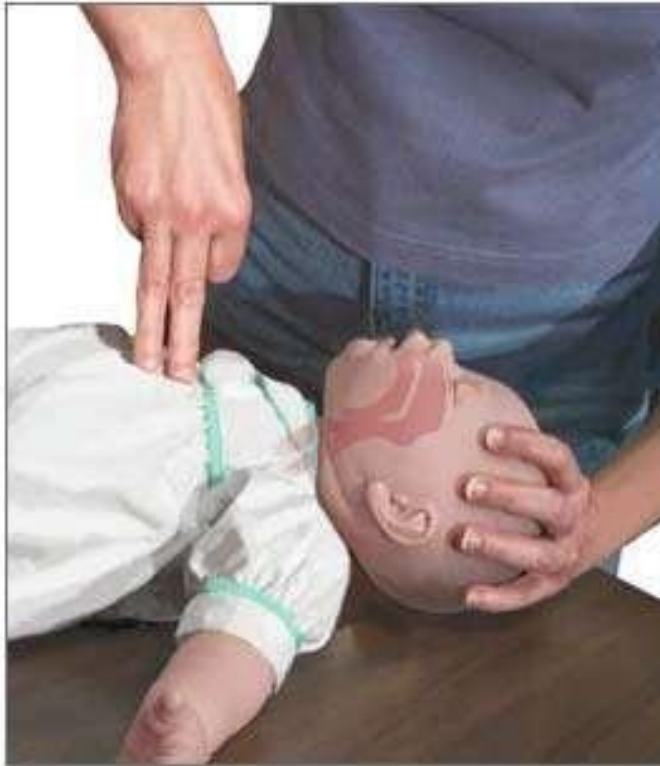


## □ IN CHILD





## □ IN INFANT



Keeping the infant's head tilted back, place two fingers on the breastbone and give five quick downward thrusts.



## (C) Circulation:-

### ➤ Assess pulse {Adult}



Check the  
victim for  
a pulse



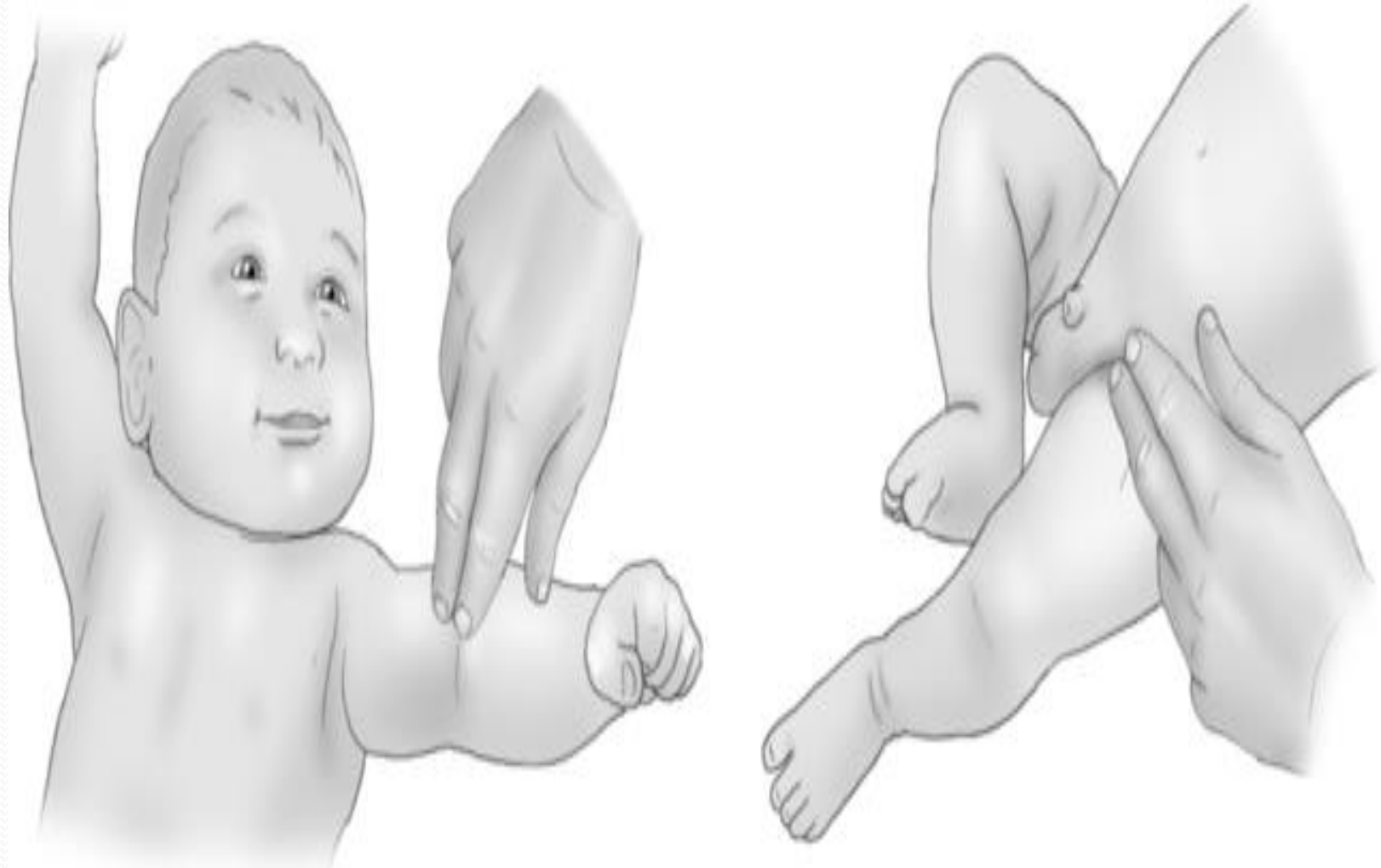


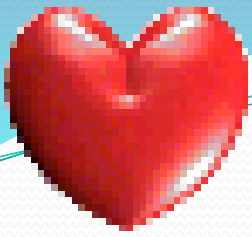
# Assess pulse (infant)



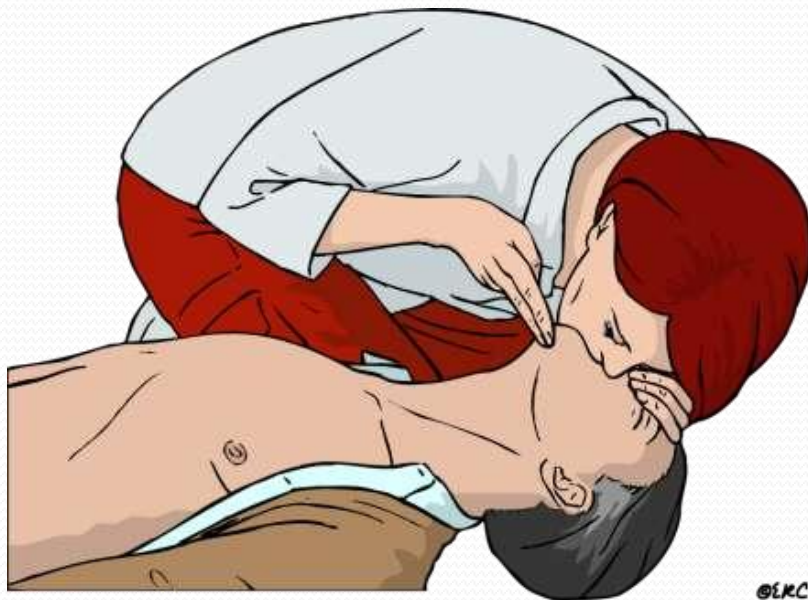


# Assess pulse (infant)





## RESCUE BREATHS



©IRC

Approach safely

Check response

Shout for help

Open airway

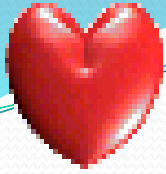
Check breathing

Call 112

30 chest compressions

2 rescue breaths





# RESCUE BREATHS



- **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**

©LKC





# RESCUE BREATHS

## RECOMMENDATIONS:

- **Tidal volume**

500 – 600 ml

- **Respiratory rate**

give each breaths over about 1s with enough volume to make the victim's chest rise

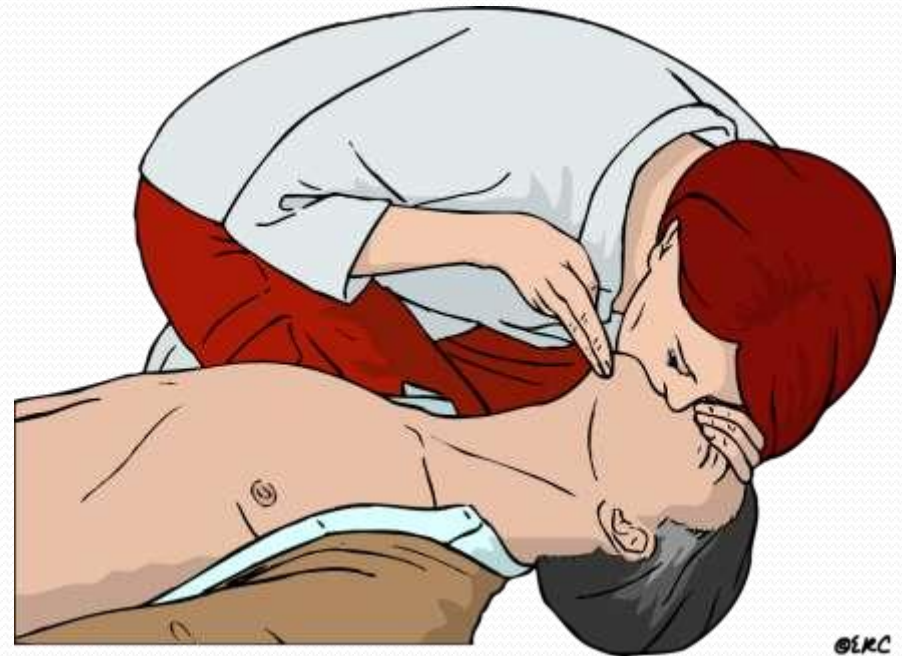
- **Chest-compression-only**

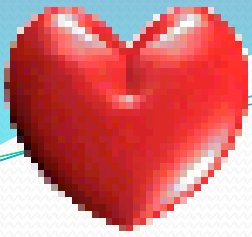
continuously at a rate of 100 min





# CONTINUE CPR





# RESCUE BREATHS



©IRC

Approach safely

Check response

Shout for help

Open airway

Check breathing

Call 112

30 chest compressions

2 rescue breaths

Defibrillator





# Defibrillator







# DEFIBRILLATION -(D)

- **Device that delivers direct electrical current across the myocardium. The aim is to produce synchronous depolarization of cardiac muscle**

## **STRATEGIES:**

**Test defibrillate for**

- **full battery charge**
- **switch on power button**
- **change paddle mode**





## *Key issues:*

**Paddle site:** Rt intraclavicular region

Lt loweraxillary region

**Paddle size:** 8cm-12cm

**wave form patterns :**

monophasic

biphasic truncated exponential

biphastic rectilinear





## *Energy level:*

**Pediatric** : 2-4 J/kg

**Adult:** Monophasic=> 360J

Biphasic truncated=> 150-200J

Biphasic rectilinear=> 120J





## Monophasic



Current delivered  
in **one** direction

## Biphasic



Current delivered  
in **two** directions





## ***STEPS:-***

- switch on
- select paddle mode
- assess rhythm
- press paddles firmly over the chest
- deliver the shock
- resume CPR



## **Intensive care:- (shifting in ICU)**

- ✓ **transfer to ICU**
- ✓ **monitor closely and continuously**
- ✓ **monitor vital signs every hour**
- ✓ **watch for convulsions**
- ✓ **intubate if necessary**
- ✓ **catheterize the patient and monitor output**
- ✓ **record the procedure**



## POST CARDIAC ARREST MANAGEMENT:-

### Continued care

- To ensure hemodynamic monitoring
- To minimize the effect of loss of spontaneous circulation of various organs
- To recognize and treat recurrent cardiac arrests

### Objectives:

- Optimize cardio pulmonary function & systemic perfusion
- Transport victim out of hospital
- Identify and treat three precipitating factors
- Institute measures to prevent recurrence and improve neurological function





# Respiratory system;

- Intubate & mechanically ventilate until they are stable Administer supplemental oxygen
- Obtain chest x ray  
Administer drugs Avoid  
hyperventilation

## □ Cardio vascular system:

- Obtain expert consultation
- Monitor ecg , x-ray, lab analysis,
- Monitor intra arterial blood pressure
- Administer drugs







# COMPLICATIONS OF CPR

- Rib fractures
- Laceration related to the tip of the sternum
- Liver, lung, spleen
- Aspiration
- Vomiting



## Possible complications

- **Coronary vessel injury**
- **Diaphragm injury**
- **Hemopericardium**
- **Hemothorax**
- **Interference with ventilation**





## Possible complications

- **Liver injury**
- **Myocardial injury**
- **Pneumothorax**
- **Rib fractures**
- **Spleen injury**
- **Sternal fracture**



# MEDICAL MANAGEMENT

## Adrenaline

- Adrenaline (epinephrine) is the main drug used during resuscitation from cardiac arrest.

## Atropine

- Atropine as a single dose of 3mg is sufficient to block vagal tone completely and should be used once in cases of asystole. It is also indicated for symptomatic bradycardia in a dose of 0.5mg - 1mg.

## Amiodarone

- It is an antiarrhythmic drug.





## NURSING MANAGEMENT

- Maintains airway patency with use of airway adjuncts as required (suction, high flow oxygen with O<sub>2</sub> or bag valve mask ventilation).
- Assist with intubation and securing of ETT
- Inserts gastric tube and/or facilitates gastric decompression post intubation as required.
- Assists with ongoing management of airway patency and adequate ventilation



- Supports less experienced staff by coaching/guidance e.g. drug preparation
- If a shockable rhythm is present (VF/VT) ensure manual defibrillator pads are applied and connected.
- If CPR is in progress, prepare and independently double check and label 3 doses of adrenaline
- Prepare and administer IV fluids
- Document medications administered (including time)



THANK YOU

