BASIC LIFE SUPPORT

(BLS)

Dr. Win Thinzar Kyaw
Port Health Officer
Quarantine Unit
International Health Division

Objectives

- 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.

Basic life support (BLS)

Advanced cardiovascular life support (ACLS)

Chain of survival

OHCA = out of hospital cardiac arrest

Cardio pulmonary resucsitation Outcome

- Brain damage is unlikely if CPR started in first 4 minutes
- 4-6 minutes - brain damage possible
- 6-10 minutes – brain damage probale
- >10 minutes – severe brain damage certain

When to start CPR

- Victim with unexpected cardiac arrest or sudden cardiac arrest (SCA)

- Signs of Cardiac Arrest ★★★
  - 1.Unconciousness
  - 2.No reactivity
  - 3.Absence of normal breathing

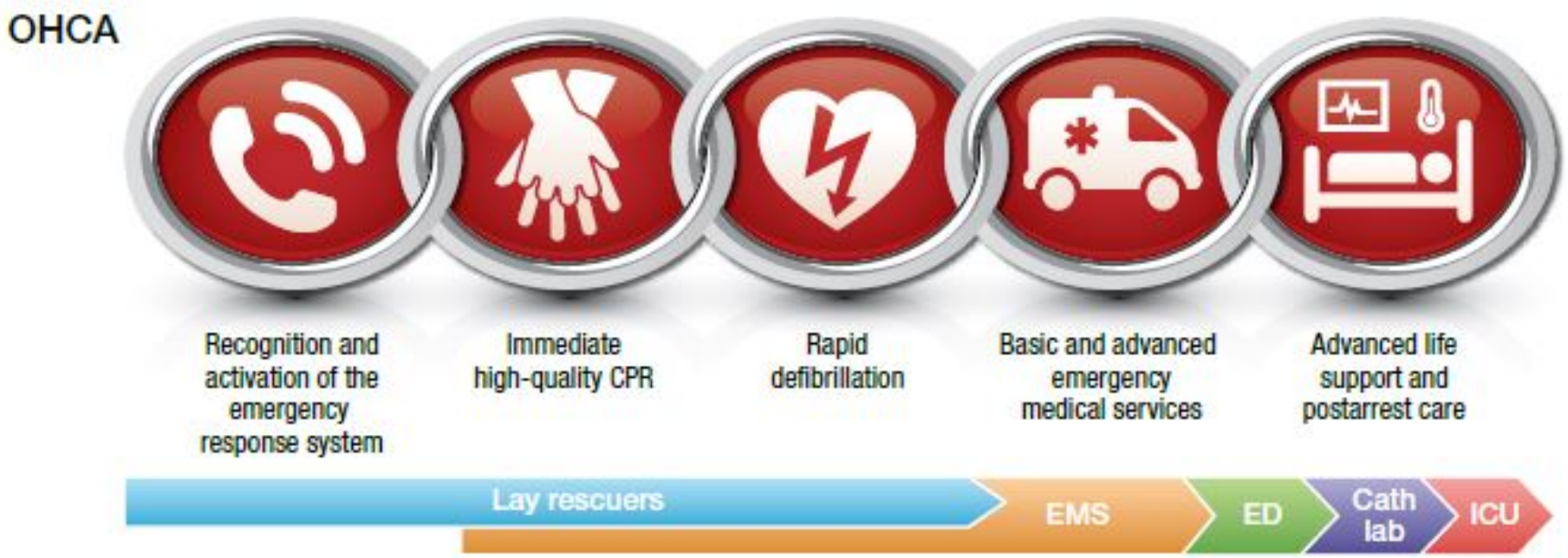
Causes of SCA

- Heart Attack
- Drowning
- Allergic reaction
- Drug overdose
- Electric shock
- Electrocution
- Acute suffocation
- Severe trauma
- Severe bleeding
- Prolonged seizures
- Stroke

What to do when you start seeing a collapsed victim?

(Do not forget chain of survival)

Chain of survival



OHCA = out of hospital cardiac arrest


CAUTION

Step 1 - Ensure scene safety

- Personal protection
- Protection of patient
- Protection of bystanders

Step 2 - Response

Shake shoulders gently

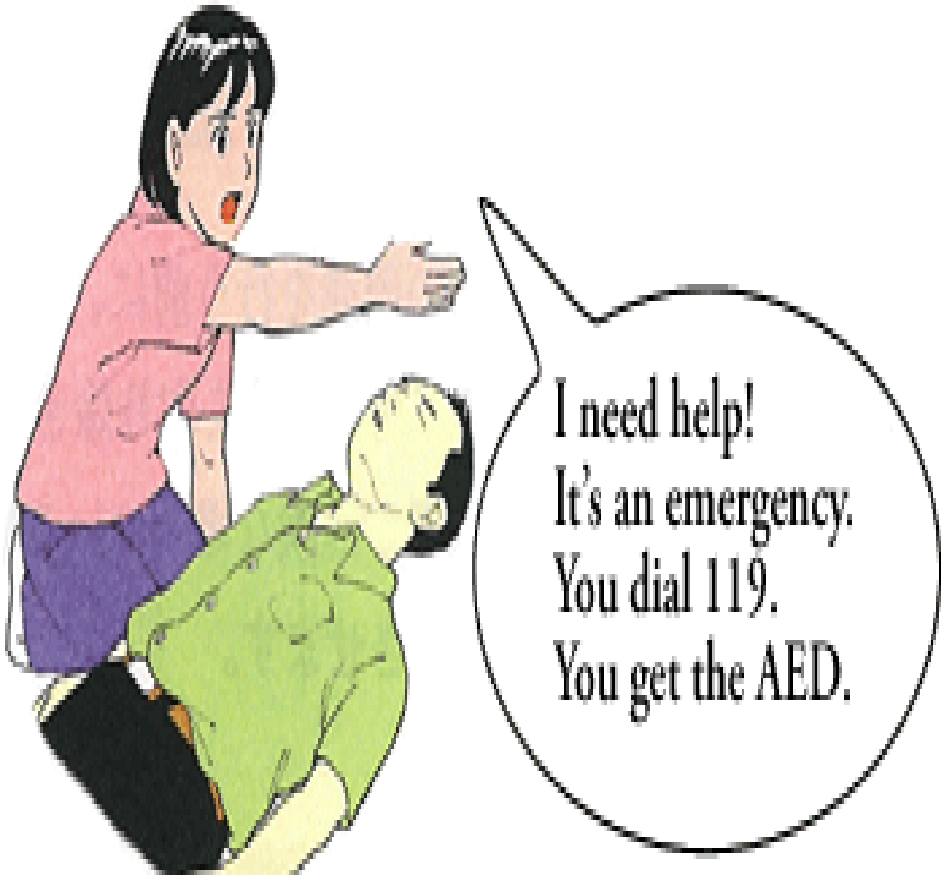
Ask “Are you all right?”

If he responds

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

Step 3 – Shout for help and activate emergency response system

- Shout for help
- Activate emergency response system via mobile device
- Get Automated external defibrillator (AED) and emergency equipment (send someone to do so)



Step 4 – Check for breathing and pulse

- Check for no **breathing** or only **gasping** and check **pulse within 10 secs**
- If there is none, begin Cardio pulmonary resuscitation **CPR**

CPR positioning

- Relatively hard surface 
- mattress or other soft material 
  (less effective)
- Rescuer should be positioned high enough above the patient

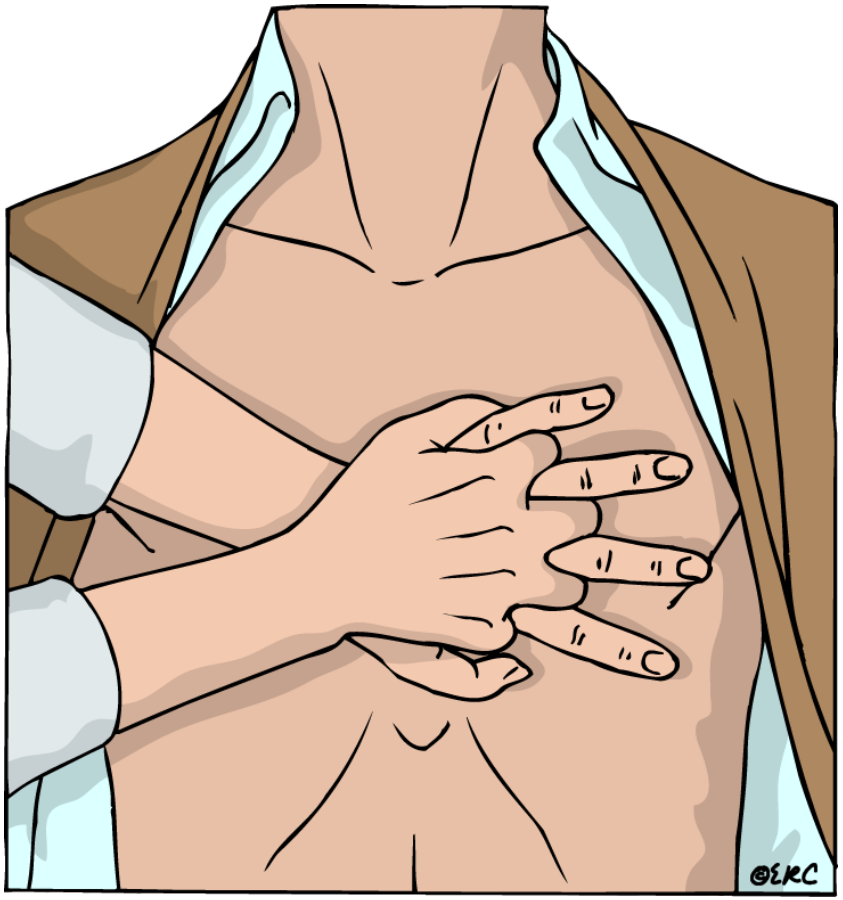
CPR

- 3 steps (**C A B**)

1. Chest compressions
2. Airway
3. Breathing

CPR- Chest compression

- Place the heel of one hand in the centre of the chest
- Place other hand on top
- Interlock fingers
- Compress the chest
  - Rate 100-120 / min
  - Depth 2-2.5 inches
  - Allows chest recoil after each compression
- When possible change CPR provider every 2 min



CPR – Chest compression

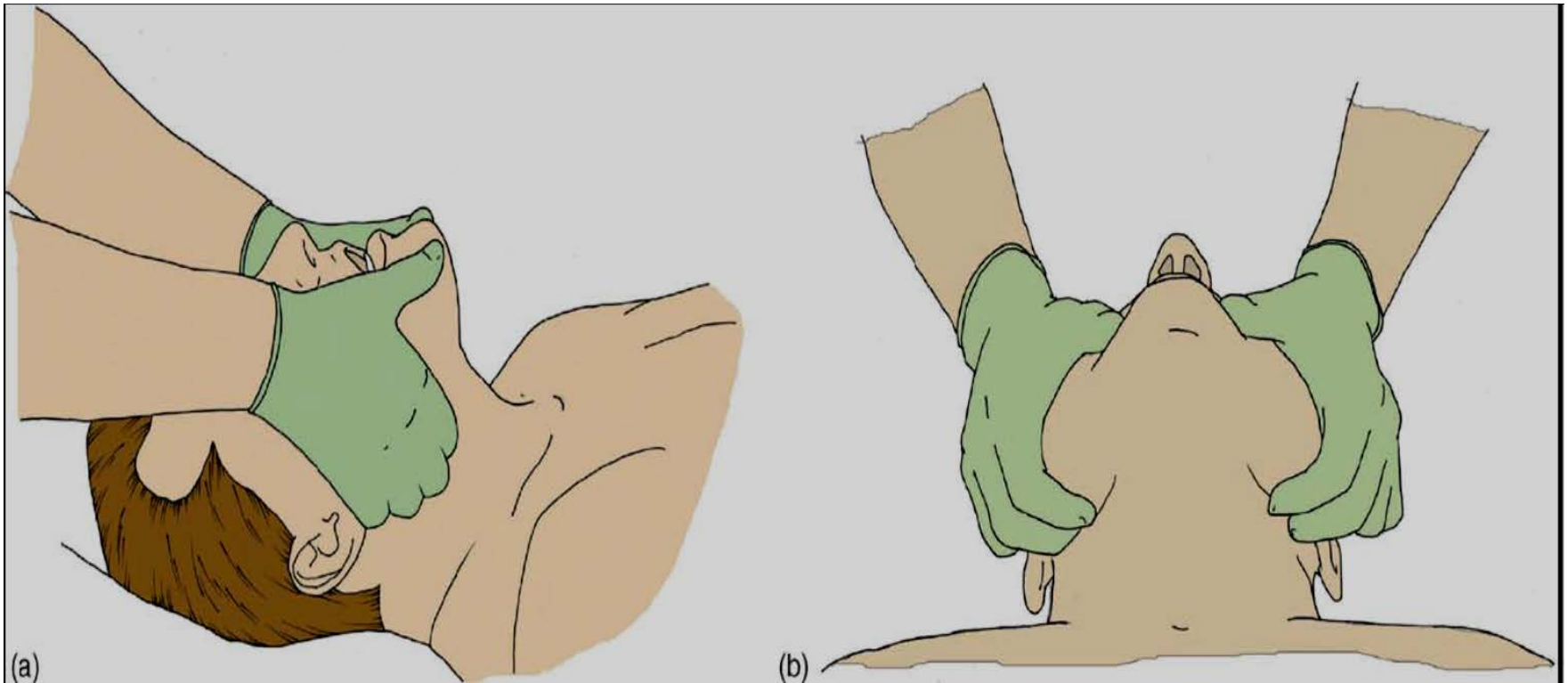
- After every 30 compressions, 2 breaths are given (30:2)

CPR - Airway

- Head tilt and chin lift
  - Lay rescuer
  - Non health care rescuers

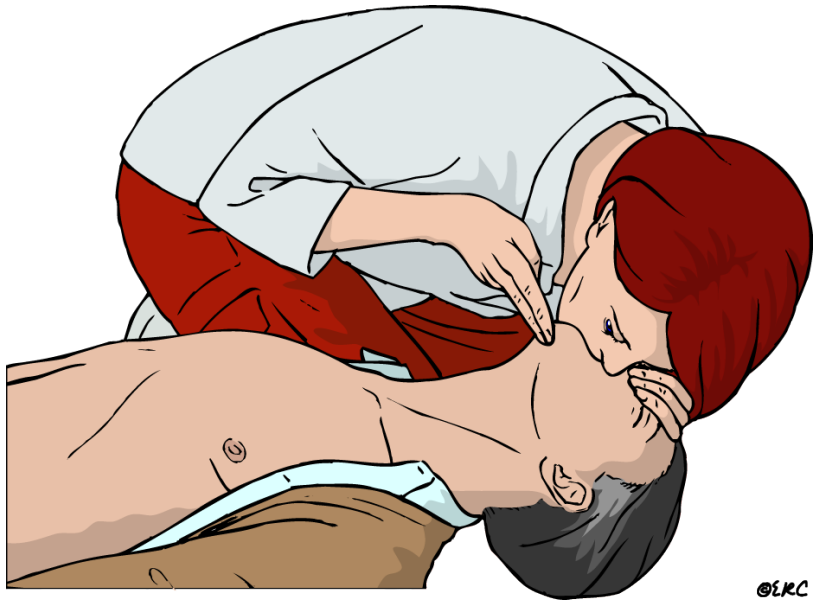
CPR - Airway

- Jaw thrust (Prevent tongue from obstructing the upper airway)
  - Health care professionals



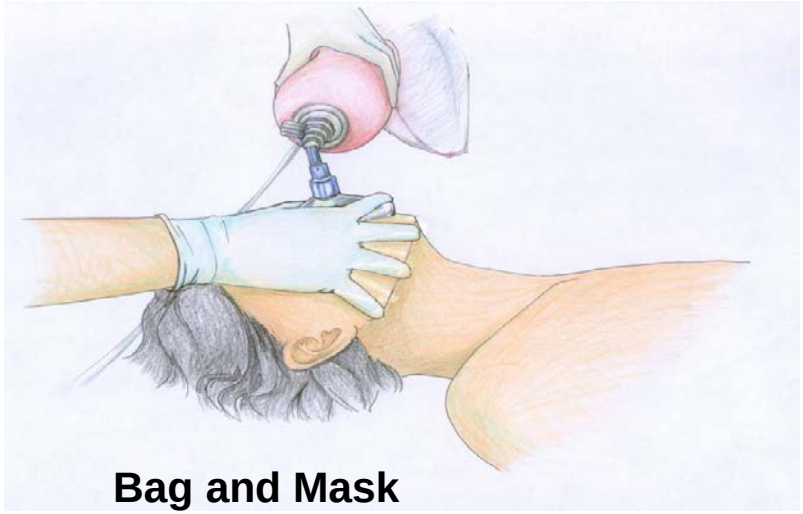
CPR - Breathing

Mouth to mouth ventilation

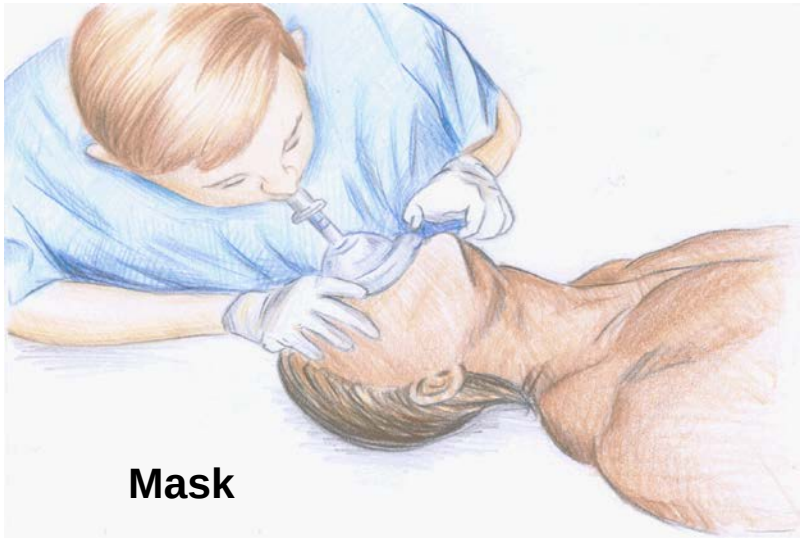


- Pinch the nose
- Take a normal breath
- Place lips over mouth
- Blow until the chest rises
- Take about 1 second
- Allow chest to fall
- Repeat

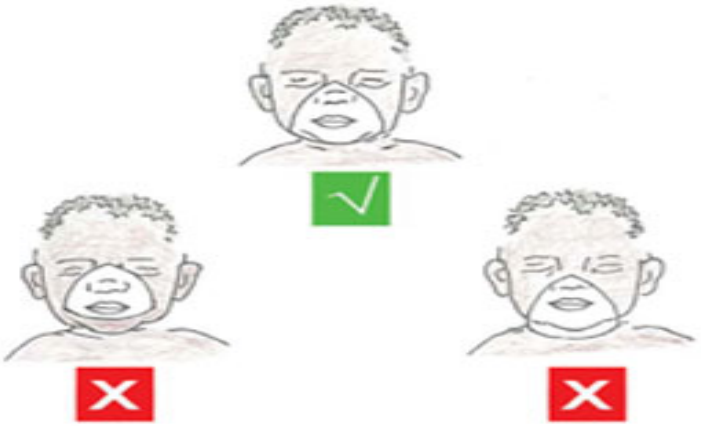
2 Breaths by Bag and Mask



Bag and Mask



Mask



Checking for CPR effectiveness

- Does chest rise and fall with rescue breaths?
- A second rescuer check pulse while you give compressions

Why CPR fail?

- Delay in starting
- Improper procedures (eg.Forget to pinch nose)
- No ACLS follow up and delay in defrillation
- Terminal disease

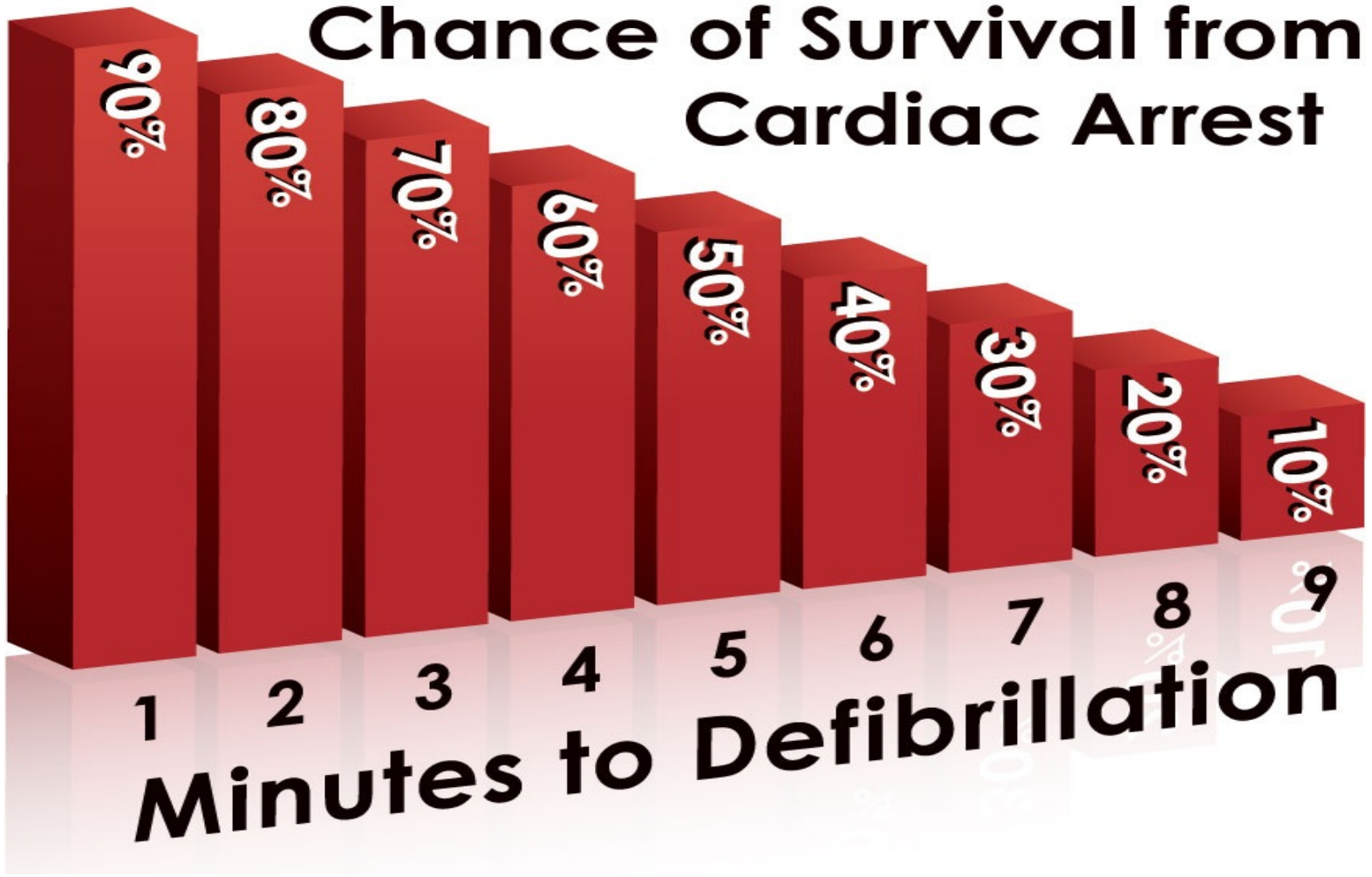
When to stop CPR

- Victim starts to breathe normally
- EMS team arrives
- Cardiac arrest of longer than 30 minutes
- Rescuer is physically exhausted
- Unsafe scene

Complications during CPR

- Gastric distension – often in children
  - Prevention: Avoid overinflating the lungs. Appropriate volume making the chest rise
- Rib fracture
  - Prevention: Correct hands position
- Gastric content or other fluids aspiration
  - Prevention: Prevent gastric distension. Recovery position in unconscious victims

AED (Automated external defibrillator)


Chance of Survival from Cardiac Arrest
90%
80%
70%
60%
50%
40%
30%
20%
10%
1
2
3
4
5
6
7
8
9
Minutes to Defibrillation

AED steps

1. **Retrieve AED**
   - Open the case and turn on AED
2. **Expose the person's chest**
   - If wet, dry chest.
3. **Open AED pads**
   - Peel of backing
   - Check for pace maker of defibrillator

AED steps

4. **Apply the pads**
   - Apply one pad o upper right chest above the breast
   - Apply the second pad on lower left chest below the armpit
5. **Ensure the wires are attached to AED box**
6. **Move away from the person**
   - Stop CPR
   - Clear the person. Tell others not to touch the person

AED steps

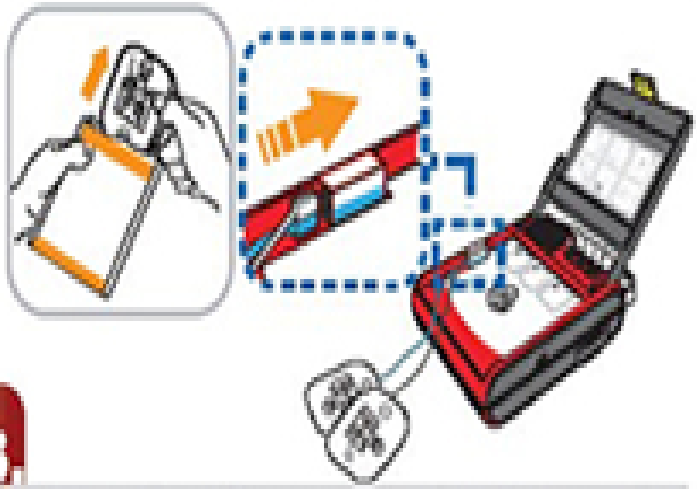
7. **Let AED analyze the rhythm**
8. **AED reads "Check Electrodes"**
   - Ensure electrodes make good contact
   - If chest is hairy, pull of pad and replace it
9. **AED reads "Shock"**
   - Be sure the person is 'clear' by making sure no one is touching them
   - Press and hold 'shock' button ntil the AED delivers the shock

AED steps

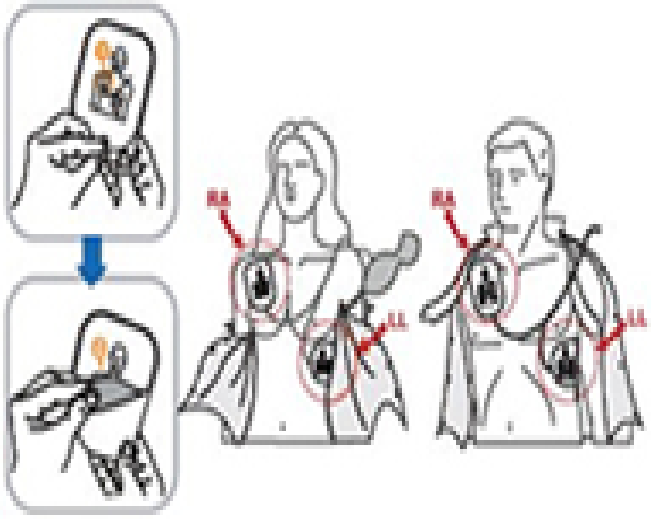
10. **Resume CPR for 2 minutes**
11. **Repeat steps 1 to 10**

01. Turn ON and open lid

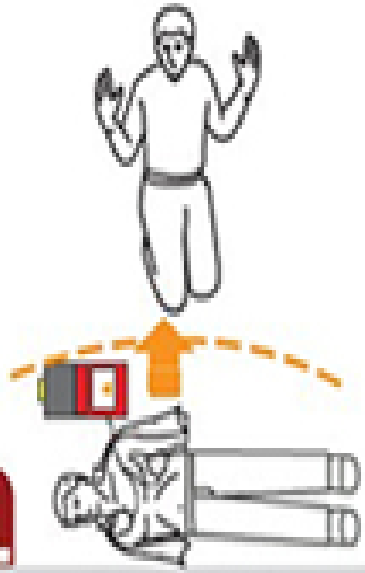
02. Remove clothing



03. Open pad package and plug in pad connector



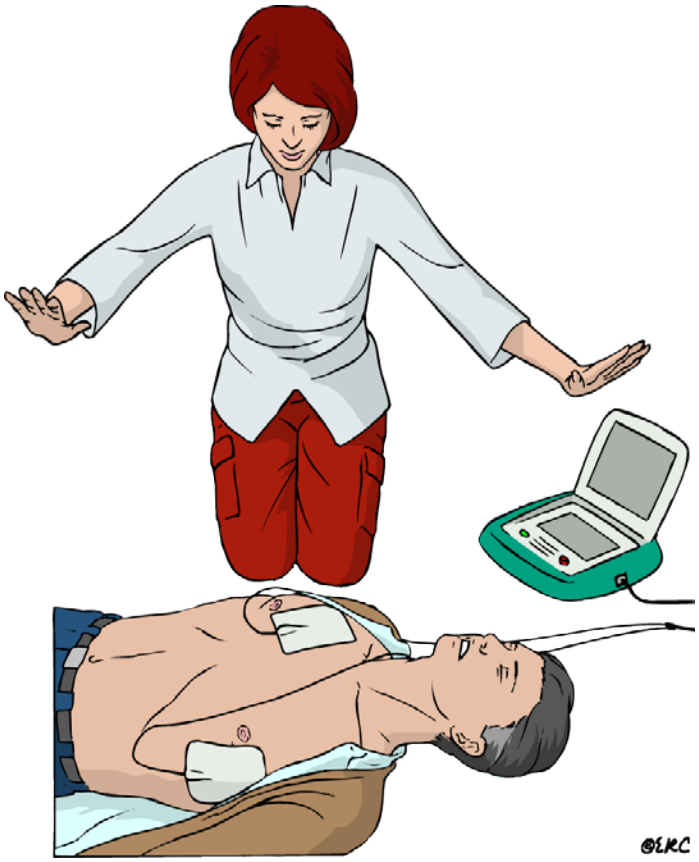
04. Peel pad backing and apply both pads



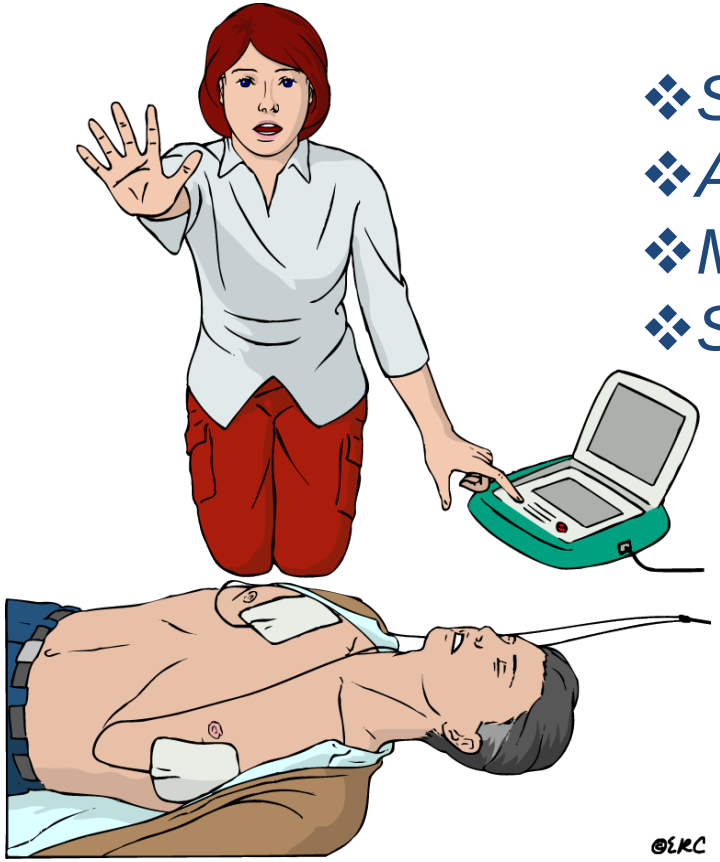
05. "Analyzing"
Wait and stand clear

06. If instructed,
press shock button

Analysing rhythm
Do not touch



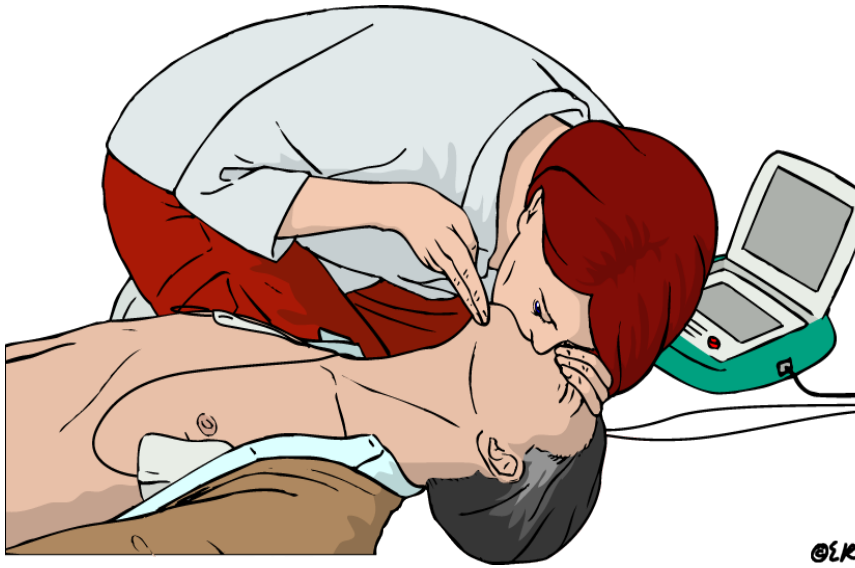
Shock indicated



- *Stand clear*
- *All clear*
- *Myself clear*
- *Shock*

No shock advised, follow AED instructions
Reassume CPR immediately

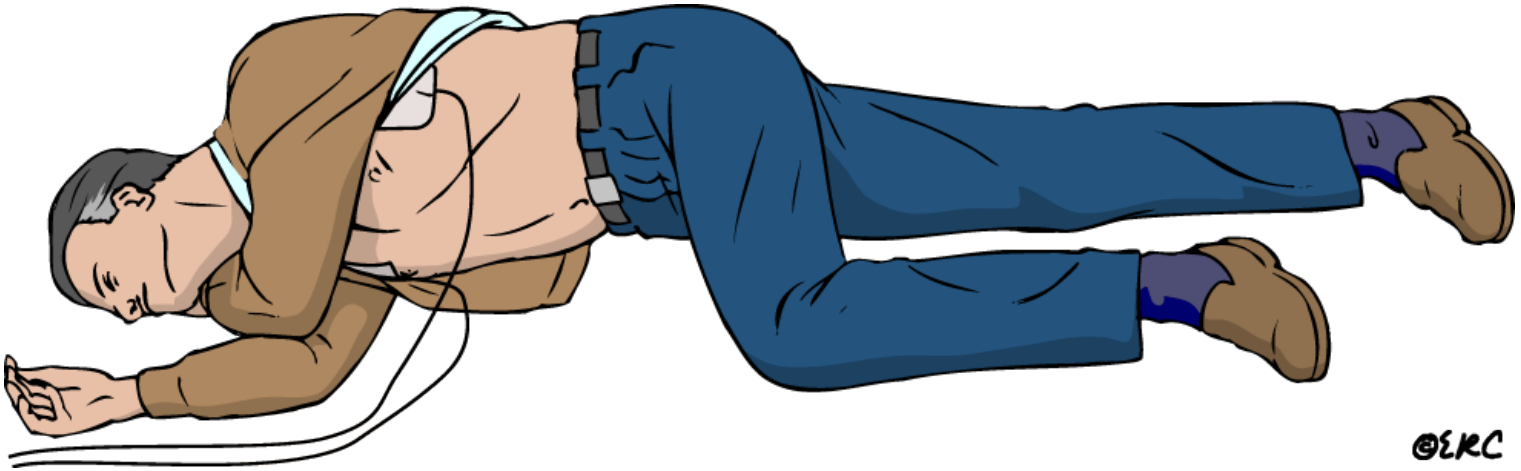
30



2

Recovery position

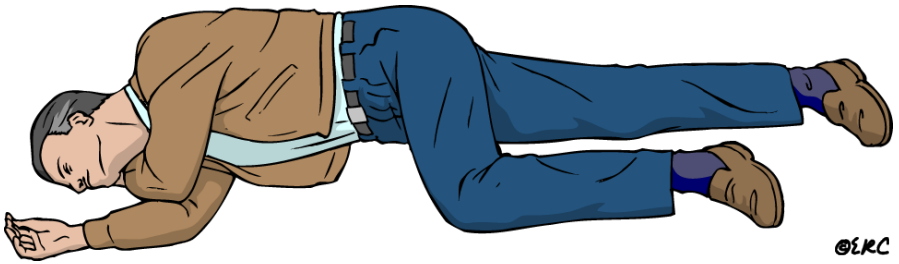
- If victim starts to breathe normally, place in recovery position




©ERC


©ERC


©ERC


©ERC

BLS for children (1 to 8 yrs)

- No respond – Alert EMS and get AED (if second rescuer is present)
- Access breathing and pulse
- Feel child's **carotid pulse or femoral pulse**
- No pulse or pulse rate <60/ min, begin CPR

- Compression to breath ratio
  - 30:2 (one rescuers)
  - 15:2 (two rescuers)
- One handed chest compression for very small children.
- Depth of compression **≤ 2 inches**

PROPER POSITION

In the absence of neck injury, tilt the forehead back and lift the chin

TIGHT SEAL

Use the "E-C clamp," which is the letters E and C formed by the fingers and thumb over the mask

VENTILATE

Squeeze the bag over one second until the chest rises

Do not over ventilate

BLS for infants(0- 12 months)

- No respond – Alert EMS and get AED (if second rescuer is present)
- Access breathing and pulse
- Feel infant's **brachial pulse**
- No pulse or pulse rate <60/ min, begin CPR

- Compression to breath ratio
  - 30:2 (one rescuers)
  - 15:2 (two rescuers)
- **Two fingers or two thumb- encircling hands**
- Depth of compression **1.5inches**
- Compression in the centre of the sternum
- **Do not press on the end of sternum**

Infant airway and breathing

Head tilt/ chin lift maneuver

Seal using your lips to surround the infant's nose and mouth

If unable to cover both mouth and nose entirely with your mouth, head tilt/ chin lift maneuver and pinch the infant's nose closed

Foreign body airway obstruction (FBAO)

Blow Back

ABDOMINAL THRUSTS
{Heimlich maneuver}
(the person is responsive and older than one year of age)

Infant chocking

Back blow

Chest thrusts

THANK YOU


Basic
Life
Sup port
BAND-AID
85 Sheer Comfort-Flex
Johnson & Johnson