Lecture 16

Subject

Cardiopulmonary Resuscitation (CPR)

Theoretical

Prepared by

Dr. Ali Ahmed

Dr: Hayder Mohammed

Dr. Rania Abd Elmosen Abo Elnour

Cardiopulmonary Resuscitation

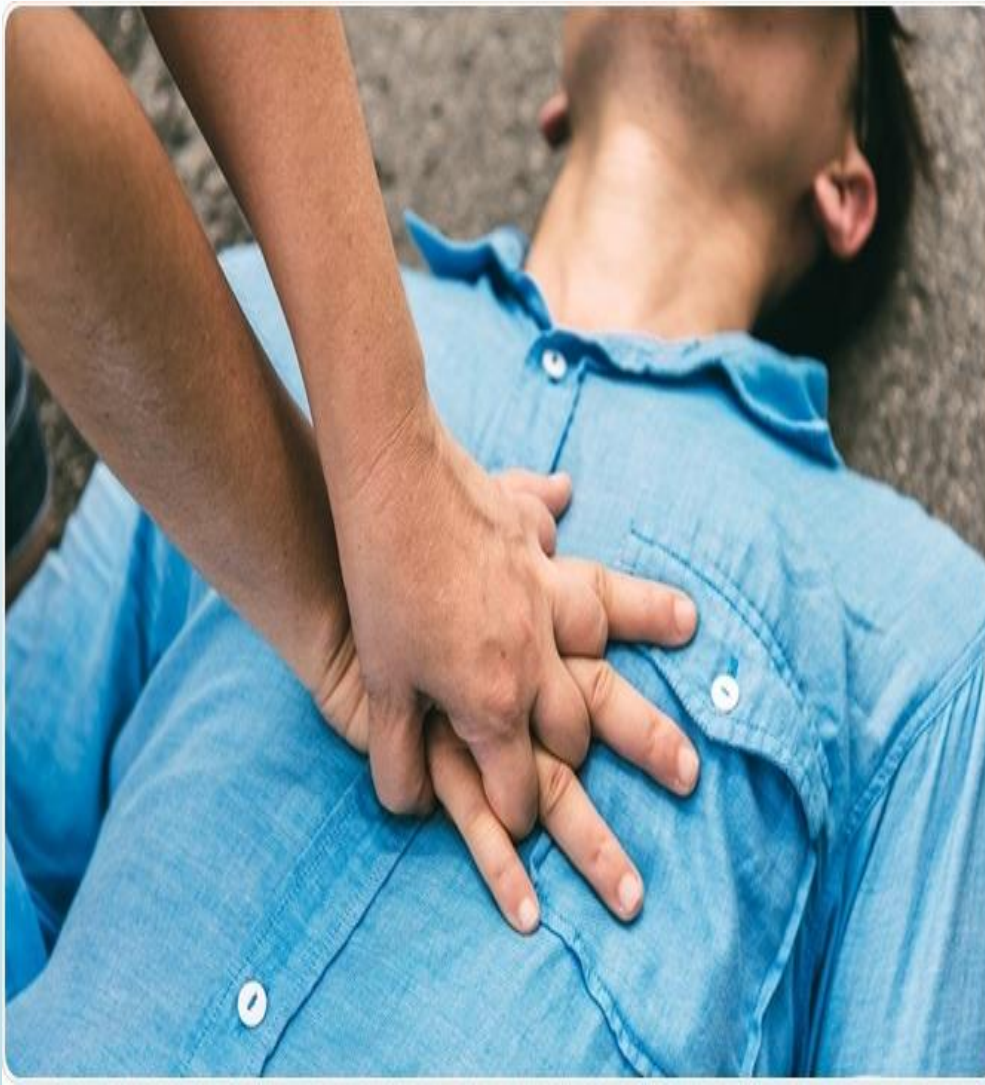
- Cardiopulmonary Resuscitation (CPR) is emergency procedure provides blood flow to vital organs until effective circulation can be reestablished.
- Is a combination of **oral resuscitation** (mouth-to-mouth breathing or use of a mask), which supplies oxygen to the lungs, and **external cardiac massage** (chest compression), which is intended to reestablish cardiac function and blood circulation.

PURPOSES of CPR

- To maintain an open and clear airway
- To oxygenate the heart and lungs.
- To restore the function of heart and lungs.
- To maintain circulation in brain and heart.
- To prevent the brain death and damage.
- To save life of the patient
- To maintain breathing by external ventilation.

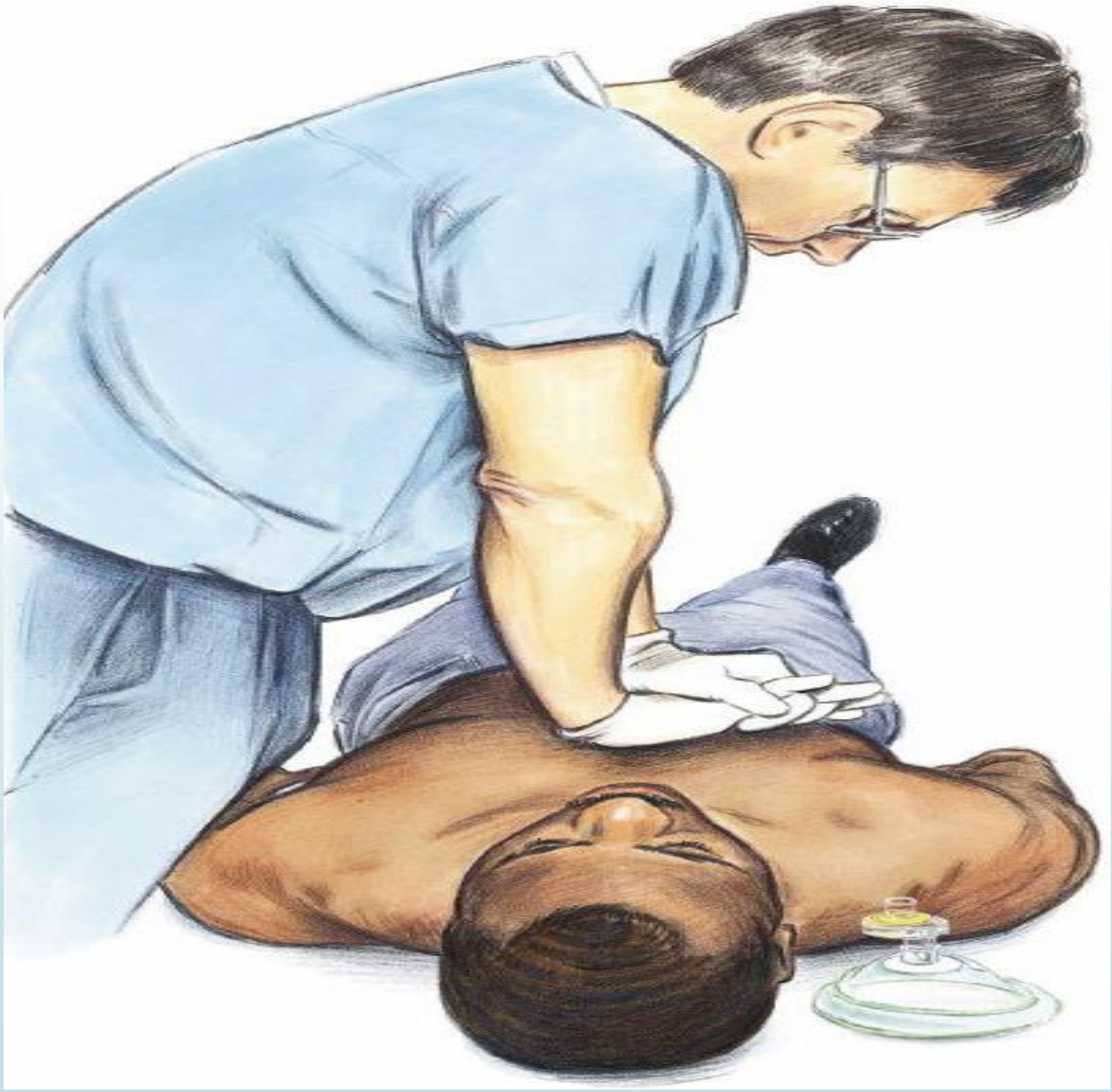
The cardinal signs of a cardiac arrest are:-

1. Apnea.
2. Absence of a carotid or femoral pulse
3. Dilated pupils.
4. Person’s skin appears pale or grayish
5. Feels cool.
6. Cyanosis



CPR involves:

- The patient should be on a hard surface
- Placing the heel of one hand in the center of the chest over the sternum and the other hand on top of the first hand.
- Elbows are kept straight and body weight is used.
- Chest compressions for adults between 5 cm (2.0 in) to 6 cm (2.4 in) deep.
- A rate of at least 100 to 120 per minute.
- The rescuer may also provide artificial ventilation by either exhaling air into the subject's mouth or nose (mouth-to-mouth resuscitation) or using a device that pushes air into the subject's lungs (mechanical ventilation).



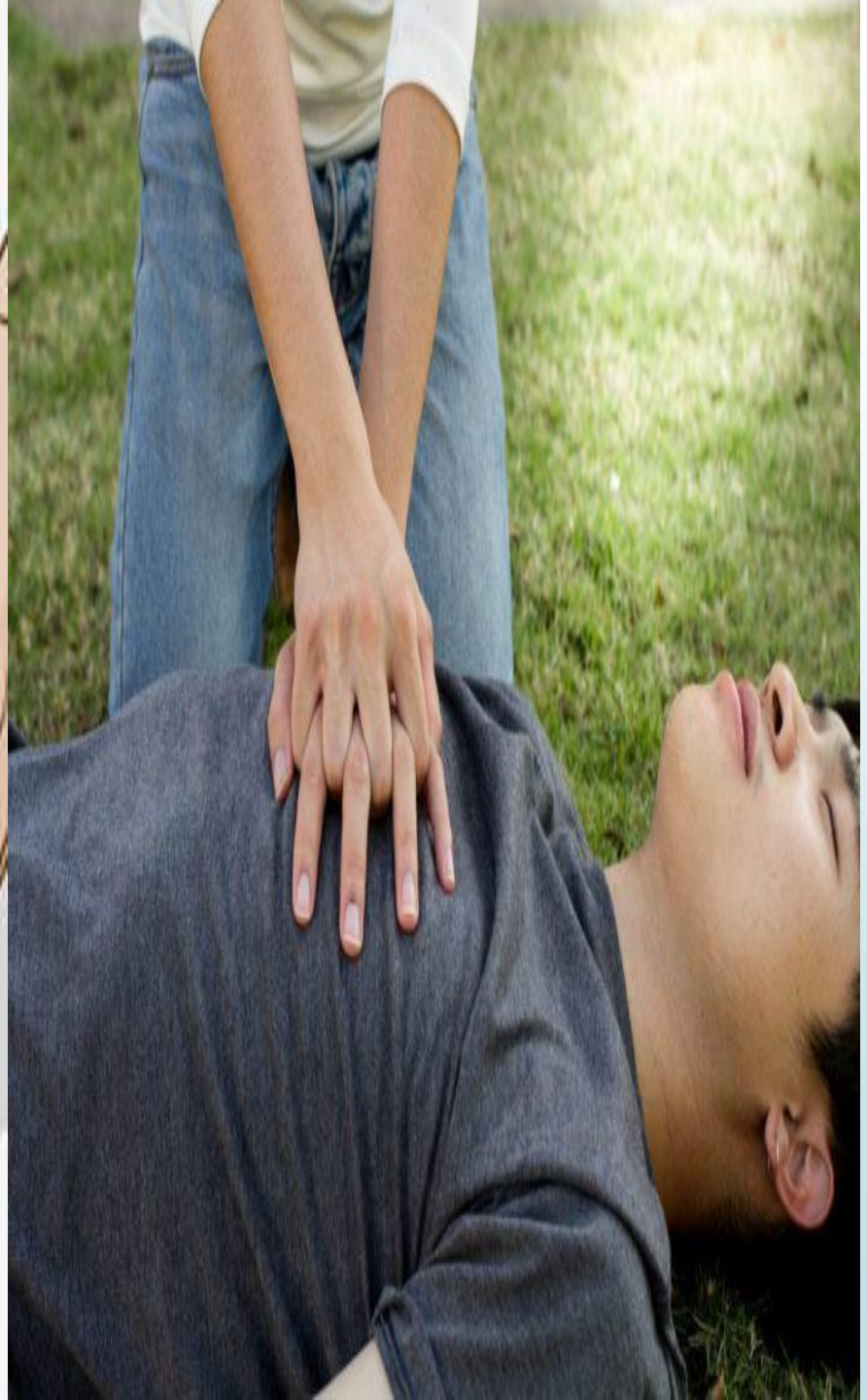
A bag-valve mask or mouth-mask device.

Methods

A universal compression to ventilation ratio are

1. In adults a ratio = 30:2 is recommended.
2. In children a ratio = 15:2 is preferred.
3. In newborns a rate = 3:1 is recommended.


© AboutKidsHealth.ca

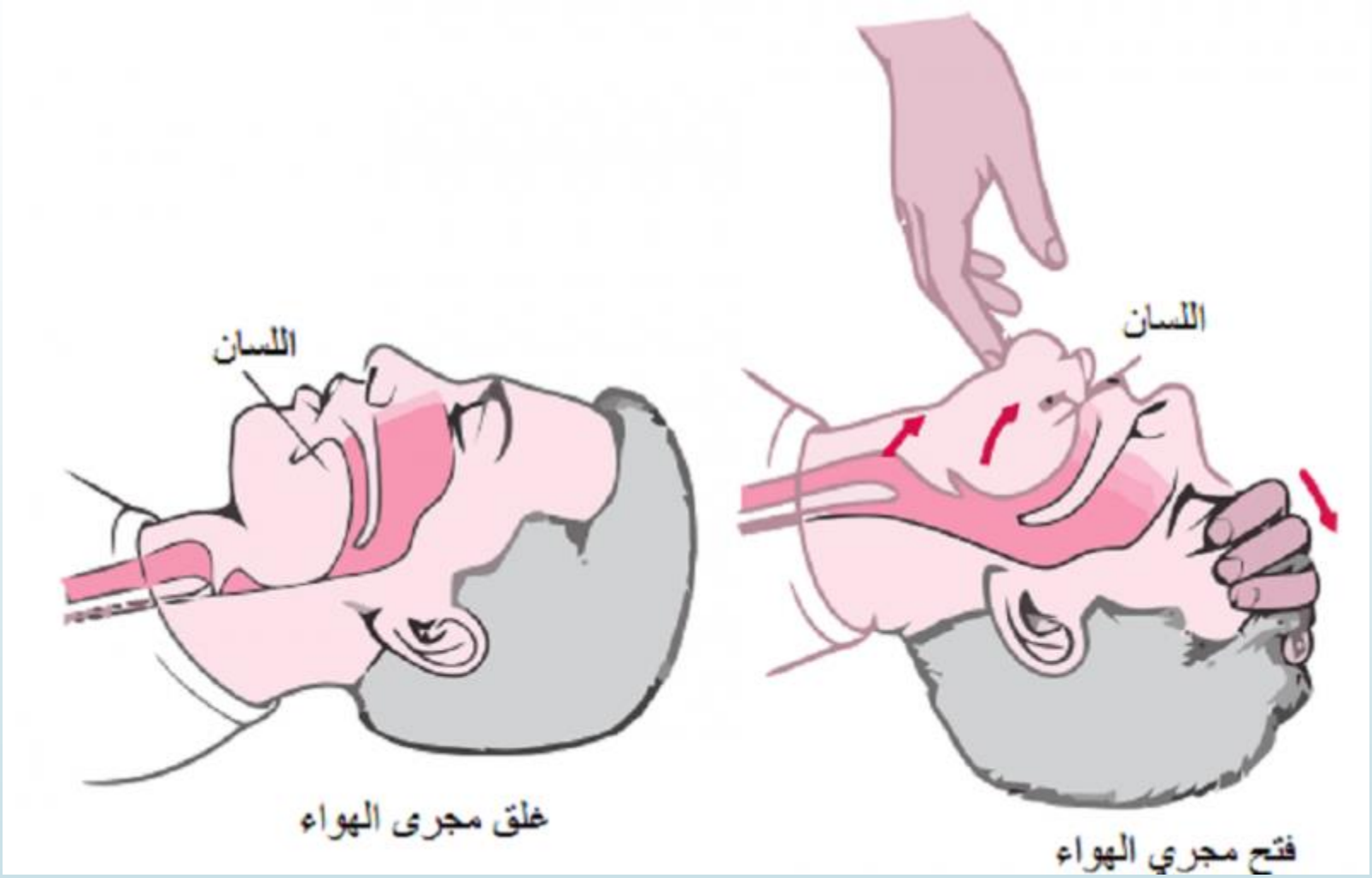


Medications Used in Cardiopulmonary Resuscitation

Medication	Action	Indication
Epinephrine (Adrenalin) (I.V Push)	Vasopressor, optimize BP and cardiac output, improve cardiac contractility	Cardiac arrest
Atropine (I.V Push)	Increased SA node automaticity and AV conduction	Bradycardia
Norepinephrine (I.V Infusion)	Vasopressor to increased BP	Hypotension and shock
Dopamine (I.V Infusion)	Vasopressor to increased BP and contractility	Hypotension and shock

POSSIBLE COMPLICATION

1. CORONERY VESSEL INJURY
2. DIAPHRAGM INJURY
3. HEMOPERICARDIUM
4. HEMOTHORAX
5. PNEUMOTHORAX
6. LIVER INJURY
7. RIB FRACTURES
8. STERNAL FRACTURE



غلق مجرى الهواء

فتح مجري الهواء


APEX
lifepoint