

CPR stands for **C**ardio **P**ulmonary **R**esuscitation i.e. to help restart the heart (pulse) and lungs (breathing). CPR is performed when a person stops breathing or heart stops. Every year about 330,000 people die because of heart condition, when their heart stops. Sudden cardiac death is the most common cause of death in United States and Canada. If you know how to perform CPR you may be able to save a life.

**Heart:** The heart beats continuously to pump blood to all parts of the body. It has four chambers: Right and left atrium and ventricles. Blood flows from the right side of the heart to the left side. The heart is connected to blood vessels (arteries and veins) which combined make up the circulatory system.

**Lungs:** Each person has two lungs underneath the ribcage: One on the left side and the one on the right. Its main function is to purify the blood i.e. from oxygen-poor blood to oxygen-rich blood.

### Adult CPR

#### Cardio Pulmonary Resuscitation:

- Check for response
- If no response - Activate EMS and call for AED (witnessed arrest or if 2 rescuer/person present)
- Open airway – Head tilt/chin lift (push the forehead back with one hand and lift the chin to move the jaw forward with the other hand)
- Look, listen and feel for breath (5-10 seconds)
- If no breath, then give 2 breaths, each for 1 second duration, look for chest rise. If the first breath doesn't make the chest rise and fall, then reposition the head i.e. head tilt-chin lift, repeat the breaths.
- Check for pulse (5-10 seconds). Check the carotid pulse.

#### If Pulse is present:

If there is a pulse, continue rescue breathing every 5-6 seconds (10-12 breaths per minute), each breath over 1 second.

#### If Pulse is absent:

If no pulse, start compression (1 ½- 2 inches in depth) at 100 per minute.

### Child CPR

#### Cardio Pulmonary Resuscitation:

- Check for response
- If no response - Activate EMS and call for AED (only if 2 rescuer/person present)
- Open airway – Head tilt-chin lift (push the forehead back with one hand and lift the chin to move the jaw forward with the other hand)
- Look, listen and feel for breath (5-10 seconds)
- If no breath, then give 2 breaths, each for 1 second duration, look for chest rise. If the first breath doesn't make the chest rise and fall, then reposition the head i.e. head tilt-chin lift, and repeat the breaths.
- Check for pulse (5-10 seconds). Check the carotid pulse.

#### If Pulse is present:

If there is a pulse >60 per minute, continue rescue breathing at 3-5 second intervals (12-20 breaths per minute), each breath for 1 second.

#### If Pulse is absent:

If no pulse or pulse <60 per minute, start compression at 100 per minute (1/3-1/2 the depth of the chest). 1 or 2 hands compression on the breastbone at the nipple line.

### Infant CPR

#### Cardio Pulmonary Resuscitation:

- Check for response
- If no response - Activate EMS and call for AED (if 2 rescuer/person present)
- Open airway – Head tilt- chin lift to a neutral position
- Look, listen and feel for breath (5-10 seconds)
- If no breath, then give 2 breaths, each 1 second in duration, look for chest rise. If the first breath doesn't make the chest rise and fall, then reposition the head, and re administer the breath.
- Check for pulse (5-10 seconds). Check the brachial pulse.

#### If Pulse is present:

If there is a pulse >60 per minute, continue rescue breathing at 3-5 second intervals (12-20 breaths per minute), each breath for 1 second.

#### If Pulse is absent:

If no pulse or pulse <60 per minute, start compression at 100 per minute. (1/3-1/2 the depth of the chest).

## CPR TRAINING

2 CREDITS

	1 Rescuer Compression to Ventilation ratio	2 Rescuer Compression to Ventilation ratio	Compressions	Rescue Breaths
<b>Adult CPR</b>	30:2	30:2	-Check carotid pulse -100/minute -1 1/2- 2 inches depth compressions	- 1 second duration - Every 5-6 seconds - 10-12 breaths/minute
<b>Child CPR (1-13yrs)</b>	30:2	15:2	-Check carotid pulse -100/minute -1/3-1/2 the depth of chest	- 1 second duration - Every 3-5 seconds - 12-20 breaths/minute
<b>Infant CPR (0-11 months)</b>	30:2	15:2	-Check brachial pulse -100/minute -1/3-1/2 the depth of chest	- 1 second duration - Every 3-5 seconds - 12-20 breaths/minute

### Adult & Child Choking

#### Conscious and choking:

- Ask the victim, if he is choking
- If he is able to cough and speak, encourage him to cough
- If unable to speak or cough then perform abdominal thrusts - Heimlich maneuver

#### Abdominal thrusts (Heimlich maneuver) for adults and children

- Position yourself behind the victim
- Wrap your arms around the victim's waist
- Make a fist and place the thumb side just above the navel.
- Hold your fist with the other arm
- Push inward and upward, thrust
- Repeat the thrust until the object is expelled from the airway or victim is unresponsive.

### Infant Choking

#### Conscious and choking:

- If the infant is choking then place them on your lap.
- If the infant is unable to cough, then start back slaps and chest compressions
- Hold the infant in one of your forearms facing down. Support the head and the jaw with your hand. Head position needs to be lower than the chest.
- Give 5 back slaps in the middle of the back (between the shoulder blades) using the heel of your hand.
- Turn the infant while carefully supporting the head and the neck, with your other hand and the forearm.
- Hold the infant with his head lower than the trunk
- Give 5 chest compressions – compressing with two fingers just below the nipple line. Compress at the rate of 1 per second.
- Continue the sequence of 5 back slaps and 5 chest compression, until the object is removed or the infant becomes unconscious.

#### Automated External Defibrillator

AED should be used on any adult or children (1-8 yrs), when there is, no response, no breathing and no pulse.

#### Following is the sequence for AED use:

- If no response
- Activate EMS (for all witnessed adult and children cardiac arrest except for drowning adult and unwitnessed children, who would need 2min/ 5 cycles of CPR before activation of EMS) and get AED
- Begin CPR

#### Mouth to Mouth Breaths:

- Position yourself on the side of victim's head
- Perform head tilt-chin lift
- Pinch the nose with your thumb and index finger
- Take a breath and seal your lips around the victim's mouth, creating an airtight seal
- Give 1 breath – over 1 sec
- Observe for the visible chest rise, if chest doesn't rise, repeat the head tilt-chin lift
- Give a second breath over 1 sec and watch for visible chest rise.

**KEEP FOR YOUR RECORDS**

## RETURN TO APC

Employee Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_ Time Started: \_\_\_\_\_ Time Finished: \_\_\_\_\_ Score: \_\_\_\_\_ / 20

## TRUE/FALSE

- \_\_\_\_\_ 1. CPR stands for Cardiopulmonary Resuscitation.
- \_\_\_\_\_ 2. Brain death starts to occur within 5 minutes after breathing stops.
- \_\_\_\_\_ 3. Hands – only CPR may be performed by any bystander even if they are not trained
- \_\_\_\_\_ 4. Pushing hard and fast in the center of an Adult's chest is hands-only CPR.
- \_\_\_\_\_ 5. The position for the victim in adult chest compression is on his back.
- \_\_\_\_\_ 6. For 1 rescuer (adult, child and infant cpr), the compression to ventilation ratio is 30:2
- \_\_\_\_\_ 7. For 2 rescuer (child and infant cpr), the compression to ventilation ratio is 15:2
- \_\_\_\_\_ 8. Chest compression rate for adult, child and infant cpr is 100 per minute.
- \_\_\_\_\_ 9. Ventilation rate for child and infant cpr is 12-20 breaths / minute (i.e. every 3-5 seconds).
- \_\_\_\_\_ 10. Ventilation rate for adult cpr is 10-12 breaths / minute (i.e. every 5-6 seconds).
- \_\_\_\_\_ 11. The depth of chest compression for adult cpr is 1 ½ - 2 inches.
12. Infant chest compression technique does not include:
- Removing the clothing
  - Using two fingers below the nipple line
  - Pushing as hard as possible on the chest
  - Pushing at the rate of 100 compressions per minute
13. If trauma is suspected, what should you do before beginning compression technique?
- Remove clothing
  - Position yourself on victim's side
  - Stabilize the neck
  - Place heel of hand in between the nipples
14. Before proceeding with any CPR:
- Check for response
  - Cover victim with blanket
  - Tilt the chin and move the jaw forward
  - Look, listen and feel for breath
15. Being trained in CPR is:
- Necessary to become a volunteer
  - Is required for citizenship
  - The first step in First Aid
  - Will help you save lives
16. The Heart has:
- Four chambers
  - Left and right ventricle and atrium
  - Lungs
  - A and B
17. With mouth to mouth breaths in an adult you should First:
- Give one breath over one second
  - Perform head tilt-chin lift
  - Position yourself on the side of the victim's head
  - Give a second breath
18. If an infant is choking and unconscious and you are alone you should first:
- Administer CPR
  - Activate EMS/911
  - Call 911
  - Perform blind finger sweep