Cardio Pulmonary Resuscitation

OM Nursing Academy

Anil Kantiwal

Introduction :-

- It is an **Emergency life saving procedure** done when Person's **Breathing & Heart** Stops.
- It helps Provide Oxygen to Vital Organs, Untill help arrives.

Indication :-

- **Cardiac Arrest**
- **Respiratory Arrest**
- **CO₂ / CO Poisoning**
- **Electric Shock**
- **Airway Obstruction**
- **Drug Reaction**

Assessment for CPR :-

- **Apnea**
- **Absence of Pulse**
- **Dilated Pupil**
- **Unconsciousness**
- **Cyanosis and Fits**

Sequence of CPR for Health Care Provider :-

1. **Determine the Unconsciousness**
(इसके लिए patient को, टच करे, उसे पूछे कि उसका नाम क्या है, अगर मरीज Conscious हैं और Response करता है तो उसे CPR की जरूरत नहीं, लेकिन मरीज Unconscious है कोई Response नहीं देता तब...)

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2. Assess **Pulse for 5 - 10 Second**
   - (Patient की Pulse assess करते हैं, अगर Pulse महसूस हो रही है तब CPR की जरूरत नहीं, लेकिन Pulse Absent हैं तब...)

3. Perform Chest Compression
   - Chest Compression देने के लिए सबसे पहले Patient को firm & flat सतह पर Supine Position में लेटा तेहें

4. Open Airway
   Method By :-
   - Head tilt chin lift method
   - Jaw thrust maneuver

**RESCUE BREATHING**

1. Lift the chin
2. Keep the airway open
3. Check the pulse every 10 seconds

*If there is no pulse, then the heart is not beating. Commence CPR immediately*

5. Check Breath and Deliver Breath

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**CAB formula of CPR :-**

- Compression
- Airway
- Breathing

1. Compressions :-

<table>
<thead>
<tr>
<th></th>
<th>Adult</th>
<th>Child (Below 8 yr.)</th>
<th>Infant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse Assessment</td>
<td>Carotid</td>
<td>Femoral</td>
<td>Brachial / Femoral</td>
</tr>
<tr>
<td>(5 से 10 सेकंड में)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compression Method</td>
<td>Two hand</td>
<td>Two / One hand</td>
<td>Two finger/ two thumb</td>
</tr>
<tr>
<td>Compression करने की जगह</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lower half of Sternum</td>
<td>Same as Adult</td>
<td>Just below Nipple line</td>
</tr>
<tr>
<td></td>
<td>• Between Nipples</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Centre of Heart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compression Depth</td>
<td>2 inch</td>
<td>2 inch</td>
<td>1.5 inch</td>
</tr>
<tr>
<td>Compression Rate</td>
<td>100 / min</td>
<td>100/ min</td>
<td>100/ min</td>
</tr>
</tbody>
</table>

**Compression & Ventilation Ratio :- (According to Rescuers)**

<table>
<thead>
<tr>
<th></th>
<th>Adult</th>
<th>Child &lt;8 years</th>
<th>Infant</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 Rescuer)</td>
<td>30:2</td>
<td>30:2</td>
<td>30:2</td>
</tr>
<tr>
<td>(2 Rescuers)</td>
<td>30:2</td>
<td>15:2</td>
<td>15:2</td>
</tr>
</tbody>
</table>

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2. **Airway :-**
   - After Performing 30 Compression open Victim's Airway.

   **Method :-** ( for Open Airway )
   1. **Head Tilt & Chin lift method**

   ![Head tilt-chin lift](Image)

   2. **Jaw thrust maneuver** ( ये Method तब काम में लेते हैं जब Patient को Head, Neck, Spinal Cord की Injury हो )

   ![Jaw thrust](Image)

3. **Breathing :-**
   - Pinch the Nostrils & Give mouth to mouth Breathing
   - If Person is not breathing then 2 Affective breathing of 1 Second / Breath is given.
   - Each Rescue Breathing Deliver over 1 Second with Visible Chest rise.
   - **Ventilation rate :-** 8 -10 Ventilation/minute
   - Each Breath should be delivered after every 6 - 8 Second.

**Activate Emergency Medical System :-**

- **Adult :-** Phone first and Then Give 5 Cycle of CPR ( 30:2 )
- **Child / Infant :-** First Completion of 5 Cycle of CPR at Ratio ( 30:2 ) And Then Call last

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4. Defibrillation :-

- Provide therapeutic dose of electric energy to the patient
- Call clear three time & no one is touching the bed.
- Placement of Paddle
  1. Base of Heart
  2. Apex of Heart

Complications of CPR :-

- Ribs Fracture
- Flail Chest
- Sternum Fracture

◆ Multiple choice Question◆

Q.1 While doing CPR the Compression Ventilation ratio in An Adult should be :

A. 15:2
B. 20:2
C. 30:2
D. 30:1

Q. 2 Carotid pulse should be checked for :

A. 5 - 10 Seconds
B. 10 - 15 Seconds
C. 15 - 20 Seconds
D. Less than 5 Seconds
Q. 3 In Case of accident what would you first examine?
A. Patent airway
B. Haemorrhage
C. Fractures
D. Possible head injury

Q. 4 The Nurse is admitting a trauma patient to the emergency department. Which of the following should be her Priority intervention?
A. Circulation
B. Breathing
C. Maintain Open Airway
D. Disability

**Answers :-**

1. C
2. A
3. A
4. C

**Some Short Meaning that’s Use in CPR :-**

- AMBU - Artificial Manual Breathing Unit
- AED - Automated External Defibrillator
- DNR - Do not Resuscitate
- ATLS - Advance Trauma Life Support
- IPPB - Intermittent Positive Pressure Breathing