

# Life Support



**Pediatrics**

*Clinical Examination*

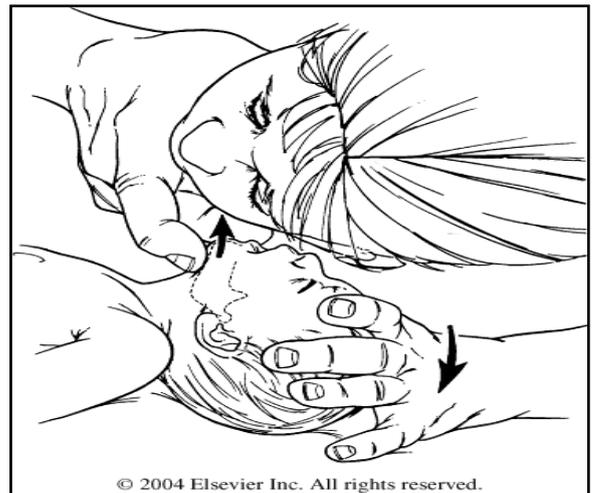
## Steps Of Out-Hospital Basic Life Support

When you are confronted with an arrested infant or child, do the following steps:

- 1- Share actively.
- 2- Be sure that nothing endanger you or the victim.
- 3- Check responsiveness.
- 4- If responsive observe.
- 5- If unresponsive go to step 6
- 6- Opening Airway

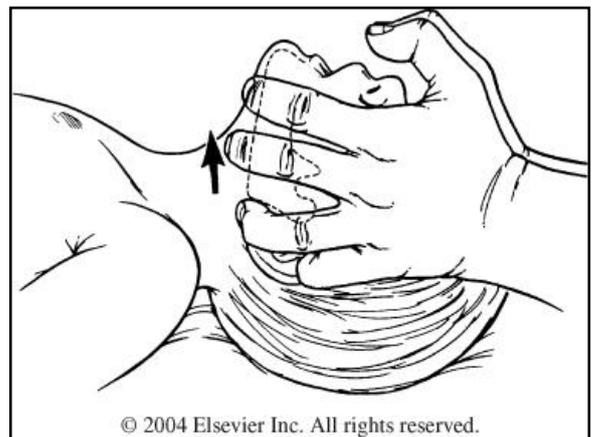
**Open Airway – No cervical spine injury (Head Tilt – Chin Lift Maneuver) :**

- One hand is used to tilt the head, extending the neck. The index finger of the rescuer's other hand lifts the mandible outward by lifting on the chin.



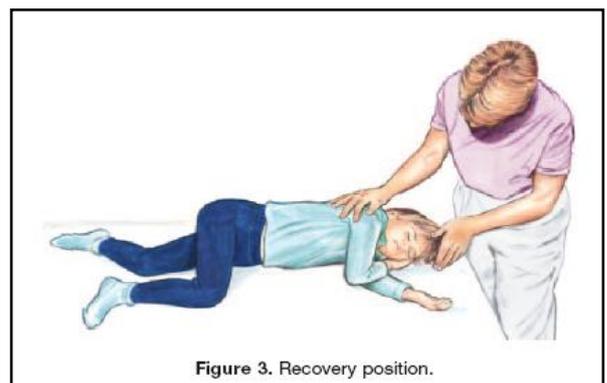
**Open Airway – Suspected cervical spine injury (Jaw Thrust Maneuver):**

- Alternatively, the jaw thrust maneuver can be used when a history of trauma or damage to the cervical spine is suspected. If there is difficulty in its performance proceed with head tilt chin lift .



**Check breathing by looking for respiratory movements, listen and feel for expired air.**

- ✓ **If all are okay:** keep in recovery position



- ✓ **If respiratory movements are observed but nothing felt nor heard:** suspect foreign body obstructing airway: Clearing Airway by:

**I. In infants:**

*5 Back blows followed by 5 chest thrusts*

***Back blows:***

- Hold the infant or child in a prone position and deliver up to five blows to the middle of the back between the shoulder blades.
- The head must be lower than the chest during this manoeuvre.
- This can be achieved by holding a small infant along the forearm or, for older children, across the thighs.



***Chest thrusts*** (if FB is not relieved by five back blows)

- Place the child in a supine position.
- Give up to five thrusts to the sternum.
- The technique of chest thrusts is similar to that for chest compressions.
- The chest thrusts should be sharper and more vigorous than compressions and carried out at a slower rate of 20/min.



**II. In children:**

**a. Conscious child: abdominal thrusts**

- In children over one year deliver up to five abdominal thrusts after the second five back blows.
- Use the upright position (Heimlich maneuver) if the child is conscious
- Up to five sharp thrusts should be directed upwards toward the diaphragm
- Abdominal thrusts are not recommended in



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infants because they may cause damage to the abdominal viscera

**b. Unconscious child: abdominal thrusts**

- Unconscious children must be laid supine and the heel of one hand placed in the middle of the upper abdomen.
- In children over one year deliver up to five abdominal thrusts after the second five back blows.



✓ **If No Breath: give 2 effective breaths by:**

**A. Rescue Breathing**

**Rescue breathing in an infant**

- The rescuer's mouth covers the infant's nose and mouth, creating a seal.
- One hand performs head tilt while the other hand lifts the infant's jaw.
- Avoid head tilt if the infant has sustained head or neck trauma.



**Rescue breathing in a child**

- The rescuer's mouth covers the mouth of the child, creating a mouth-to-mouth seal.
- One hand maintains the head tilt; the thumb and forefinger of the same hand are used to pinch the child's nose.



**B. Bag and Mask Breathing**

- 1-Select the appropriate sized mask
- 2-Be sure there is a clear airway
- 3-Position of the baby head: the neck should be slightly extended .
- 4-The mask is held on the face with the thumb and index finger encircling much of the rim of the mask ( C – shaped ), while the ring and fifth fingers bring the chin forward ( E – shaped ).
- 5-An air-tight seal between the rim of the mask and the face is essential.

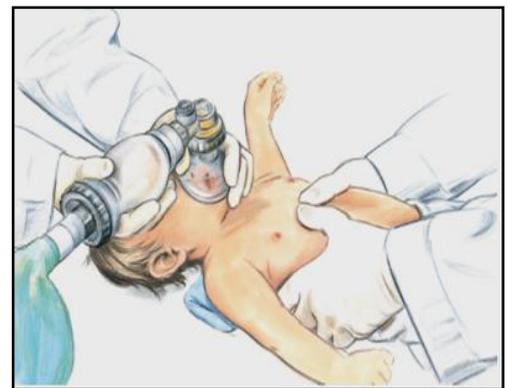
**After effective breathes:**

- **Child starts breathing:** put child in recovery position. Observe.
- **No breathing after 2 effective breathes:** start immediate combined ventilations and cardiac compressions:

**Combined Ventilations and Cardiac Compressions:**

**In an *infant victim*,** rescuers should compress the lower third of the sternum with two fingers of one hand; the upper finger should be one finger's breadth below an imaginary line joining the nipples

**When more than one healthcare provider is present,** two-thumb (chest encirclement) method of chest compression can be used for infants. The thumbs are aligned one finger's breadth below an imaginary line joining the nipples, the fingers encircle the chest, and the hands and fingers support the infant's rib cage and back. The compression rate is 100/min and the compression to ventilation ratio is 30:2.



**Chest compression in children**

- Locating hand position for chest compression in a child.
- Note that the rescuer's other hand is used to maintain head position to facilitate ventilation
- **In larger, older children (over the age of eight years)** the adult two-handed method of chest compression is normally used. The compression rate is 100/min and the compression to ventilation ratio is 30:2, but the compression depth changes to 4-5 cm.
- In smaller children less than 8 years, 30:2 ratio is used so long as there is only one rescuer, with 2 rescuers, 15:2 ratio is then recommended.

