

- If you are not feeling the pulse it indicates that heart not functioning
- Restore the heart through cardiac massage
- Pulse rate is 72 times per minute on an average. While noticing the pulse, observe its rate, strength and rhythm.

5 **ASPHYXIA (SUFFOCATION)**

Definition: When lungs are not getting sufficient fresh air, important organs of the body, mainly the brain is deprived of oxygen. This is a dangerous condition called asphyxia.

5.1 **Causes:**

- Drowning
- Breathing polluted air
- Pressing of wind pipe (Hanging, Throttling and Strangulation)
- Choking
- Pressure/weight on chest.
- Electric shock
- Some poisons.

5.2 **Signs and Symptoms of Asphyxia/Suffocation:**

- Low / No Breathing
- Blue colour of cheeks and lips with congestion of face.
- Swelling of veins at neck.
- Unconsciousness.

5.3 **General Treatment for Asphyxia:**

- Remove cause from casualty or casualty from cause.
- Ensure more fresh air; loosen tight clothing at chest and neck regions.
- Start artificial respiration without wasting time.
- Arrange medical aid.

Note:- (1) Normal Breathing (Respiration) Rate 15 – 18 times per minute.
 (2) Normal Heart Beat/pulse rate 72 times per minute.

5.4 **Methods of Artificial Respiration:**

- Mouth to Mouth Method of Artificial Respiration
- Mouth to Nose Method of Artificial Respiration

5.5 **Mouth to Mouth Method of Artificial Respiration:**

- Place the casualty on his back on a plain and hard surface.
- Sit by the side of the face and place the hand by the side of chin and tilt the head slightly back so that clear ventilation at throat.
- Cover the casualty's mouth with clean cloth and pinch the nostrils.
- Open your mouth, take fresh air, and cover the lips of the casualty with your lips and blow the air into the mouth of casualty @ 10-12 times per minute.
- While blowing ensure that nostrils are pinched and chest is rising. If chest is not raising it indicates some obstruction in air passage clear the air passage and restart mouth to mouth artificial respiration. This process to be continued till the normal breathing resumed or Doctor arrives which ever is earlier.

5.6 **Mouth to Nose method of Artificial Respiration:**

This method will be adopted only when mouth cannot be opened due to injury inside the mouth or jaw fracture or the person suffering with fits convulsions .In this method blow the air into the nose of the victim by closing the mouth of the victim with fingers.

5.7 **WHEN THE HEART STOPS FUNCTIONING**

If the Heart is not working the following symptoms are noticed:

- The face is blue or pale.
- Heart beat and pulse at the root of Neck (carotid pulse) are not felt.

- Note:-** (1) Even if the casualty is breathing but the breathing is not normal, it is wise to start artificial respiration.
(2) Do not begin heart compression until you are sure that the heart has stopped beating.

5.8 External Heart Compression or External Cardiac Massage:

- a. Place the casualty flat on his back on a hard surface and remove the cloths over the chest.
- b. Sit on the right side of the casualty
- c. Feel and mark the lower part of the sternum.
- d. Place the heel of your left hand on the marked point make sure that the palm and fingers are not in contact with chest.
- e. Place the heel of the right hand over the left hand.
- f. Push the sternum towards the spine. It can be pressed upto 1 to 1.5 inches.
- g. Adults should be given about 100 compressions per minute. For children from 2 to 10 years compressions with one hand heel will be enough, but compressions should be @ 100 times per minute. For infants below 2 years compressions with two fingers is good enough and applied at a rate of 100 times per minute.
- h. Press firmly but carefully, carelessness may cause injury to ribs.
If the treatment is effective
 - i. colour will become normal.
 - ii. Pupil will contract.
 - iii. Carotid pulse begins.

5.9 CPR (Cardio Pulmonary Resuscitation)

If heart and breathing both have failed give CPR - Cardio Pulmonary Resuscitation: Give 30 heart compressions of cardiac massage, then two inflations of artificial respirations and repeat the process.

1. SHOCK

Definition:

Shock is severe depression to vital functions of organs like brain, heart, lungs etc. due to less blood supply to the brain.

1.1 Causes:

- Wounds
- Fractures
- Burns & Scalds
- Snake bite
- Sunstroke
- Heart attack
- Dog bite
- Electrical shock etc.

1.2 Sign and symptoms of Shock:

1. Giddiness
2. Pale colour of face
3. Coldness
4. Cold clammy skin
5. Rapid and weak pulse
6. Nausea
7. Vomiting
8. Unconsciousness