

- 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

### **1.3 General Treatment for Shock:**

- a. Reassure (encourage) the casualty if he is conscious.
- b. Keep the casualty in supine position (face upward) with head lower than the body to supply more blood to brain. The head must be turned to one side to avoid tongue falling back and blocking the wind pipe.
- c. Cover with a blanket to keep victim warm. Do not use hot water bottles, massage or give alcoholic drinks.
- d. Give pain relievers and arrest bleeding, if necessary.
- e. Arrange medical aid.

## **2. WOUNDS AND HEMORRHAGES (BLEEDINGS)**

**Definition:** Wound is caused due to breakage of skin / tissue.

### **2.1 Types of Wounds:**

- Contused Wounds
  - Lacerated Wounds
  - Punctured Wounds
  - Incised Wounds.
- a. Contused wounds are caused by blunt instruments where there is no opening. It is treated by putting ice over the wound.
  - b. Lacerated wounds are caused by irregular edges of instruments like glass pieces, metal pieces, machine injuries, animal bites and are said to occur where the edges of the wound is irregular. Clean the wound with water and pick any floating foreign body. Cover the wound with a clean cloth or apply antiseptic cream.
  - c. Incised wounds are caused by sharp edged instruments like razor / knife where the edge of wound is in a straight line. Arrest the bleeding immediately if loss of blood is profuse.
  - d. Punctured wounds are caused by sharp edged instruments like needles, nails and gun-shot wounds where the wound is more deep than wide.  
The wound should be covered and packed with a pad.

### **2.2 Types of Bleedings (Hemorrhages):**

- Artery Bleeding – Bright red in colour and flow in jets.
- Vein Bleedings – Dark red in colour and flow continuously.
- Capillary Bleedings – Red in colour and oozing from all parts of wound.

### **2.3 According to the place of wound bleeding are two types:**

- External bleeding
- Internal bleeding

### **2.4 Danger of Wounds:**

- It allows precious blood to escape from body.
- It permits harmful bacteria/virus or other injurious agents to enter into body.

### **2.5 Methods to arrest Bleeding:**

- a. Direct Pressure Method: Whenever a person, has a bleeding wound which is free from any foreign body, direct pressure method is to be used for arresting the bleeding. Clean the surroundings of the wound. Put a dressing/pad and press the wound. Bleeding will cease.

- b. Indirect Pressure Method: It is applied by two ways :-
  - By using Tourniquet bandage,
  - By pressing Pressure Points

A Tourniquet bandage is used to stop bleeding for hands and legs only. It should be tied above the wound towards the heart in single bone area, and should be relaxed once in 15 minutes.

- c. Important Pressure Points:

For other parts pressure points to be pressed.

1. Carotid pressure point on the neck on either side of voice box.