

First Aid Online

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~ INTRODUCTION ~

First aid is the skilled application of accepted principles of treatment, either at the occurrence of an accident or in a case of sudden illness, using facilities or materials available at the time, because of the increasing numbers and serious nature of accidents of all kinds, the responsibility of the first aider has become greater in recent years. First aid is treatment given to casualty :

- To sustain life.
- To prevent his condition from becoming worse.
- To promote his recovery.

Breathing

Respiration, or breathing, is the process by which passes from the air into the blood while carbon dioxide, a waste product, is expelled. This respiratory exchange of gases takes place in the lungs, atmospheric air which we breathe comprises one fifth oxygen 20%. There is still 16% oxygen in the air we breath out. This accounts for the effectiveness of the expired-air method of resuscitation.

REMEMBER

Expired air still contains 16% oxygen. This is why expired air resuscitation is effective. The respiratory system includes:

- Nose
- Mouth
- Pharynx
- Larynx
- Trachea
- Lungs
- Diaphragm

Mechanism of Respiration

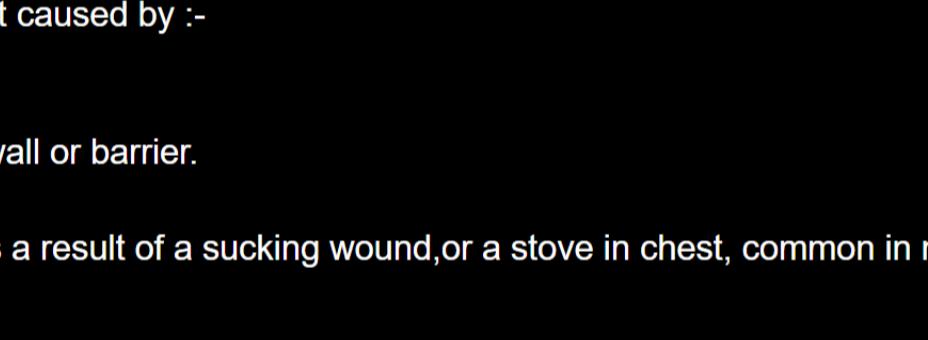
Respiration is brought about by the action of the diaphragm and the muscles between the ribs. It consists of three phases, inspiration, expiration and a pause.

Inspiration

The diaphragm contracts and its dome-shaped center becomes flattened, thus increasing the capacity of the muscles attached to them, thus increasing the capacity of the chest from front to back and from side to side. In inspiration, air is draw into the lungs by muscular activity as described above.

Expiration

In expiration, air is forced out through the bronchi and trachea by the relaxation of the diaphragm and the return of the ribs to their normal position. This is achieved by the elastic contraction of the lungs. Their is a short puss before inspiration recommences. This movements are controlled by respiratory centers in the mid brain which react to variations in the amount of carbon dioxide in the blood.



Asphyxia

Asphyxia is condition in which there is commonly a lack of oxygen in the blood.

Causes:

1. Obstruction caused by :-

- The tongue falling to the back of the throat in an unconscious casualty lying on his back or in the case of a fractured jaw.
- A mass of food stuck in the throat.
- A foreign body such as teeth, blood, vomit.
- Swelling of the tissues of the throat due to injury such as in stings, scoldings, swallowing of corrosives or following infection.

2. Suffocation by pillows, plastic bags ect.

3. Compression of the neck caused by , for example , ties and collars or by hanging,or throttling.

4. Compression of the chest caused by :-

- Fall of earth or sand.
- Crushing against a wall or barrier.
- Pressure in a crowd.
- Damage to a lung as a result of a sucking wound,or a stove in chest, common in motor accidents.

5. Condition affecting the nerves which control respiration like electrical injury - poisoning.

6. Conditions preventing the use of oxygen by the body :-

- Carbon monoxide poisoning.
- Cyanide poisoning.

Signs and symptoms

1. Breathing , the rate, depth and difficulty increase at first, attar,it may become noisy with frothing at the mouth, and it finally stops.

2. Congestion of the head,neck and toes may become blue (Cyanosis).

3. Consciousness is gradually lost, and fits my occur.

Choking

Conscious adult or child (over one year of age)

Suspect choking when a person who is eating or a child who is playing with small objects.

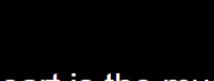
- Suddenly collapses
- Grasps his throat
- wheezes or coughs

First Aid For Choking:

If the person is not coughing strongly, ask if he can speak.

- If he can speak, do not give first aid.
- If he can not speak, give four sharp back blows or four rapid manual thrusts (abdominal or chest).
- Finger sweeps.

Remember that abdominal thrusts are not recommended for infants and children.



Mouth to Mouth Ventilation

If the casualty doesn't breath, you will have to begin resuscitation.

Mouth-to-Mouth

1. Open the Victim's airway (head tilt - neck lift)
2. Look, listen, and feel for breathing
3. Pinch the nostrils shut.
4. Take a deep breath and seal your lips around the mouth (give two inflations).
5. Check casualty's pulse (carotid pulse in neck)
6. If pulse is present, continue giving air one inflation every five seconds for children, give one every four seconds and for infants give one every three seconds.

The Circulation system

Blood vessels:

The circulatory system consist of the the heart, the arteries, the capillaries, and the veins. The heart is the muscular organ which acts as a double pump. It lies in the chest behind the breast bone and rib cartilages, between the two lungs, and immediately above the diaphragm. The heart is divided into a right and left side, separated by a thin wall each side is further divided into an upper collecting chamber (Atrium) and a lower thicker muscular pumping chamber (Ventricle).