

GASEOUS EXCHANGE

apparatus, the lime water turns milky. In (B) if atmospheric air is passed through the lime-water, the later remains unchanged.

10.5.2 Rate of Breathing at Rest and During Exercise:

Breathing is largely an involuntary process. It is regulated by hypothalamus of our brain. The rate of breathing changes automatically according to the changes in internal or external conditions. For instance, if a person is doing exercise, its rate of breathing would increase because of increased consumption of oxygen by his muscles. Thus gradually increase in concentration of carbon dioxide in his blood will cause an increase his breathing rate. If the exercise condition persists, the muscle cells will start breaking down Glucose without oxygen. It is termed as “**anaerobic respiration**”. As a result of this, lactic acid is formed in the muscles rather than carbon dioxide. It causes pain and cramp in normal muscles. The breaking down of lactic acid requires additional amount of oxygen which is termed as “oxygen debt”. The extra amount of oxygen is obtained through deep breathes.

Artificial Ventilator:

A machine that works like lungs when patient's natural breathing becomes difficult. Through this machine, the oxygen rich air is directly supplied to the trachea through a tube inserted the mouth up to the wind pipe.

