

The Lung Volumes and the lung capacities refer to the volumes of air associated with different phases of the respiratory cycle. The lung volumes are directly measured. The Lung capacities are inferred from the lung volumes. The Average total lung capacity of an adult human male is about 6 litres of air, but only a small amount of this capacity is used during normal breathing.

Tidal Volume- The Volume of air that is inhaled and exhaled every time you breathe.

Vital Capacity- The Maximum amount of air a person can expel from the lungs after a heavy workout.

Residual Volumes- The volume of the air that is remaining in the lungs after an intense workout.

We have different levels of lung volumes because according to "Wikipedia" (2014) it defines that the lung volumes of air is associated with the different phases of the respiratory cycle and for example say if we are doing nothing or watching television then it is going to be Tidal volume. If you are doing a sport say football, rugby e.t.c., then you will have a high level of breathing so you would have Vital capacity. After the sport you will still be breathing heavily and this is Residual volumes and this will involve what air is left in the lungs.

Control of breathing (neural & chemical)

Your breathing rate is primarily regulated by the neural and chemical mechanisms. The Respiration is controlled by spontaneous neural discharge from the brain to nerves that innervate respiratory muscles. The primary respiratory muscle is the diaphragm, which is innervated by the phrenic nerve. The diaphragm basically controls and regulates your breathing by contracting when you breathe in then when you breathe out it relaxes into its normal position. The rate at which the nerves discharge is influenced by the concentration of oxygen, carbon dioxide and the acidity of the blood. The normal respiratory rate in adults is between 14 and 18 breaths per minute on average. Newborns breathe much faster at about 44 breaths per minute. BTEC 2013.