Paper Title

Name

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**Metabolism**

Metabolic processes are one of those processes that are taking place in the body every time. It is the sum of all those reactions which are involved in anabolism and catabolism. Catabolism is the reaction where food is broken down to produce energy while anabolism is the consumption of energy produced in catabolism for the formation of larger molecules, for instance, the formation of proteins from amino acids both of these reactions are significant for maintaining life. As in the produce, anabolism uses energy and catabolism produces energy so both the energies balance out each other. If the total power alteration is positive then at that time the excess energy is stored in the form of fat molecules, but if the total energy change is negative, then the body uses the already stored energy (Courses.lumenlearning.com, 2019). Proteins are metabolized by a range of enzymes in the body. Mostly the amino acids are used for the formation of novel proteins. If there are more amino acids the required or if the body is starving, then some amino acids will be directed for protein formation. Before entering into a new cycle the amino group must be lost, this amino group is converted into ammonia lipid metabolism includes the breakdown and formation of lipids in the cells which involve the breakdown of storage or fats for energy and also some structural and functional lipids are formed. The metabolism of carbohydrates takes place in the mouth when amylase breaks down complex sugars into monosaccharide in the first step of carbohydrates metabolism glycolysis is formed which is used in energy production (Vijayakumar et al., 2010).

There are three major fluid compartments which are intravascular, interstitial and intracellular. Fluid movement from these compartments occurs in the capillaries. The amount of water we lose should equal to the water gain. As long as the osmotic concentration is the same the body fluid in our body remains the same (Study.com, 2019). Sodium, Potassium, Chloride, bicarbonate, calcium, and phosphate are the most important electrolytes in terms of functions. Sodium is responsible for osmotic pressure gradient; potassium helps to establish resting membrane potential in neurons after membrane depolarization. Chloride helps in maintaining hydration; bicarbonate maintains acid-base balance calcium provides hardness to bones while phosphate is also present in bones. Bicarbonates help to maintain the acid-base balance by being part of the buffer system. Acidosis means the excess of acid while alkalosis of an excess of base. There are two types of acidosis which are respiratory and metabolic acidosis. There are four types of alkalosis, respiratory alkalosis, metabolic alkalosis, hypochloremic alkalosis, and hypokalemic alkalosis. Carbohydrates intake is based on the glycogen depletion and the physical activity of the individuals (Trainingpeaks.com, 2019).

The metabolism of a body is significant in performing daily functions because it not only provides energy for daily activities but also balances out the energy consumed and energy required. In this case by the breakdown of fats and proteins the energy is produced and if in any case, the energy is more than required then it is saved in the form of lipids and fats. If the energy is less than the body uses the stored energy. This entire mechanism is regulated by the metabolism which also plays an important role in maintaining the temperature of the body by different means.

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