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Importance of Carbs in Metabolism

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Carbohydrate is the major source of calories providing remainder of food calories beyond those furnished by the protein and fat. It is non-refined food that offer the best source of carbohydrate which perform numerous roles in living organisms. Polysaccharides serve for the storage of energy like starch, glycogen. The 5-carbon monosaccharide ribose is an important component of coenzymes like ATP, FAD and NAD, as also backbone of the genetic molecule known as RNA. The related deoxyribose is a component of DNA. Saccharides and their derivatives include many other important biomolecules that play key roles in immune system, fertilization, preventing pathogenesis, blood clotting, and development. There are three main purposes of metabolism are, conversion of the energy in food to energy available to run cellular processes, conversion of food to building blocks for proteins, lipids, nucleic acids, and some carbohydrates and elimination of metabolic wastes. These enzyme-catalyzed reactions allow organisms to grow, reproduce, maintain their structures and respond to their environments. The word metabolism can also refer to the sum of all chemical reactions that occur in living organisms, including digestion and transportation of substances into and between different cells, these set of reactions within cells is called intermediary metabolism. Metabolic reactions may be categorized as catabolic – breaking down of compounds like glucose to pyruvate by cellular respiration or anabolic – building up or synthesizing compounds like proteins, carbohydrates, lipids and nucleic acids. Usually, catabolism releases energy and anabolism consumes energy.

In many diabetic patients metabolism plays very important role for degrading and upgrading the health of the person. When we talk about the disorders, there are two important hereditary diseases. The infant's body is unable to convert one form of Carb into other that is Galactose to glucose, due to the absence of necessary enzyme, this is Galactosemia. Second one is Glycogen storage disease which can be fatal in first two years of life. In this case it is inability of converting glucose to glycogen and vice versa. This results in an imbalance of glycogen in the body. Main symptoms are fatigability and hypoglycemia which can results in shock and convulsions. Thus one has to have proper intake of Carbohydrates in his or her diet in general and diabetics in particular.

Biography

Prakash Kondekar, is Hon Director, Indian Institute of Naturopathy, Member, American Diabetic Association. has many qualifications like, BSc (Hons) LLB MDH ND Ayurveda- Ratana FRSH (London) Bowtech (UK). Presented 45 papers & conducted workshops in UK, USA, Germany, Mauritius, Singapore, UAE, Vietnam, Italy & Spain. In India, conducted 715 Health Management workshops and invited by AICR for International Conference on Food Nutrition every year from 2003. Member of American Diabetic Association awarded by Bombay Para Medical Association & by American Institute of Intellectuals-2005. Dr is a visiting professor in Mumbai University & also Medical Practitioner in Naturopathy, Yoga & Bowen Therapy, in Mumbai, for 27+ years.

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