

Importance of Vitamins

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Abstract :-

Vitamin is a word which is commonly heard, advertisers claim that their products contain some Vitamins or the other which is good for health, etc. The present paper unfolds the importance of Vitamins for body, the paper also highlights that vitamins are vital body regulators, they are group of potent organic compounds which are not carbohydrates, proteins or fats in nature, but are present in foods and are essential in minute quantities for specific body functions of growth, maintenance and reproduction. The present paper deals with the importance of water and fat soluble vitamins.

Key words : Vitamins water soluble, fat soluble.

Introduction :-

The term Vitamin was coined by Funk to mean 'vital amine' the active principle in rice polishing which was vital for life, amine in nature and not belonging to known nutrients like proteins, carbohydrates and minerals. Funk was dealing with Thiamin. Later it was realized that several such organic molecules, now called vitamins, exist in foods and are necessary for higher animals in small amounts. Water soluble vitamins in general perform catalytic functions as cofactors for enzymes in all forms of life. There are two types of vitamins water soluble and fat soluble. Both the vitamins are required for normal growth and maintenance of all animal life. Vitamins are important for their regulatory and protective functions. Unlike most other nutrients they are required in very small amounts. But it is necessary to provide these in the diet because many of them cannot be manufactured by the body. The lack of vitamins results in definite deficiency disorders, which are specific for each particular vitamin.

Discussion :-

Vitamins are conveniently classified in two groups on the basis of their solubility (in fat or in water) into fat soluble and water soluble vitamins. Fat - soluble vitamins include A, D, E and K and water soluble vitamins include the B- group and vitamin C.

Fat Soluble Vitamins :-

Fat soluble vitamins can be absorbed in the presence of fat. Therefore, the presence of some fat in the diet is essential for their absorption. Fat soluble vitamins can be stored in the body and occasional intake of very high sources may help the body tide over periods of low intake. Not much of fat – soluble vitamins are lost in normal cooking procedures.

Vitamin A :-

This was the first fat – soluble vitamin to be discovered. Vitamin A is expressed as microgram (mcg) of retinol in carotene. Vitamin A is necessary for normal growth and development. If the intake of vitamin A is not sufficient for normal growth, the bones will stop growing, before the soft tissues are affected. This may result in the overcrowding of the brain and nervous system, cranial pressure and consequent brain and nerve injury. In some instances the pressure on the optic nerve may result in blindness.

Vitamin D :-

Vitamin D is sometimes called the ‘Sunshine Vitamin’ because the body is able to convert a precursor present in the skin to vitamin D in the presence of sunlight. Vitamin D is essential for the proper absorption of calcium and phosphorus from the digestive tract and their deposition in the bones. Without the presence of vitamin D formation of strong and rigid bones is not possible. Deficiency of vitamin D leads to rickets in children, in young girls poor formation of the bones of pelvis and osteomalacia in adult women.

Vitamins E and K :-

Vitamins E has antioxidant properties and is believed to prevent the oxidation of vitamin A and carotene in the digestive tract and to regulate the rate of oxidation of foods inside the body.

Vitamin K is essential for the formation of prothrombin by the liver. Prothrombin is a normal constituent of the blood and helps clotting of blood on contact with air.

Water – Soluble Vitamins :-

Water soluble vitamins consist of a larger number of substances. These include ascorbic acid and the B – complex vitamins, these are absorbed quickly in the body and the amount that is not utilized is excreted through urine. Adequate amounts should therefore, be supplied in the daily diet.

Vitamin B – Complex :-

A number of substances have been identified and grouped together under this heading of these only. They will be discussed in the present paper, definite requirement of these three vitamins have been established.

Thiamin :-

Thiamin is necessary for catalyzing the oxidation of carbohydrates in the body. This reaction releases energy in the system. Thiamin helps in the normal functioning of the nervous system and the heart. It is essential for proper growth.

Riboflavin :-

Riboflavin is a water soluble yellow pigment. It is less soluble in water than thiamin and more stable to heat, especially in acid solutions. Riboflavin combines with protein in the body to form a number of important enzymes concerned with several oxidation process inside the cell. It is thus essential for the growth of animal, plant. (including micro-organisms)

Niacin :-

Niacin, the term which includes both nicotinic acid and nicotinamide, is another vitamin of the vitamin B – complex. Niacin functions in the body as a component of two important co-enzymes involved in respiration and the breakdown of glucose to produce energy

niacin works in the close association with co-enzymes that contain riboflavin and is necessary for growth.

Ascorbic Acid (Vitamin C) :-

Though the chemical structure of ascorbic acid (vitamin C) has been elucidated only recently, dearth of it in human body has long been known to cause a disease called scurvy. Ascorbic acid performs a number of important functions in the body. It is a part of the cementing material which holds the body cells in place. It helps the body to build resistance to infection. It also helps in the absorption of calcium and iron.

Conclusion :-

From the discussion it can be concluded that apart from proteins, carbohydrates, fats, minerals and water and from recent research it is proved that vitamins are vital X are important in regulation and maintenance of body and they have to be supplied from diet in prescribed amount depending upon age, state of the body.

Works Cited :-

- 1) Nutrition and Dietetics :Shubhangi A. Joshi
Second edition.
- 2) The text book of Human Nutrition editors :Mahtab S. Banji, N. Pralhad Rao, Vinodini Reddy.
Second edition.
- 3) Fundamental of Foods and Nutrition :Sumati R. Mudambi, M. V. Rajgopal.
- 4) Vitamin and Mineral requirements in Human Nutrition
Second edition.
- 5) Advanced text book of Food and Nutrition. Vol. II. Dr. M. Swaminathan.