

RATIONAL NUTRITION AND ITS PRINCIPLES

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Abstract

This article presents materials on the chemical composition of food products and their importance, metabolism, rational nutrition and principles of rational nutrition.

Keywords

Food products, chemical composition, fats, proteins, carbohydrates, vitamins, metabolism. Rational nutrition, principles of rational nutrition.

Nature has given man very few opportunities to live a healthy life. Physical education and sports, proper organization of work and rest, rational nutrition - all this embodies a healthy lifestyle. None of these can be ignored.

Food is not only a means of providing the human body with the necessary nutrients and energy, but also a means of creating a sense of taste, comfort, and joy that life has created for humans. According to doctors, scientists, and nutritionists, healthy eating habits reduce the risk of cardiovascular diseases by 20-30% and diabetes by 50%. If the diet were properly organized and the body was provided with the necessary nutrients, humanity would be completely free from anemia, food allergies, alcoholism, tooth loss, and joint and bone diseases. Science has convincingly proven the importance of proper nutrition in preventing many diseases.

Proper nutrition is especially important for children and adolescents. In many countries, in the years after World War II, it was found that the height and weight of children and adolescents increased significantly compared to their peers in the 1920s and 1930s. This is called acceleration of the development process and is a direct result of improved nutrition.

We use the phrases "healthy, conscious, proper nutrition" as synonyms. Proper nutrition is the basis for human growth, development, restoration of health, all-round development of a person, and longevity. Food or food products are all objects and processed products of nature that surround us, nutrients that a person consumes to live, build energy sources. They

are the structure of the body, the renewal of organs and tissues, and also the source of energy for a person to perform work. Nutrients are divided into 6 main groups: carbohydrates, proteins, fats, vitamins, minerals and water. Nutrients are divided into macronutrients (from the Greek "macro" - small).

The human body consists of proteins, fats, carbohydrates, vitamins, water and mineral elements that enter the body with food. Our body has partial reserves of all nutrients, but the reserves and their shelf life differ significantly from each other. The longest "living" amino acids are stored in bones - 7 years, while some amino acids expire after a few hours after eating. The life of water reserves is 4 days, and a person cannot live without water for more than 5-7 days. In this article, we will briefly review the knowledge about rational nutrition and its principles. The main principles of proper nutrition are compliance with the chemical composition of food in accordance with the physiological needs of the body. Failure to comply with these principles can lead to functional changes, pathological conditions and death. The main principles of nutritional balance are the correct provision of biologically active substances - proteins, fats, carbohydrates, vitamins and minerals - depending on the age, gender and general life activity of the organism. The balance between proteins, fats and carbohydrates is very well studied and is taken into account when drawing up a diet. The ratio between proteins, fats and carbohydrates should be 1:2.7; 4.6. The chemical composition of nutrients is determined by the food complex consisting of proteins, fats, carbohydrates, vitamins, mineral salts and water. According to their functional orientation, nutrients are divided into energy (fats, carbohydrates), basic plastic (proteins, a number of minerals, water) and basic catalytic (vitamins, microelements). Nutrients are divided into essential nutrients (carbohydrates and fats) and non-essential nutrients (which include amino acids, all vitamins, and most minerals) based on their necessity.

Proteins. Proteins are high-molecular organic substances consisting of amino acids. Proteins are an essential and irreplaceable component of nutrition. It is especially important for growing children and adolescents to have a sufficient amount of protein, because only with such nutrition can the body grow and develop effectively. In the process of life, proteins in cells are broken down and renewed. To support these processes, it is necessary to provide the body with a daily supply of valuable protein with food. Protein is part of the nucleus and cytoplasm of cells. Proteins are important in the human body.

Protein, fat, carbohydrate and energy needs of people by age and gender: -
Men

Group	Age	Protein (g)	Fat (g)	Carbohydrate (g)	Energy (kcal)
I	18-29	91	88	378	2800
I	30-39	88	83	365	2700
I	40-59	83	79	344	2500
II	18-29	90	87	412	3000
II	30-39	87	82	399	2900
II	40-59	82	77	378	2750
III	18-29	96	93	440	3200
III	30-39	88	88	426	3100
III	40-59	88	82	406	2950
IV	18-29	102	99	518	3700
IV	30-39	99	95	504	3600
IV	40-59	95	90	483	3450
V	18-29	118	113	602	4300
V	30-39	113	107	574	4100
V	40-59	107	102	546	3900

Women:

Group	Age	Protein (g)	Fat (g)	Carbohydrate (g)	Energy (kcal)
I	18-29	78	75	324	2400
I	30-39	75	72	310	2300
I	40-59	72	70	297	2200
II	18-29	77	74	351	2550
II	30-39	74	70	337	2450
II	40-59	70	67	323	2350
III	18-29	81	79	371	2700
III	30-39	79	75	358	2600
III	40-59	75	72	344	2500
IV	18-29	87	84	441	3150
IV	30-39	84	80	427	3050
IV	40-59	80	76	406	2900

Principles of rational nutrition

Rational nutrition is important for a person to be healthy and strong, for the normal growth and development of a young organism, and for good working capacity.

Rational nutrition is the correct organization of timely provision of the body with nutritious and tasty food rich in various nutrients.

Rational nutrition is the provision of nutrients in an amount that ensures the continuous renewal of tissues and organs in accordance with the daily energy expenditure of the body.

Rational nutrition guarantees the timely provision of the body with vitamins, microelements and other substances necessary for normal life.

Rational nutrition requires a clear nutritional regimen, that is, it is necessary to correctly distribute the amount of food eaten during the day, at what time, and how many times it is eaten, and the nutritional value of each meal.

There are 4 main principles of rational nutrition.

1. The energy needed by a person throughout his life should enter the body with food. There should be a balance between the production and consumption of energy in the body.

2. Food should meet the physiological needs of the body, contain nutrients in sufficient quantities and in the appropriate proportions.

3. In order to comply with the diet, it is necessary to consume the appropriate amount of food at a certain time during the day.

4. The prepared food must be properly processed by cooks so that its nutritional properties are not lost.

All measures should be taken to ensure that the food is eaten with appetite and digested, and sanitary and hygienic rules should be followed to prevent contamination of the product.

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