

FUNCTIONS OF FOOD IN THE PROCESS OF VITAL ACTIVITY OF THE ORGANISM

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Abstract

According to the formula of a balanced diet, food provides the body with more than 50 different substances of organic and inorganic nature, which contribute to the performance of food of various functions in the life of the organism (Table 1).

The first function of food is to provide the body with energy. Even at rest, a person consumes significant amounts of energy (in an adult, these costs are 5858-7113 kJ, or 1400-1700 kcal).

Keywords:

Balanced, inorganic, organism, energy.

Introduction

The decisive factor on which the amount of energy expenditure depends is the neuromuscular activity (physical work, sports, active recreation, etc.). Some amount of energy (586-711 kJ, or 140-170 kcal) is spent on the processes of digestion and assimilation of food (specifically the dynamic action of food).

Of the wide variety of nutrients, carbohydrates, fats and proteins are the main suppliers of energy to the body. The energy function of food is provided mainly by bakery products, pasta, cereals, confectionery, potatoes, sugar, fats and fatty products.

The second function of food is to provide the body with plastic substances. There are two interrelated aspects of metabolism: assimilation (anabolism) and dissimilation (catabolism). As a result of dissimilation there is depletion, destruction of cells and tissues, disintegration of substances that are part of intracellular components. Assimilation is associated with the formation of new

cells, their growth and development, the restoration of all worn out and destroyed as a result of dissimilation. Dissimilation processes are carried out in the body constantly, regardless of food intake.

Assimilation processes are possible only if the body is provided with plastic substances, which primarily include proteins, to a lesser extent - fats and carbohydrates. Mineral elements are of great importance in performing the plastic function of food. they play a leading role in building bone tissue.

Table 1

Food functions and factors that provide them

Function	Factors	
		Composition and properties of food
Energy	Carbohydrates, fats, proteins, organic acids, ethanol	Bread, sugar, fats, etc.
Plastic	Proteins, mineral recho- fault, fats, carbohydrates and so on.	Meat, fish, milk, eggs, legumes, etc.
Bioregulatory	Proteins, vitamins, micro elements, essential polyunsaturated fatty acids, etc.	Vegetables, fruits, berries, eggs, etc.
Adaptive-regulatory	Dietary fiber, water, etc.	Low-grade flour bread, cereals, vegetables, beverages, etc.
Immunoregulatory	<i>a</i>	Products rich in essential nutrients (complete proteins, vitamins, etc.)

Rehabilitation	Pharmacological properties of nuggets in the case of increasing or decreasing the number of them in the diet, culinary processing	Foods low in sodium, mody- fikovanym carbohydrate component, low fat or their improved structure, low energy value, with fillers and other diet products
Signal-motivational	Flavoring and extractive substances	Spicy vegetables, spices

The plastic function of food is provided mainly by meat and fish products, dairy and egg products.

The third function is bioregulatory. It also contains substances from which enzymes and hormones are formed - biological regulators of metabolism in tissues. Proteins, vitamins and microelements play a particularly important role in the formation of enzymes and hormones. The enzymatic activity of proteins is considered to be their most important feature as the basis of vital manifestations of the organism. Many vitamins are precursors of coenzymes, in which they participate in various enzymatic reactions. A person gets most of his vitamins from food. Trace elements contained in the body in small concentrations (usually thousands of percent or less), are part of a number of enzymes, vitamins, hormones and respiratory pigments, affecting their metabolism. Various vegetables, fruits, berries, eggs, etc. have pronounced bioregulatory properties.

The fourth function is adaptive-regulatory. Each nutrient plays a specific role in the adaptive and regulatory activities of various functional systems of the body that ensure its vital functions.

The most important are the systems of nutrition, secretion and thermoregulation. For example, dietary fiber (fiber, pectin, etc.), which until recently was considered a ballast substance, is involved in the formation of fecal masses and regulation of motor function of the intestines - an important organ of the excretory system. Rye and wheat bread, various cereals, potatoes, vegetables and fruits are rich in dietary fiber.

The fifth function is immunoregulatory. The body's ability to resist harmful biological, chemical and physical factors depends on the quality of nutrition, especially its protein and vitamin composition, the content of essential fatty acids omega-3 and omega-6, trace elements (iron, zinc, iodine, etc.).

Nutrition also plays an important role in the **rehabilitation of patients**, ie in restoring their health (**sixth function**). It accelerates recovery, as well as prevents recurrence and transition of the disease from acute to chronic. To strengthen the rehabilitation function of food, different groups of dietary products are used: low-sodium, modified carbohydrate component, reduced fat and improved fat, low energy value, and so on.

Finally, the **seventh function of food** is associated with the **delivery to the body of flavors** that help maintain an appropriate level of food motivation. The concept of "flavors" is collective. They belong to the group of nutrients, but are intended primarily to diversify food and better assimilation. The founder of scientific hygiene FF Erisman wrote: "Without flavors in food, we would die of hunger, but not from the fact that food is poorly digested, but from the fact that we would soon give up all food. "

Flavors, in addition to spices - vinegar, mustard, salt, include onions, garlic, dill, celery, parsley, bay leaf, cinnamon, cardamom and more. They contain a variety of essential oils, organic acids, sugars, minerals, vitamins and other compounds that give food a specific taste and aroma.

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