



NUTRITIONAL, ENERGETIC VALUE AND AESTHETICS OF FOOD

<https://www.youtube.com/watch?v=1EWlstzFCL4>

Food is the main supplier of nutrients that participate in the formation tissues and provides the necessary substances the human body.

Knowledge and appreciation of food from the point nutritionally, energetically, but also in terms of biological view, allows their selection independent on the satisfaction of the body's requirements.

The nutritional value of

food products is given by the amount of nutrients per which they give to the human body, necessary for carrying out fundamental processes.

These nutrients are: proteins, lipids, carbohydrates, minerals and vitamins.

Dictionary:

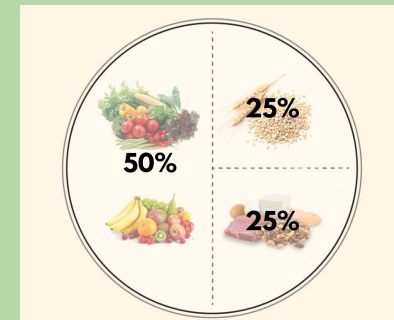
Calorie = unit of measure for thermal energy (symbol - horse); quantity of the heat;

Diet = special diet recommended for maintaining;

healthnutritious – rich in nutrients

Proteins are the most important elements for the body being necessary for regeneration and the formation of new tissues. Front body defense of infectious diseases is strongly influenced by quantity and quality of protein in food.

Proteins are found in foods of origin animal (eggs, milk, meat, fish), but also in those of vegetable origin (cereals, vegetables).



Lipids provide energy through combustion their. They are usually of animal origin (butter, cream, bacon, cream), but also of origin vegetable (olive oil, sunflower oil).

The presence of lipids in food influences storage them, because the high temperature, the light and air favors the appearance of the unwanted change called rancidity.

Carbohydrates provide most of the energy needed by the human body. They are contained in honey, fruits, vegetables, cereals, milk, etc., in mainly vegetable food products.



Mineral substances play a role in the development vital processes: iron has a role in regeneration blood, iodine influences the functioning of the gland thyroid. The lack of mineral substances produces nutritional disorders and metabolic disorders.



Vitamins are essential for development the normal life of the organism. They cannot be synthesized by the body, therefore it is necessary to receive them from the outside, together with the food.

Vitamins are divided into two groups, according to function by their properties to dissolve in water or in fats, namely:

- **liposoluble** (those that dissolve in fats)
 - vitamins A, D, E, K;
- **water-soluble** (those that dissolve in water)
 - vitamins B and C.

The energy value of food is determined by the presence of substances which by burning in the body give an amount of energy.

For the calculation of the energy value of a product the percentage protein content shall be taken into account, lipids and carbohydrates.

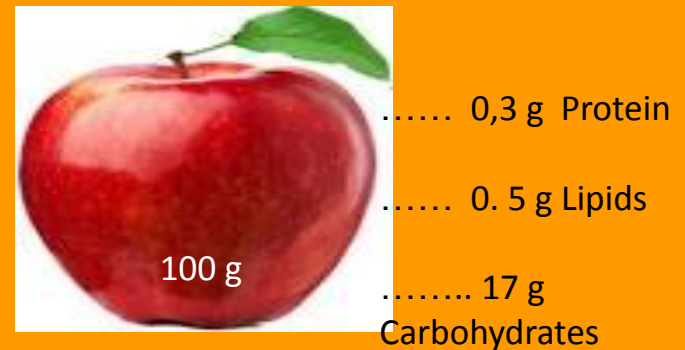


By burning, carbohydrates (G) and proteins (P) releases 4.1 kcal/g, and lipids (L), 9.3 kcal/g.

Example:

Nutritional value of 100 g apples

The energy value (W) for 100 g apples is:

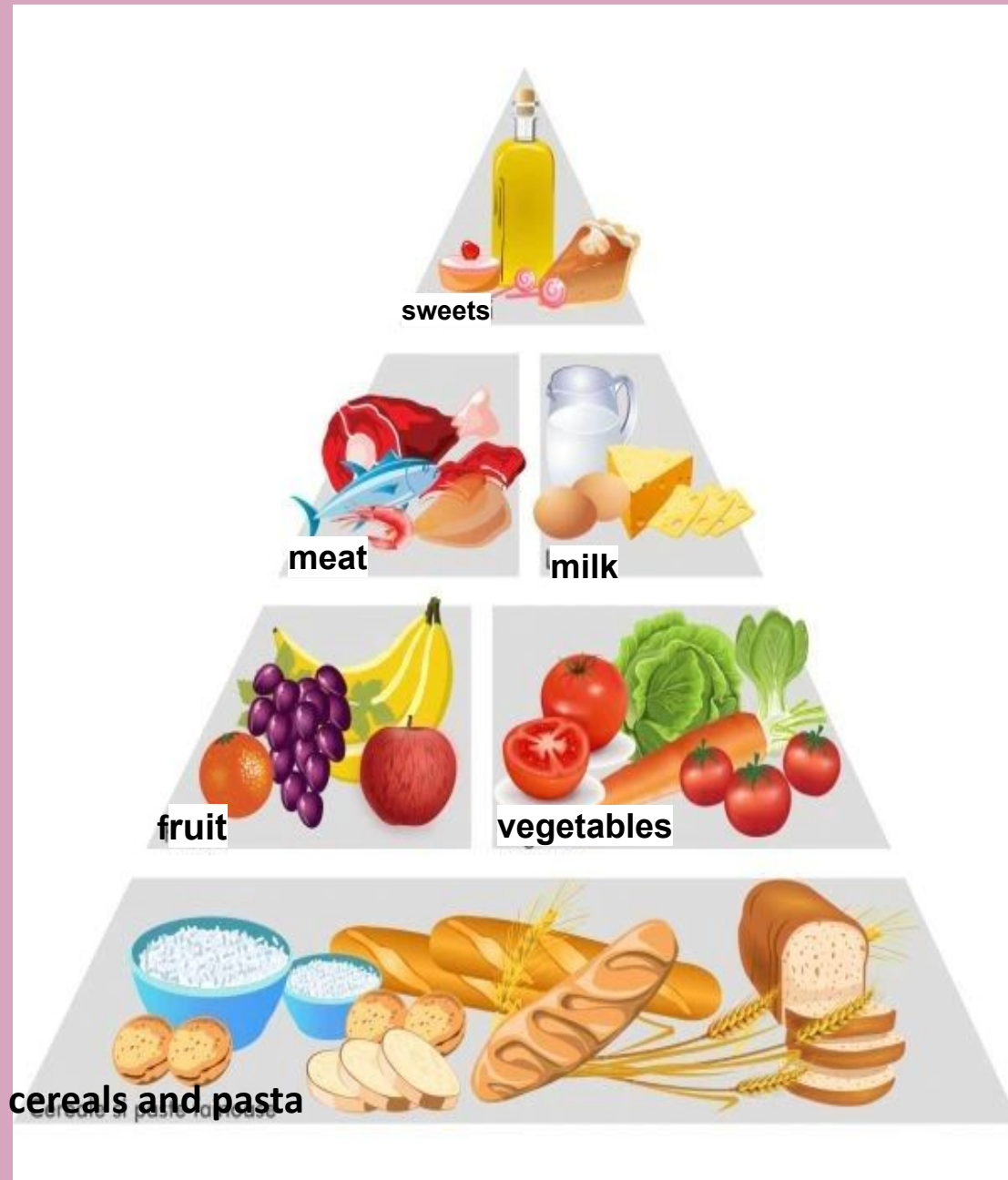


$$W = P \times 4,1 + L \times 9,3 + G \times 4,1 = 4.1 \times 0.3 + 9.3 \times 0.5 + 4.1 \times 17$$
$$= 1.23 + 4.65 + 69.7 = 75,58 \text{ kcal.}$$

Depending on their composition in the elements nutritious, food can be divided into several groups: milk and milk products; eggs, fish, meat and derived from meat, vegetables and fruits, fats, cereals; sugary products.

https://docs.google.com/document/d/1o2SqkbKY2WxbkLBhfUGZXwSzGVgFg_0EDz4qW015AA0/edit

Food Pyramid



The energy or caloric value is given by the substances that, by burning in the body, release a quantity of energy.

Energy providers are carbohydrates, lipids and proteins. Carbohydrates and proteins provide 4.1 cal/gram, while lipids provide 9.3 cal/gram. The energy value is expressed in calories (horsepower) or joules.

1 horse = 4 joules.

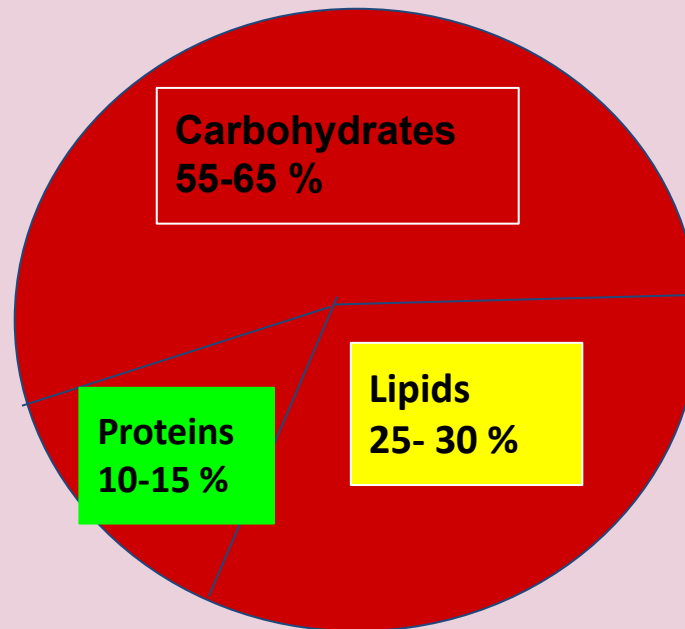
The caloric requirement must be established according to age, type of effort, health status. Surplus energy is stored by the body, forming adipose tissue (fat layer). In general, an adult who does not do a lot of physical work needs about 35 kilocalories per day for each kilogram of his body.

For the calculation of the energy value of a product, the percentage content of proteins, lipids and carbohydrates is taken into account. By burning, carbohydrates (G) and proteins (P) release 4.1 kcal/g, and lipids (L), 9.3 kcal/g.



- The main carbohydrates are: glucose, sucrose, cellulose, fructose, starch.

- The balance P - G - L in the diet balanced:



THANK YOU!!!

