



CARBOHYDRATES ARE THE MAIN SOURCE OF ENERGY IN THE BODY

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Annotanion: The concepts of "carbohydrate" and "sugar" are not the same. Sugar is a conventional everyday concept used mainly in relation to sucrose so-called table sugar, as well as other water-soluble simple carbohydrates with a sweet taste, mono- and disaccharides, such as glucose, fructose, lactose, maltose.

Key words: glucose, fructose, lactose, maltose, sugar, everyday concept, water-soluble simple carbohydrates, a sweet taste

INTRODUCTION

Carbohydrates are the main source of energy in the body. The energy obtained with carbohydrates contained in food is mainly produced from starch and sugars, as well as (to a lesser extent) from dietary fibers and sugar alcohols.

The main sources of carbohydrates are cereals and potatoes. Fruits, fruit juice, berries and milk also contain sugars (mono- and disaccharides). Sweets, sugary drinks, fruit syrups, sweetened confectionery and dairy products with flavoring additives are the main sources of added sugars. Added sugars are sugars added to products during their processing or preparation.

The concepts of "carbohydrate" and "sugar" are not the same. Sugar is a conventional everyday concept used mainly in relation to sucrose (so-called table sugar), as well as other water-soluble simple carbohydrates with a sweet taste (mono- and disaccharides, such as glucose, fructose, lactose, maltose).

- Carbohydrates should cover 50-60% of the daily nutritional energy requirement.
- The energy obtained with added sugar should not exceed 10% of the daily food energy.

A person with a daily energy requirement of 2000 kcal per day should consume: from $0.5 \times 2000 \text{ kcal} / 4 \text{ kcal} = 250 \text{ g}$ to $0.6 \times 2000 / 4 \text{ kcal} = 300 \text{ g}$ of carbohydrates. With a daily energy requirement of 2500 kcal, the recommended daily amount of carbohydrates is 313-375 g, with 3000 kcal – 375-450 g.

Our body, and especially the brain, needs a constant supply of glucose, which ensures the efficiency and effectiveness of its work. With a prolonged lack of



carbohydrates, the body begins to synthesize glucose from its own proteins, which significantly reduces its protective ability against environmental factors.

METHODS AND RESULTS

The first one includes carbohydrates, which are digested and absorbed, supplying the body cells mainly with glucose, that is, glycemic carbohydrates (starch and sugars). The second group includes dietary fiber.

Glucose is the main "fuel" for most cells of the body. It is deposited in the liver and muscles in the form of glycogen. Liver glycogen is used to maintain normal blood glucose levels between meals, muscle glycogen is the main source of muscle energy.

In the digestive tract of a person who eats starch-rich food, starch is broken down, resulting in the formation of a large amount of glucose. Cereals and potatoes are the most rich in starch. They are not digested and are sent to the intestine, forming the substrate necessary for its microflora.

Carbohydrates perform many functions in the body:

- they are the main source of energy in the body: 1 gram of carbohydrates = 4 kcal,
- are part of cells and tissues,
- determine the blood type,
- are part of many hormones,
- perform a protective function as part of antibodies,
- play the role of a reserve substance in the body: glycogen accumulating in the liver and muscles is a temporary supply of glucose, which the body can easily use if necessary,
- dietary fiber is necessary for the proper functioning of the digestive system.

Recommendations for increasing the consumption of foods rich in starch and dietary fiber:

- When choosing the main course, prefer whole-grain pasta or rice and less sauce.
- In the case of sausages with boiled potatoes, take more potatoes and fewer sausages.
- Add beans and peas to stews, vegetable casseroles or stews. This will increase the content of dietary fiber in the dish. Acting in this way, you can eat less meat, dishes become more economical, and the amount of saturated fatty acids consumed is also reduced.
- Prefer whole-grain rye and wheat bread.
- Choose whole grain rice: it contains a large amount of dietary fiber.



- Eat whole grain cereals for breakfast or mix them into your favorite cereals.
- Porridge is a great warming winter breakfast, whole grain oatmeal with fresh fruits, berries and yogurt is a refreshing summer breakfast.
- Eat 3-5 slices of whole-grain rye bread a day.
- Eat at least 500 grams of fruits and vegetables per day.

CONCLUSION

Most people tend to consume too much sugar, because they eat a lot of sweets, cakes, pastries and other sugar-rich foods, drink soft drinks and juice drinks. Sugars contained in unprocessed foods, such as fruits and milk, should not be feared. First of all, you should reduce the consumption of food containing added sugar.

Sugar is added to many foods, but most of all it contains:

- soft drinks and juice drinks: for example, 500 ml of lemonade can contain up to 50 g, i.e. 10-15 teaspoons of sugar,
- sweets, candies, cookies,
- jam,
- cakes, buns, puddings,
- ice cream.

The main disadvantages of many sugar-rich foods are, on the one hand, a relatively high energy content, and on the other hand, as a rule, a rather low content of vitamins and minerals. In addition, many sugar-rich foods also contain a lot of fat - for example, chocolate, cookies, buns, cakes and ice cream.

Sugar-rich foods and drinks can damage teeth if you don't pay enough attention to oral hygiene. Teeth should be thoroughly cleaned at least 2 times a day, and cleaned between meals, for example, with chewing gum. If the sugars contained in fruits do not harm the teeth so much, then their structure is already split in the composition of juices, and therefore they are just as harmful to the teeth as any other sugar-rich food, especially if they are consumed often. Drinking a glass of fruit juice a day is still recommended (and preferably with food), because it enriches our table with vitamins, minerals and phytochemicals.

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