

Maltose - description, benefits, effects on the body and the best sources.

Tkacheva Natalya, herbalist, nutritionist

Eliseeva Tatyana, editor-in-chief of the EdaPlus.info project

E-mail: tkacheva.n@edaplus.info, eliseeva.t@edaplus.info

Abstract. It is also called malt sugar. Maltose is obtained from cereal grains, mainly from sprouted grains of rye and barley. This sugar is less sweet than glucose, sucrose and fructose. It is considered more beneficial to health, as it does not have a negative effect on bones and teeth.

Key words: Maltose, general characteristics, daily requirement, digestibility, beneficial properties, signs of deficiency, signs of excess

Products rich in maltose:

- Maltose syrup
- White maltose syrup (starch)
- Black molasses (from sugar beets)
- Caramel molasses
- Malt
- Honey [1]
- Marmalade
- Kvass
- Ice cream
- Beer
- Malt bread
- Muesli
- Bread
- Baby food
- Lentils [2]

General characteristics of maltose

In its pure form, maltose is an easily digestible carbohydrate [3]. It is a disaccharide consisting of glucose residues. Like any other sugar, maltose is easily soluble in water and insoluble in ethyl alcohol and ether.

Maltose is not an essential substance for the human body. It is produced from starch and glycogen, a storage substance found in the liver and muscles of all mammals.

In the gastrointestinal tract, maltose received with food breaks down into glucose molecules and is thus absorbed by the body.

Daily requirement for maltose

A certain amount of sugars per day must enter the human body with food. Doctors advise consuming no more than 100 grams of sweets per day. In this case, the amount of maltose can reach 30-40 grams per day, provided that the consumption of other types of sugar-containing products is reduced.

The need for maltose increases:

Intense mental and physical activity requires large amounts of energy. For their speedy restoration, simple carbohydrates are required, which also includes maltose.

The need for maltose is reduced:

- If you have diabetes (maltose quickly increases blood sugar levels, which is very undesirable for this disease).
- A sedentary lifestyle, sedentary work not associated with active mental activity reduces the body's need for maltose.

Maltose absorption

Maltose is quickly and easily absorbed by our body. The process of maltose absorption begins right in the mouth, thanks to the presence of the amylase enzyme in saliva. Complete absorption of maltose occurs in the intestines, and glucose is released, which is necessary as an energy source for the entire body, and especially the brain.

In some cases, when there is a deficiency of the enzyme in the body, the body becomes intolerant to maltose. In this case, all products containing it should be excluded from the diet.

Beneficial properties of maltose and its effect on the body

Maltose is an excellent source of energy. According to information from medical sources, maltose is a more beneficial substance for the body than fructose and sucrose. It is included in dishes intended for dietary nutrition. Croquettes, muesli, crispbread, some types of bread and confectionery products are made with the addition of maltose.

Malt (maltose) sugar contains a number of vital substances: B vitamins [4], amino acids, trace elements potassium, zinc, phosphorus, magnesium and iron [5-9]. Due to the large amount of organic substances, such sugar cannot be stored for a long time.

Interaction with Essential Elements

Maltose is soluble in water [10]. Interacts with B vitamins [11] and some microelements, as well as polysaccharides. Digests only in the presence of special digestive enzymes.

Signs of maltose deficiency in the body

Energy exhaustion is the first sign of a lack of sugars in the body. Weakness, lack of strength, depressed mood – these are the first symptoms that the body urgently needs energy.

There were no general signs of maltose deficiency in the body. This is due to the fact that our body is capable of independently producing this substance from glycogen, starch and other polysaccharides.

Signs of excess maltose in the body

- all kinds of allergic reactions [12];

- nausea, bloating;
- indigestion;
- dry mouth;
- apathy.

Factors influencing the content of maltose in the body

The proper functioning of the body and the composition of food products affect the content of maltose in our body. In addition, the amount of maltose is affected by physical activity, which should not be too much, but not too little.

Maltose - health benefits and harms

To date, the properties of maltose have not yet been well studied. Some advocate its use, others say that since it is obtained using chemical technologies, it is harmful. Doctors only warn that excessive use of maltose can harm our body.

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