

Sucrose - description, benefits, effect on the body and the best sources.

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Abstract. This is a chemical compound corresponding to the formula $C_{12}H_{22}O_{11}$, and is a natural disaccharide consisting of glucose and fructose. In common parlance, sucrose is usually called sugar. Typically, sucrose is made from sugar beets or sugar cane. It is also made from the sap of the Canadian sugar maple or from the sap of the coconut palm. Moreover, its name corresponds to the type of raw material from which it was produced: cane sugar, maple sugar, beet sugar. Sucrose is highly soluble in water and insoluble in alcohol.

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

Foods rich in sucrose:

- Refined sugar
- Bee honey [1]
- Marmalade
- Gingerbread
- Dates [2]
- Sweet straw
- Apple marshmallow
- Prunes
- Raisins (kishmish)
- Persimmon [3]
- Dried figs
- Grapes [4]
- Grenades [5]
- Medlar
- Irga

Daily requirement for sucrose

The daily mass of sucrose should not exceed 1/10 of all incoming kilocalories. On average, this is about 60-80 grams per day. This amount of energy is spent on the life support of nerve cells, striated muscles, as well as on the maintenance of blood cells.

The need for sucrose increases:

- If a person is engaged in active brain activity. In this case, the released energy is spent on ensuring the normal passage of the signal along the axon-dendrite chain.

- If the body has been exposed to toxic substances (in this case, sucrose has a barrier function, protecting the liver by the resulting paired sulfuric and glucuronic acids).

The need for sucrose decreases:

- If there is a predisposition to diabetic manifestations, and diabetes has already been identified. In this case, sugar needs to be replaced with analogues such as mannitol, xylitol and sorbitol.
- Overweight and obesity [6] are also a contraindication to indulgence in sugar and sugar-containing products, since unused sugar can be converted into fat deposits.

Digestibility of sucrose

In the body, sucrose breaks down into glucose and fructose, which in turn is also converted into glucose. Despite the fact that sucrose is a chemically inert substance, it can activate the mental activity of the brain. At the same time, an important advantage in its use is the fact that it is absorbed by the body only 20%. The remaining 80% leaves the body virtually unchanged. Due to this property of sucrose, it is less likely to lead to diabetes than glucose and fructose consumed in their pure form.

Beneficial properties of sucrose and its effect on the body

Sucrose provides our body with the energy it needs. Protects the liver from toxic substances and activates brain activity. That is why sucrose is one of the most important substances contained in food.

Signs of lack of sucrose in the body

If you are haunted by apathy, depression [7], irritability; There is a lack of strength and energy; this may be the first signal of a lack of sugar in the body. If sucrose intake is not normalized soon, the condition may worsen. The existing symptoms may include problems that are unpleasant for any person, such as increased hair loss, as well as general nervous exhaustion.

Signs of excess sucrose in the body

- Excessive fullness. If a person consumes excess sugar, the sucrose is usually converted into fat tissue. The body becomes loose, obese, and signs of apathy appear.
- Caries. The fact is that sucrose is a good nutrient medium for various types of bacteria. And they, in the process of their life activity, release acid, which destroys the enamel and dentin of the tooth.
- Periodontal disease and other inflammatory diseases of the oral cavity. These pathologies are also caused by a large number of harmful bacteria in the oral cavity, which multiply under the influence of sugar.
- Candidiasis and genital itching. The reason is still the same.
- There is a risk of developing diabetes. Sharp fluctuations in weight, thirst, fatigue, increased urination, body itching, poorly healing wounds, blurred vision are reasons to see an endocrinologist as soon as possible.

Sucrose and health

In order for our body to remain constantly in good shape, and the processes occurring in it not to cause us trouble, it is necessary to establish a regime for consuming sweets. Thanks to this, the body will be

able to receive a sufficient amount of energy, but will not be exposed to the risks associated with an excess of sweets.

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Received 05.06.2019

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