

Organic acids - description, benefits, effects on the body and the best sources

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Abstract. Fruits, vegetables, some herbs and other substances of plant and animal origin contain substances that give them a specific taste and aroma. Most organic acids are found in various fruits, also called fruit acids.

The remaining organic acids are found in vegetables, leaves and other parts of plants, in kefir, as well as in all kinds of marinades.

The main function of organic acids is to provide optimal conditions for a complete digestion process.

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

Foods rich in organic acids:

- Cranberry
- Apples [1]
- Grapes [2]
- Gooseberry
- Cowberry
- Rowan [3]
- Raspberry [4]
- Sea buckthorn [5]
- Cheese
- Black bread
- Pears [6]
- Shellfish
- Dairy products
- Lavender
- Cinnamon [7]

General characteristics of organic acids

Acetic, succinic, formic, valeric, ascorbic, butyric, salicylic... There are many organic acids in nature! They are present in juniper fruits, raspberries, nettle leaves [8], viburnum [9], apples, grapes, sorrel [10], cheese and shellfish.

The main role of acids is to alkalize the body, which maintains the acid-base balance in the body at the required level within pH 7.4.

Daily requirement for organic acids

In order to answer the question of how many organic acids should be consumed per day, you need to understand the question of their effect on the body. Moreover, each of the above acids has its own special effect. Many of them are consumed in quantities ranging from tenths of a gram and can reach 70 grams per day.

The need for organic acids increases:

- for chronic fatigue;
- avitaminosis;
- with low stomach acidity.

The need for organic acids is reduced:

- for diseases associated with water-salt imbalance;
- with increased acidity of gastric juice;
- for liver and kidney diseases.

Digestibility of organic acids

Organic acids are best absorbed with the right lifestyle. Gymnastics and balanced nutrition lead to the most complete and high-quality processing of acids.

All organic acids that we consume during breakfast, lunch and dinner go very well with baked goods made from durum wheat. In addition, consuming virgin vegetable oil can significantly improve the quality of acid absorption.

Smoking can convert acids into nicotinic compounds, which have a negative effect on the body.

Beneficial properties of organic acids, their effect on the body

All organic acids present in products have a beneficial effect on the organs and systems of our body. At the same time, salicylic acid, which is part of raspberries and some other berries, relieves us of fever, having antipyretic properties [11].

Succinic acid, present in apples, cherries [12], grapes and gooseberries, stimulates the regenerative function of our body. Almost everyone can talk about the effects of ascorbic acid! This is the name of the famous vitamin C [13]. It increases the body's immune strength, helping us cope with colds and inflammatory diseases.

Tartronic acid counteracts the formation of fats during the breakdown of carbohydrates, preventing obesity [14] and vascular problems. Found in cabbage [15], zucchini [16], eggplant [17] and quince. Lactic acid has antimicrobial and anti-inflammatory effects on the body. It is found in large quantities in yogurt [18]. Available in beer and wine [19].

Gallic acid, which is found in tea leaves and oak bark, will help you get rid of fungus and some viruses. Caffeic acid is found in the leaves of coltsfoot [20], plantain [21], and in the shoots of artichoke and Jerusalem artichoke. It has an anti-inflammatory [22] and choleric effect on the body.

Interaction with Essential Elements

Organic acids interact with some vitamins, fatty acids, water [23] and amino acids.

Signs of a lack of organic acids in the body

- avitaminosis;
- impaired absorption of food;
- skin and hair problems;
- Digestive problems.

Signs of excess organic acids in the body

- blood thickening;
- digestive problems;
- kidney dysfunction;
- joint problems.

Organic acids for beauty and health

Organic acids consumed with food have a beneficial effect not only on the internal systems of the body, but also on the skin, hair, and nails [24-26]. Moreover, each of the acids has its own special effect. Succinic acid improves the structure of hair, nails and skin turgor. And vitamin C has the ability to improve blood supply to the upper layers of the skin. Which gives the skin a healthy look and radiance.

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