

Succinic acid - description, benefits, effect 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. Amber. Like a drop of sun in the palm of your hand. Natural amber has long been famous for its healing properties. To improve the health of the body, people wore it as jewelry, applied it to a diseased organ, and consumed it internally as a powder. Later it became known that our body independently produces a similar substance, and it is simply indispensable for it.

According to statistical data from search engines, succinic acid is very popular among people today. It turns out that it cleanses the body, helps to achieve a beautiful and slim figure, stimulates the immune system and reduces fatigue. Naturally, these are not all of its advantages. Succinic acid has a number of other equally useful and important properties, which in our age of technological progress and haste are very helpful in maintaining the tone and health of the body.

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

Products rich in succinic acid:

- Kefir
- Curdled milk [1]
- Old wine
- Sunflower oil [2]
- Oysters
- sunflower seed
- Brewer's yeast
- Barley
- Bread "Borodinsky"
- Crackers, rye flour bread
- Green gooseberry
- Alfalfa
- Apples [3]
- Cherries [4]
- Grapes [5]

General characteristics of succinic acid

Succinic acid belongs to the class of organic acids. Under favorable conditions, it is produced by the body independently and in the required quantity. Succinic acid is a transparent, whitish powder that tastes like citric acid.

Succinic acid is found naturally in many foods. At enterprises, acid is produced from natural amber. The hypothalamus [6] and adrenal glands [7] have a particular influence on the functioning of succinic acid in the body. In the body, succinic acid is presented in the form of succinates - salts of succinic acid.

Daily requirement for succinic acid

In order to determine the required amount of acid that should be consumed daily, you need to use the following formula: $0.03 \text{ g.} \cdot \text{body weight of the person for whom the calculation is being carried out.}$ The resulting product will be called the daily norm of succinic acid.

The need for succinic acid increases:

- with weakened immunity;
- overweight;
- skin problem (inflammation, acne [8]);
- with a decrease in brain activity;
- for the treatment of chronic fatigue syndrome (CFS);
- in old age, when the body's ability to replenish the level of succinic acid on its own decreases;
- in diabetes mellitus [9].

The need for succinic acid is reduced:

- with individual intolerance to acid associated with allergic reactions;
- hypertension [10];
- urolithiasis;
- ulcer [11] of the duodenum;
- increased acidity of gastric juice;
- glaucoma (increased intraocular pressure) [12];
- coronary heart disease [13].

Digestibility of succinic acid

Succinic acid is well absorbed by the body without accumulating in organs and tissues. In addition, it is not addictive and tastes good. The most complete absorption of succinic acid by the body is achieved by organizing the correct daily routine, proper nutrition and optimal physical activity. It is the complex effect of such factors on the body that leads to maximum absorption of acid.

Beneficial properties of succinic acid and its effect on the body

Succinic acid helps increase the body's defenses, stimulating regeneration processes. It lowers blood sugar levels to the required level. Succinic acid also restores the optimal acid-base balance in the body.

That is why, with a sufficient level of succinic acid in the blood (about $40 \mu\text{M}$), an increase in working capacity is observed, lightness and vigor are noted after sleep, the nervous system is strengthened, and stress resistance increases.

Thanks to succinic acid, brain performance is restored [14], the body's endurance increases, and male potential grows. Accelerating metabolism and cleansing the body of toxins also occurs thanks to succinic acid. In addition, it helps reduce excess weight.

Interaction with other elements

Succinic acid interacts well with other organic acids, such as malic, pyruvic and acetic acid. In addition, it has the ability to convert to malic acid and vice versa. Vitamins and microelements enhance the effect of succinic acid on the body and bring additional benefits to the body.

Signs of a lack of succinic acid in the body

- decreased immunity;
- constant fatigue and weakness;
- the appearance of skin rashes;
- excess weight;
- low brain activity.

Signs of excess succinic acid in the body

- disorders of the digestive system;
- discomfort in the kidney area;
- increased sensitivity of tooth enamel.

Factors influencing the content of succinic acid in the body:

During inflammatory processes, there is a sharp decrease in the amount of free acid present in the body. Also, the acid content is affected by diet. Eating alkalizing foods leads to the formation of succinic acid salts, which increases its content in the body.

Succinic acid and health

It's good when all organs work harmoniously and the body produces a sufficient amount of the substances it needs. But this, unfortunately, does not always happen. Due to various health problems, succinic acid in the body may be produced in insufficient quantities.

In this case, various dietary supplements containing succinic acid and medications sold in pharmacies come to the rescue. If your doctor agrees and you are experiencing symptoms of acid deficiency in your body, you can begin a course of treatment.

Usually, after completing a course of therapy with succinic acid, the condition of the skin improves [15], the whole body is cleansed with a gradual loss of extra pounds. Increases energy and improves work capacity and endurance.

Literature

1. Eliseeva, T. (2022). Curdled milk: composition and benefits proven by research. *Journal of Healthy Eating and Dietetics*, 1 (19), 2-5. DOI: 10.59316/.vi19.151
2. Eliseeva, T., & Shelestun, A. (2022). Sunflower oil – beneficial and dangerous properties, chemical composition, use in cooking and cosmetology. *Journal of Healthy Eating and Dietetics*, (19). DOI: 10.59316/oil.2022.19.22
3. Tkacheva, N., & Eliseeva, T. (2021). Apples – benefits and harms proven by nutritionists. *Journal of Healthy Eating and Dietetics*, 3 (17), 84-88. DOI: 10.59316/.vi17.130

4. Eliseeva, T., & Tarantul, A. (2019). Cherry (lat. Prúnus subg. Cérasus). *Journal of Healthy Eating and Dietetics*, 2 (8), 2-14. DOI: 10.59316/.vi8.39
5. Tarantul, A., & Eliseeva, T. (2019). Grapes (lat. Vítis). *Journal of Healthy Eating and Dietetics*, (10), 14-25. DOI: 10.59316/.vi10.54
6. Eliseeva, T., Tkacheva, N. (2021). Nutrition for the hypothalamus - useful and dangerous foods, recommendations. *Journal of Healthy Eating and Dietetics*, (15). DOI: 10.59316/j.edpl.2021.15.8
7. Eliseeva, T., Tkacheva, N., & Shelestun, A. (2021). Nutrition for the adrenal glands - healthy and dangerous foods, recommendations. *Journal of Healthy Eating and Dietetics*, (15). DOI: 10.59316/j.edpl.2017.1.7
8. Lazareva, V. (2021). Acne - signs and symptoms, useful and dangerous products, folk remedies. *Journal of Healthy Eating and Dietetics*, (15). DOI: 10.59316/j.edpl.2021.15.40
9. Lazareva, V., & Eliseeva, T. (2021). Diabetes - signs and symptoms, useful and dangerous foods, folk remedies. *Journal of Healthy Eating and Dietetics*, (16). DOI: 10.59316/j.edpl.2021.16.24
10. Lazareva, V., & Eliseeva, T. (2021). Hypertension - signs and symptoms, useful and dangerous foods, folk remedies. *Journal of Healthy Eating and Dietetics*, (16). DOI: 10.59316/j.edpl.2021.16.23
11. Lazareva, V., & Eliseeva, T. (2022). Ulcer - signs and symptoms, useful and dangerous foods, folk remedies. *Journal of Healthy Eating and Dietetics*, (20). DOI: 10.59316/j.edpl.2022.20.25
12. Lazareva, V., & Eliseeva, T. (2021). Glaucoma - signs and symptoms, useful and dangerous foods, folk remedies. *Journal of Healthy Eating and Dietetics*, (16). DOI: 10.59316/j.edpl.2021.16.26
13. Lazareva, V., & Eliseeva, T. (2021). Ischemia - signs and symptoms, useful and dangerous products, folk remedies. *Journal of Healthy Eating and Dietetics*, (16). DOI: 10.59316/j.edpl.2021.16.43
14. Shelestun, A., & Eliseeva, T. (2021). Food for the brain – 12 products for effective work. *Journal of Healthy Eating and Dietetics*, 3 (17), 22-27. DOI: 10.59316/.vi17.116
15. Tkacheva, N., & Eliseeva, T. (2021). Food for the skin - 12 products for its beauty and health. *Journal of Healthy Eating and Dietetics*, 3 (17), 44-48. DOI: 10.59316/.vi17.121

[HTML version articles](#)

Received 15.02.2019

Amber acid - description, benefits, effect on the body and best sources

Tkacheva Natalia, phytotherapist, nutritionist

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

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

Abstract. Amber. Like a drop of sunshine in the palm of your hand. Natural amber has long been famous for its healing properties. People used to wear it as jewelry, apply it to sick organs, and use it as a powder inside the body to improve its health. Later it became known that our body independently produces a similar substance, and it is simply indispensable for it. According to the statistics of search

engines, succinic acid today enjoys great popularity among the people. It turns out that it cleanses the body, contributes to the acquisition of a beautiful and slim figure, stimulates immunity and reduces fatigue. Naturally, this is not all of its advantages. Succinic acid has a number of other equally useful and important properties, which in our age of technological progress and are quickly very helpful in maintaining the tone and health of the body.