



Beetroot Juice – 10 Proven Health Benefits

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Abstract. The article discusses the main properties of beetroot juice and its effect on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. The chemical composition and nutritional value of the drink are indicated, the use of beetroot juice in various types of medicine and the effectiveness of its use in various diseases are considered. The potentially adverse effects of beetroot juice on the human body under certain medical conditions and diseases are analyzed separately.

Key words: beetroot juice , useful properties, contraindications, composition, calorie content

Few people know about the benefits of beetroot juice, although [beets themselves](#) , as a root crop, are very popular. Everyone knows the sweet and delicate taste of beets, its rich ruby color, and also the fact that it is very useful for the intestines and digestion. However, when beets are cooked, a large amount of useful substances disappear. Therefore, in recent years, beetroot juice has been increasingly used for treatment and detoxification of the body. When drinking a drink, such useful substances as ascorbic acid, vitamin K, carotene, phytoestrogens, and folic acids enter the body much faster. As a result, immunity increases and the functioning of the cardiovascular system improves. Also, when drinking beetroot juice, the concentration of potassium increases several times, compared with the use of a root crop.

Top 10 Health Benefits of Beet Juice

1. Helps to achieve high results in sports.

Thanks to the use of beetroot juice, the blood is better saturated with oxygen, while its amount decreases in the muscles and they function better. Athletes become more enduring and energetic, and show better results in competitions.

This was especially evident in competitions related to height.

In 2014, there was an interesting publication in the journal Medicine and Science in Sports and Exercise. Athletes, cyclists who consumed beetroot juice rich in nitrates showed better results in races. In doing so, they used devices to simulate height.

In endurance training at high altitude, beetroot juice has also helped athletes achieve maximum performance. The subjects drank 70 ml of beetroot juice 3 hours before the test. They trained for 15 minutes with a maximum load of over 60%. ^[2]

2. Is the strongest antioxidant.

Due to the pigment betalain, beetroot juice is a medicine for many terrible diseases - cancer, cardiovascular ailments or dementia.

Betalain has a pronounced antioxidant, anti-inflammatory and chemopreventive effect. It protects body cells from free radical damage.

In 2015, according to the results of a scientific study, it turned out that betalain, contained in large quantities in beets, fights the oxidative process in the body and neutralizes free radicals. Thus, DNA, lipids, and protein structures are protected because highly reactive radicals do not damage the membrane. ^[3]

3. Has a hypotensive effect.

The presence of nitrates in beets is not at all a minus. The body chain produces nitric oxide from them. And it, in turn, helps to improve blood flow and lower blood pressure.

The following study was carried out in 2012. One group of people received beetroot juice, the second - water. During the day, the people of the first group recorded a significant decrease in both systolic and diastolic pressure. ^[four]

4. Promotes blood purification

Beetroot juice is rich in fiber, which perfectly cleanses the entire digestive tract of toxins, the intestines are emptied regularly and without problems.

Glutathione is formed due to betalain, as a result, all harmful toxins become water-soluble and are easily excreted from the body with urine. Animal experiments have shown that beetroot juice perfectly cleanses and restores the liver. And since it is the main filtering organ of our body, this is extremely important.

Another advantage of beetroot juice, compared to the root crop, is that it is much easier to digest and digest, and also equalizes the pH balance in the body. ^[5]

5. Prevents aging

It's no secret that in older people, blood circulates more slowly through the body, causing a lack of oxygen, and leading to ailments such as dementia and Alzheimer's disease. Beetroot juice contains nitrates, which are converted to nitrites in the mouth by bacteria. It is they who increase the flow of blood and oxygen to the brain and other difficult places. The effect of beetroot juice nitrates on the body of the elderly has been studied through research by Wake Forest of the Translational Center. For

trials, they chose elderly people in their 70s who followed a diet high in nitrates for 4 days, after which they underwent an MRI of the brain. It turned out that the subjects had improved blood flow to the white matter of the frontal lobes. But it is precisely the insufficient blood supply to these parts of the brain that leads to cognitive problems. It also found that the brain cells of older adults who regularly consumed beetroot juice became more neuroplastic and similar to the brain cells of younger people. ^[6]

6. Helps lower sugar levels in diabetes

This is facilitated by alpha-lipoic acid found in beets. Its properties include: lowering glucose levels, antioxidant effect, increased sensitivity to insulin. According to a 2020 study, regular consumption of beetroot juice for diabetics helps keep sugar levels under control. Due to the high fiber content in beets, it absorbs toxins and the absorption of glucose slows down. At this time, the body has time to produce insulin for its processing. ^[7]

7. Provides the body with folic acid

Folic acid is very important for the human body, because it is involved in the synthesis of DNA and the formation of new cells, with its deficiency, the cardiovascular, immune and circulatory systems suffer. This is especially true for pregnant women, without the proper amount of folic acid, a healthy pregnancy is impossible. One cup of beets (about 136 grams) contains 148 micrograms of folic acid. ^[eight]

8. Saturates the body with probiotics

Everyone knows that probiotics are found in large quantities in fermented milk products and are extremely beneficial for the human digestive and immune systems. Not so long ago, an experiment was carried out with the fermentation of three types of juices, tomato, beet and carrot. During the fermentation, three bacterial strains of *Lactobacillus plantarum*, *Lactobacillus acidophilus* and *Lactobacillus delbrueckii* were grown. This was facilitated by the presence of betaxanthin in beetroot juice. Thus, consuming fermented beetroot juice can saturate the body with probiotics without consuming dairy products. This is especially valuable for those people who are lactose intolerant, as well as for adherents of dietary nutrition, because beetroot juice contains few calories and is rich in fiber. ^[9]

9. Promotes Collagen Production

Exosome-like nanoparticles found in beet juice extract have become a real breakthrough in the field of cosmetology. Antiogenesis analysis was carried out with the aim of pro-angiogenic effect of beet juice on endothelial cells. But in the course of the study, in addition to the angiogenic effect, it was unexpectedly found also the production of collagen and the enzyme type 2 hyaluronan synthase. Therefore, beetroot juice can be used in cosmetology and therapy. ^[ten]

10. Prevents Endothelial Dysfunction

Endothelial dysfunction is a vascular pathology and manifests itself after prolonged sitting. For a long time, doctors did not know how to correct her treatment with the help of nutrition. To study the effect of beetroot juice on people suffering from this disease, an experiment was conducted. It was attended by 11 women and men. They had to sit for three hours in one place. Before and after the experiment, they measured the dilatation of the popliteal artery and took blood samples. Some of them took a placebo before the test, others beetroot juice. It turned out that those subjects who took beetroot juice did not feel this syndrome, that is, he decompensated it. The thing is that beetroot juice increases the bioavailability of nitric oxide and prevents endothelial dysfunction. ^[eleven]

Contraindications to the use of beet juice

Despite the enormous benefits of beetroot juice, it should be used with caution in the presence of kidney stones. Calcium is less absorbed by the body due to the oxalates present in beets, and it begins to be deposited in the form of kidney stones. If you suffer from such an ailment, you should be tested for the level of iron in the body, since such symptoms indirectly indicate this. ^[12]

How to drink beetroot juice correctly

For increased performance and athletic performance, take a small amount of freshly squeezed beetroot juice two hours before your workout or competition. For a daily diet, it is recommended to use beetroot juice in between meals or along with the main meal. The taste of beetroot juice is quite specific, so it is recommended to add ginger, lemon or other vegetables to it to make it more interesting and tastier. When buying beets, opt for small root vegetables, they tend to be sweeter and tastier.

There is no specific dosage of beetroot juice, but since it greatly reduces blood pressure, 250 grams per day is the maximum norm, which is not recommended to be exceeded so that side effects do not occur. ^[13]

Expert comment

Tatyana Eliseeva, nutritionist

Beets and beetroot juice are a storehouse of useful substances: potassium, [folic acid](#), betaine. Juice improves immunity, helps in the fight against formidable diseases, rejuvenates the body and promotes detoxification and cleansing of all human organs and systems. Regular consumption of beet juice in combination with ginger, celery, or other vegetables will give you energy, vigor and make you healthier.

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