



Apples - benefits and harms proven _ nutritionists

Tkacheva Natalia, phytotherapist, nutritionist

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

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

Abstract. The article discusses the main properties of an apple 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 product are indicated, the use of an apple is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of apple are analyzed separately. on the human body under certain medical conditions and diseases.

Keywords: apple , benefit, harm, beneficial properties, contraindications

It is an effective remedy for heart disease, diabetes, cancer. Fruits also prevent many chronic diseases. If you needed an extra reason to add them to your oatmeal or smoothie , here it is - we've rounded up 10 health benefits of the fruit, as well as a few side effects you should be aware of.

The average calorie content of apples is 52 kcal per 100 g, but a lot depends on the variety. The fruits come in different colors - from pale yellow and green to dark red. Their texture and flavor also range from juicy to firm and overly sour to sweet. In addition to calories from one fruit, you get 4 grams of fiber and 14% of the recommended daily intake of vitamin C. Polyphenols, resveratrol and other beneficial compounds bring invaluable benefits.

Top 10 Health Benefits of Apples

1. Help control weight and lose weight

The products contain a lot of fiber and are 86% water, so they give a feeling of satiety and contribute to weight loss. Studies have shown that those who started their lunch with apple slices, on average, ate 200 fewer calories. It is important to know that satiety gives a full-fledged fruit, and not applesauce or juice. ^[1, 2, 3]

2. Increase Good Bacteria in Your Gut

Pectin performs the function of a prebiotic and normalizes the microbiome in dysbacteriosis. During digestion, dietary fiber travels through the small intestine and into the large intestine, where it feeds beneficial gut bacteria. New research shows that it promotes weight loss, increased immunity, heart health.

3. Prevent cancer

The American Institute for Cancer Research found that apple fiber and polyphenolic compounds interfere with estrogen function and thus reduce the risk of breast cancer. Apples also contain antioxidants that prevent precancerous colon lesions. ^[four]

4. Protect Against Cardiovascular Disease

To remove more bad cholesterol and reduce the risk of heart disease by half, it is enough to eat one apple a day. The polyphenolic antioxidants in the fruit also reduce the risk of atherosclerosis, which leads to stroke and heart attack. ^[5, 6]

5. Prevent the development of diabetes

Antioxidants contained in the peel and pulp protect pancreatic cells from damage and inflammation, reduce the risk of developing type 2 diabetes by 28%. The peel of red fruits contains resveratrol, as does red wine. It normalizes blood pressure, is good for the brain, joints, protects against cancer - prevents the development of cancer of the stomach, colon. ^[7]

6. Boost Immunity and Help Asthma

The antioxidants in fruits protect the lungs from oxidative damage. A large study of more than 68,000 women found that those who ate apples more often had a 10% lower risk of asthma. Scientists believe that the result is provided by quercetin, a flavonoid that improves the functioning of the immune system and fights inflammation. ^[8, 9]

7. Reduce acid reflux

Gastroesophageal Reflux disease (GERD) occurs when food is pushed back up the esophagus and causes pain, irritation, heartburn, and an unpleasant sour taste in the mouth. Adding apples to the diet reduces the symptoms of GERD. This is a better and safer solution than daily anti-reflux medication.

8. Increase bone density and strength

Scientists have found that eating more apples reduces the chance of a hip fracture. In addition to fiber and vitamin C, the pulp contains a unique flavonoid - phloridzin. French researchers found that it prevents the development of osteoporosis in postmenopausal women. ^[ten]

9. Protect the stomach from drugs

Non-steroidal anti-inflammatory drugs (NSAIDs), known to everyone as painkillers, can severely damage the lining of the stomach. Freeze-dried apple extract and two plant compounds - chlorogenic acid and catechin - protect stomach cells from destruction. ^[eight]

10. Prevent Brain Disease

Apple juice reduces the amount of harmful active compounds in brain tissues, supports mental development - preserves the neurotransmitter acetylcholine, which is responsible for the transmission of nerve impulses. Its low level is found in Alzheimer's disease. [11, 12]

Dangerous and harmful properties of apples

The fruits contain the natural chemicals salicylates. In some people, the compounds cause an allergic reaction - skin rash, swelling. The fruit also tops the list of plant foods with the most pesticide residues. If you do not grow it yourself, then it is worth limiting consumption.

In any case, eating too much fruit harms the body - it threatens with a jump in blood sugar levels, a large load on the intestines and being overweight. As for the seeds, in addition to protein and fiber, they do contain the harmful substance cyanide. But their danger is exaggerated - to get poisoned, a person needs to eat 150 crushed grains.

How many apples should you eat every day?

To get the maximum benefit without side effects, it is enough for a person to eat 1-2 fruits per day. With an increase in the portion, bloating, diarrhea may occur. Nutrition experts advise those who are on a low-carb diet not to give up fruit. When compiling a menu, they recommend paying attention to the amount of carbohydrates in different varieties.

Which apples are healthier - raw or baked?

Try to eat more raw fruits with skins to get the maximum amount of fiber and polyphenols. Be aware that important antioxidants are lost during the cooking process. If you still decide to bake apples in the oven, choose the varieties suitable for this - mackintosh, antonovka, jonagold - and do not add sweeteners.

Raw fruits can be eaten with peanut butter and cheddar cheese, cut into cubes or grated and added to salads. Baked pulp is added to sandwiches, fried meat. While cooking, avoid added sugar - an appetizing and fragrant apple pie is injurious to health.

Expert comment

Tatyana Eliseeva, nutritionist, nutritionist

The benefits of apples are directly related to their soluble fiber content. It helps maintain weight and detox - the main thing you can do to protect against disease. Skip those unhealthy snacks and start filling your diet with fruits today to reap the full benefits of antioxidants and lead a fulfilling lifestyle!

Literature

1. The effect of fruit in different forms on energy intake and satiety at a meal, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2664987/>
2. A low-energy-dense diet adding fruit reduces weight and energy intake in women, <https://pubmed.ncbi.nlm.nih.gov/18439712/>
3. Loss of body weight and fat and improved lipid profiles in obese rats fed apple pomace or apple juice concentrate, <https://pubmed.ncbi.nlm.nih.gov/23909905/>
4. Cancer chemopreventive potential of apples, apple juice, and apple components, <https://pubmed.ncbi.nlm.nih.gov/18855307/>

5. Apples and cardiovascular health--is the gut microbiota a core consideration?, <https://pubmed.ncbi.nlm.nih.gov/26016654/>
6. Colors of fruit and vegetables and 10-year incidence of stroke, <https://pubmed.ncbi.nlm.nih.gov/21921279/>
7. Fruit consumption and risk of type 2 diabetes: results from three prospective longitudinal cohort studies, <https://pubmed.ncbi.nlm.nih.gov/23990623/>
8. A Comprehensive Review of Apples and Apple Components and Their Relationship to Human Health^{1,2}, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3183591/>
9. Quercetin and Its Anti-Allergic Immune Response, <https://pubmed.ncbi.nlm.nih.gov/27187333/>
10. Fruits and dietary phytochemicals in bone protection, <https://pubmed.ncbi.nlm.nih.gov/23244535/>
11. Apple juice prevents oxidative stress and impaired cognitive performance caused by genetic and dietary deficiencies in mice, <https://pubmed.ncbi.nlm.nih.gov/14978604/>
12. Neuroprotective Effects of Quercetin in Alzheimer's Disease, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7023116/>

[An extended HTML version of this article](#) is available on the edaplus.info website.

Apples - the benefits and harms proven by nutritionists

Tkacheva Natalia, phytotherapist, nutritionist

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

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

Received 21.10.2021

Abstract. The article discusses the main properties of an apple 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 product are indicated, the use of an apple is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of apple are analyzed separately. on the human body under certain medical conditions and diseases.