

# *Journal of Healthy Nutrition and Dietetics*

## In issue:



Plums



Cinnamon



Porcini



Quince



Cardamom



Calais



Spirulina



cilantro



echinacea



Pear



Apple



Pumpkin



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## health benefits of plums - 7 reasons to add them to your diet diet

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**Abstract.** The article discusses the main properties of the plum and its impact 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 plums is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of plum are analyzed separately. on the human body under certain medical conditions and diseases.

**Keywords:** plum , benefit, harm, beneficial properties, contraindications

Sweet, tart plums are a source of health. They have less sugar than other fruits and are full of vitamins, minerals, fiber, and the super-healthy purple pigment anthocyanins. There are over 2,000 varieties, and all of them have good antioxidant and detoxifying properties, stimulate metabolism, improve heart health, help control stress and reduce fatigue. In this article, we will analyze their benefits in detail and provide confirmation.

The calorie content of plums is lower than that of other popular fruits - 46 kcal per 100 g of pulp. They are low in protein and fat, high in fiber and antioxidants, and a great combination of 15 different vitamins and minerals. It is a good source of vitamins A and C, which help the body produce collagen, increase iron absorption, and help keep the immune system running smoothly. Prunes are slightly different from fresh fruits - they contain more calories, fiber, carbohydrates and vitamin K.

## Top 7 Health Benefits of Plums Proven by Scientists

### 1. Normalize digestion with constipation

The laxative effect is associated with a high content of fiber and sorbitol - sugar alcohol. The components prevent constipation, increase the volume of stool and accelerate the speed of movement

of waste through the digestive tract. Studies have confirmed that prunes are more effective than the laxative psyllium and to normalize the stool, it is enough to eat 5 fruits twice a day. <sup>[1, 2, 3]</sup>

## **2. Reduce blood sugar levels**

Despite the large amount of carbohydrates, fruits do not cause hyperglycemia. This is partly due to the high percentage of dietary fiber - fiber slows down the rate of absorption of carbohydrates, which causes blood sugar to rise gradually, rather than abruptly. Additionally, fruits increase the level of adiponectin. The hormone also controls blood sugar and prevents damage from disease and age-related changes. <sup>[4, 5]</sup>

## **3. Protect Against Osteoporosis**

Fruits not only prevent bone loss, but also reverse this process. How they reduce the risk of osteoporosis and osteopenia is still unknown. Scientists suggest that antioxidants are responsible for the positive effect - they reduce inflammation and increase the level of certain hormones involved in bone formation. Vitamins and minerals additionally protect bones - potassium, magnesium, phosphorus, vitamin K. <sup>[6, 7, 8]</sup>

## **4. Reduce the risk of stroke with hypertension**

The positive effect of plums on the cardiovascular system is associated with a high content of potassium, antioxidants, and fiber. Potassium normalizes blood pressure in two ways - it helps the body get rid of sodium through the urine and reduces tension in the walls of blood vessels. As a result, the risk of stroke is reduced. In the study, people who drank prune juice daily had lower levels of total and bad cholesterol than those who drank water. <sup>[9, 10]</sup>

## **5. Reduce anxiety**

Anxiety is correlated with low dietary intake of antioxidants. Therefore, improving your diet with foods rich in antioxidants can help relieve symptoms of anxiety disorders. Plum a day can relieve stress - it's a safe and easy first step in dealing with anxiety. Since fruits of different colors contain different nutrients, doctors advise adding more color to the plate. <sup>[eleven]</sup>

## **6. Promote hair growth and treat hair loss**

There is a theory that prolonged periods of stress overwork the adrenal glands and cause them to stop producing hormones normally. "Adrenal fatigue" negatively affects the operation of all systems and appearance. Fruits relieve fatigue from them and thus prevent hair loss.

## **7. Increase immunity**

100 g of plum contains 9.5 mg of vitamin C (16% of the daily requirement). This is 43.7 mg less than an orange. However, people cannot get ascorbic acid only from citrus fruits - allergies, digestive problems, etc. can occur. Plum fruits will be an excellent addition to the diet and, with regular use, will increase the body's resistance to infections and inflammation. <sup>[12]</sup>

## **Possible side effects of plums**

Juicy fruits sometimes cause skin rashes, itching in the nose, swelling of the oral mucosa in allergic people with high sensitivity to birch pollen. If there are problems with digestion, there may be bloating, flatulence, diarrhea. This is especially true for people with irritable bowel syndrome (IBS). If



you are concerned about the presence of fructose in the product, then the process of converting it into energy can be slowed down by combining plum fruits with protein products.

### **How many plums do doctors recommend eating?**

The daily norm for each is individual - it all depends on the state of health, chronic diseases. A healthy person can eat up to 100–150 g of plums per day. 1-2 fruits eaten in the morning will keep you feeling full for a long time and will not allow you to overeat unhealthy snacks.

A plum has a glycemic load of approximately 2, making it a low glycemic index food. If you eat more than one serving, the GI will be higher. You should not get involved in superfood for other reasons - it can provoke diarrhea. To prevent this from happening, you need to consume no more than 1/4–1/2 prunes and up to 200 ml of juice per day.

### **Which plums are healthier - fresh with skin, peeled or cooked?**

Researchers at the University of Innsbruck in Austria found that fully ripe fruits, which are on the verge of spoilage, contain the most antioxidants. Their skin often has a white coating. It should be easy to rub off with your finger. This suggests that the fruit is harmless and it is enough to wash it under cold water before eating. The peel contains many beneficial compounds that are absent in the pulp. If the gastrointestinal tract allows you to eat coarse fiber, you should not refuse it.

Yellow, red, dark purple fruits can be eaten on their own, with cereal and yogurt, meat, vegetables, frozen, after removing the stone. They are baked in the oven and on the grill, stewed to make desserts, sauces for meat, jams. When choosing jam or juice, make sure that it does not contain sugar or it contains in minimal quantities, otherwise the harm will offset the benefit.

People with pre-diabetes or type 1-2 diabetes, high cholesterol, and some types of cancer can eat plums in any form. They can also be included in your weight management diet. Large as a tennis ball or small as a cherry, fruits contain antioxidants along with vitamin C, therefore they contribute to a healthy glow of the skin, reduce the risk of creases and early wrinkles. Now you know why plums are so loved all over the world - they are easy to eat, they are tasty and fantastically healthy!

### **Expert comment**

#### **Tatyana Eliseeva, nutritionist, nutritionist**

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### Health Benefits of Plums - 7 Reasons to Add Them to Your Diet

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**Abstract.** The article discusses the main properties of the plum and its impact 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 plums is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of plum are analyzed separately. on the human body under certain medical conditions and diseases.



## Food for relief pain

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**Abstract.** The article discusses various types of pain and their mechanism of action on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. The food products that will help reduce the level of pain are indicated, the scientific foundations of pain relief nutrition are considered.

**Key words:** pain, diagnostics, healthy foods, dangerous foods

Chronic pain is a big problem that the medical community is not coping with. But in your kitchen there is an alternative to painkillers: some fruits, vegetables, spices block pain signals, fight inflammation and improve the quality of life. Unlike drugs, well-chosen natural products have no side effects, and still contain vitamins, minerals and antioxidants. The latter prevent many diseases at the developmental stage, which you may not even be aware of.

## What kind of pain can food help with?

The most common types of pain are muscular, headache, in the back and neck, joints, uterus, stomach and intestines. Painful sensations may never completely disappear, because it all depends on the underlying causes. But with the right diet, you can reduce symptoms, improve the daily functioning of organs and systems. <sup>[one]</sup>

Soreness after a hard workout, the onset of a cold, feeling unwell due to sleeping on the wrong side of the bed - the right food helps to cope with these and other problems faster. But there is also food that has the opposite effect.

## Foods to Avoid for Any Kind of Pain

It is necessary to exclude from the diet all provocateurs of inflammation. It's worth starting with sugar – if you consume more of it than the body can process, this will lead to the release of pro-inflammatory cytokines and an increase in the inflammatory biomarker C-reactive protein. Nutritionists advise using honey in dishes as a natural substitute.

Refined grains - pasta, white rice and white bread - cause inflammation in the intestines, joints and many organs. Another ban is related to trans fats, the culprits of many cardiovascular diseases and premature death. It is equally important to minimize salt intake.

Eggs, chocolate, wheat, red meat and corn are also associated with some inflammatory processes. It is not always necessary to refuse them, but limited consumption benefits everyone. The main food plate should have fresh vegetables, berries and nutrient-rich fibrous carbohydrates.

## Top 15 Natural Pain Relief Products

### 1. Turmeric

The active substance curcumin has a powerful anti-inflammatory, antioxidant effect and is similar in effectiveness to some drugs. Supplements with it are prescribed for recovery from coronavirus, with

rheumatoid arthritis and osteoarthritis . In order for the substance to be better absorbed from the spice, you need to combine it with black pepper or fats (add to milk, cereals with butter). <sup>[2]</sup>

## **2. Cherry**

The berries contain antioxidants anthocyanins, which reduce pain. They are also rich in polyphenols and vitamin C. Substances help with gout, reduce muscle pain, which has been tested by athletes after marathons. <sup>[3, 4]</sup>

## **3. Mint**

Peppermint oil relieves painful spasms in irritable bowel syndrome. Mint leaf tea is also good for soothing occasional indigestion and bloating. Studies show that Brazilian mint tea from the Hyptis plant crenata is just as effective as a prescription pain reliever. <sup>[5]</sup>

## **4. Hot pepper**

Jalapeno , habanero , cayenne, serrano , cherry, chili are types of hot peppers with capsaicin . The substance is well known for its pain-relieving properties, so it is used in creams and patches. The fruits are also rich in antioxidants, vitamins B6 and C, potassium and beta-carotene. <sup>[6]</sup>

## **5. Garlic**

The bulb plant reduces inflammation, joint pain, and endometriosis with its anti-inflammatory sulfur compounds. When extracted, the component has a wide range of applications - from the destruction of microbes to the fight against cancer. <sup>[7]</sup>

## **6. Bone broth**

Slow-cooked, strong bone broth contains a sufficient dose of collagen, proline , glycine and glutamine - assistants in wound healing. It is also high in minerals and anti-inflammatory compounds that are helpful in autoimmune diseases. <sup>[eight]</sup>

## **7. Cruciferous vegetables**

It is advisable to eat half a glass of cruciferous vegetables daily - broccoli, cauliflower and Brussels sprouts. They are excellent sources of antioxidants, vitamins, and fiber. The antioxidant compound sulforaphane blocks an enzyme that causes pain and inflammation in the joints. In addition to patients with arthritis, it is useful for athletes during periods of high stress. <sup>[9]</sup>

## **8. Salmon**

Enriched with omega-3 fatty acids, salmon is included in almost all lists of healthy foods. Omega-3 interacts with immune cells, leukocytes and enzymes, cytokines - the main participants in inflammation. Fatty fish are recommended to be eaten twice a week for heart health, joints, and arthritis pain relief (especially in the neck and back). <sup>[ten]</sup>

## **9. Extra virgin olive oil**

The oily solution causes a slight tingling in the throat due to oleocanthal , a similar action to ibuprofen. Lubricin, which is part of the composition , also provides smooth sliding of the joints, protects



cartilaginous tissues from destruction. In order not to lose the benefits of olive oil when cooking, it is necessary to maintain temperatures up to 180°C. <sup>[eleven]</sup>

## **10. Green tea**

One of the most affordable natural beverages is self-healing. Its polyphenolic compounds have proven anti-inflammatory properties and are considered a good addition to dietary therapy. But only organic green teas are beneficial - their leaves are not treated with carcinogenic pesticides. <sup>[12]</sup>

## **11. Ginger**

Ginger root is best known for its soothing properties for nausea, but it can also combat joint pain and menstrual cramps. Research confirms that ginger capsules work like ibuprofen. <sup>[13, 14]</sup>

## **12. Blueberries**

Small, juicy berries contain a lot of phytonutrients needed to fight inflammation and pain. Antioxidants neutralize free radicals and protect healthy cells from them. In the off-season, you can eat frozen blueberries - it retains all the healthy ingredients. <sup>[fifteen]</sup>

## **13. Pumpkin seeds**

Pumpkin seeds are an excellent source of magnesium. The body needs the mineral for many reasons, including to prevent migraines and osteoporosis. Want to get more magnesium? Add almonds, cashews, dark green leafy vegetables, beans, and lentils to your diet.

## **14. Coffee**

Caffeine can reduce discomfort from muscle injuries, physical exertion. A study found that supplementing with 100–130 mg of caffeine (the same amount of caffeine in one cup of drink) enhanced the effects of ibuprofen. <sup>[16, 17]</sup>

## **15. Cranberry juice**

Cranberry juice blocks *H. pylori* from sticking to the mucosa, a spiral-shaped bacterium that attacks the protective lining of the stomach and small intestine, causing ulcers and pain. To get the result, you need to drink less than a glass of sugar-free juice daily for three weeks. An acidic drink is allowed to be diluted with water, sweetened with honey, stevia. <sup>[eighteen]</sup>

## **Other ways to deal with pain**

Physiotherapy, individually selected sets of exercises relieve chronic pain, as they reduce swelling, improve blood circulation and the functionality of the affected body part. Physiotherapeutic procedures include hot and cold applications, myofascial relaxation, massage. For many patients, yoga and acupuncture become salvation. <sup>[19]</sup>

You can take nutritional supplements in capsules - curcumin, omega-3, collagen to restore connective tissue.

## **Expert comment**

**Tatyana Eliseeva, nutritionist, nutritionist**

Sometimes, to reduce pain, it is enough to change the way of life. It is difficult to immediately give up bad habits acquired over the years, so it is easier to start with nutrition correction. This does not mean that you need to use all the products from the recommended list - they should be chosen taking into account pathologies. If after changing the diet, the condition remains the same, consult a nutritionist - a specialist will identify food sensitivities and help you return to a full life faster.

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## food for pain relief

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### **Cinnamon : scientific justified health benefits \_**

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**Abstract.** The article discusses the main properties of cinnamon and its impact 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 cinnamon is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of cinnamon were analyzed separately. on the human body under certain medical conditions and diseases.

**Keywords:** cinnamon , benefits, harm, beneficial properties, contraindications

Fragrant cinnamon is one of the most useful and recognizable spices on the planet. Its characteristic smell and taste are concentrated in the oily part, or rather, in cinnamic aldehyde. The component and other antioxidants have the properties of antibiotics and immunity stimulants. They reduce the risk of heart disease, blood sugar and inflammation markers.

The calorie content of cinnamon ranges from 247-303 kcal / 100 g. A teaspoon contains 2.1 g of carbohydrates, so the spice is suitable for those who follow a ketogenic diet and low-carb diets. The

presence of a large amount of iron, vitamins B1 and B2 in the composition does not play a big role, since we consume the spice in meager amounts. But the antioxidants included in the composition are of great importance and influence on health.

## **Top 7 Health Benefits of Cinnamon for Men and Women**

### **1. Fights infections, fungi, viruses**

An inexpensive food supplement contains the beneficial cinnamaldehyde. It inhibits the development of respiratory tract infections, the growth of dangerous food bacteria such as salmonella. The antimicrobial properties of the ingredient are so high that it prevents bad breath, caries. But the most stunning discovery for scientists was the discovery associated with the HIV-1 strain - during a study of 69 medicinal plants, cinnamon was the most effective in the fight against a dangerous virus. <sup>[12]</sup>

### **2. Rich in Powerful Antioxidant Polyphenols**

Antioxidants limit the activity of free radicals and prevent or reduce the damage they cause. In this way, they reduce the risk of many deadly diseases, slow down aging. Comparing 26 spices, scientists found that cinnamon was superior to other food additives, even oregano and garlic. It is so potent that it can be used as a natural preservative. <sup>[3, 4]</sup>

### **3. Normalizes digestion and acts as a prebiotic**

The extract has long been used in Ayurvedic medicine for the treatment of gastrointestinal diseases - flatulence, indigestion. It also promotes the growth of beneficial bacteria and inhibits the growth of pathogens. Regularly including cinnamon in your diet will improve your gut health.

### **4. Protects against cancer**

The prophylactic reduces the growth of cancer cells and the formation of blood vessels in tumors. The ways of its action are not fully understood, but scientists suggest that the product is toxic to cancer cells and causes their death without affecting healthy ones. Studies have already confirmed the effectiveness of cinnamon extract in the fight against colorectal cancer, leukemia. <sup>[5, 6]</sup>

### **5. Lowers Blood Sugar and Helps Type 2 Diabetes**

Cinnamon powder slows down the digestion of carbohydrates by acting on certain pancreatic enzymes. It also prevents the development of metabolic syndrome, insulin resistance and mimics the action of the hormone. Several studies have confirmed that after taking 1–6 g of the spice, the concentration of glucose in the blood decreases by 10–29%. <sup>[7, 8, 9]</sup>

### **6. Protects Against Dementia**

Diseases of the central nervous system - Parkinson's disease, Alzheimer's disease, etc. - are associated with the death of nerve cells and atrophy of parts of the brain and spinal cord. Cinnamon inhibits the activity of the protein that provokes these pathologies, protects neurons and neural connections. Animal studies have shown that the spice significantly improves the condition in neurodegenerative diseases. <sup>[10, 11]</sup>

### **7. Reduces the risk of heart attacks**

Heart disease is the world's most common cause of premature death. Just 120 mg of spice per day is enough to prevent the development of most heart problems. A small serving lowers blood pressure, "bad" LDL cholesterol, triglycerides, and stabilizes "good" HDL cholesterol. <sup>[12, 13]</sup>

### **Does cinnamon have side effects?**

There are two main types of spice - Ceylon (real) and cassia. The latter is more common due to its low price, but it has a higher concentration of coumarin. The substance is useful and dangerous - it thins the blood, is part of drugs for the prevention of blood clots. In large quantities it is considered harmful, but it is unlikely that a person in their right mind will be able to eat so much product to harm their health. Who should be wary of the spice is diabetics, people with liver disease and anyone who takes any medication.

### **How much cinnamon should you eat?**

There is no strict norm for the use of the product. Some experts believe that it is enough to eat 2-4 g (0.5-1 tsp) of powder per day to get benefits. However, in some studies, scientists have raised the dosage to 6 g. Nutritionists advise against doing experiments at home and large portions can be toxic.

Store cinnamon in an airtight container in a dark place. Under such conditions, the sticks are stored for at least a year without loss of properties. They should be crushed as needed, without creating stocks - after 2-3 months, small crumbs lose their bright taste.

### **What is ground cinnamon used for and where is it added?**

In winter, it's hard to resist a treat with a spicy, spicy flavor that's associated with the holidays. Therefore, the ingredient is found in many confectionery products: buns, apple pies, muffins, Christmas gingerbread. They also flavor cereals, fruit and berry desserts, marinades, apple sauces and jams. A pinch of seasoning would be appropriate in coffee, latte, smoothies. In some cuisines, a sweet spice with a touch of bitterness is even added to meat dishes.

### **Expert comment**

#### **Tatyana Eliseeva, nutritionist, nutritionist**

The spice adds flavor to food with little or no increase in calories, and is an advantage for those who value the antioxidant effect and seek to control blood sugar levels. If you want to get more benefits and look towards cinnamon supplements, it is better to stop buying them. They need more research. So far, cinnamon sticks have no competitors - a natural product has all the listed properties and, when used correctly, is safe for health.

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### **Cinnamon: Science-Based Health Benefits**

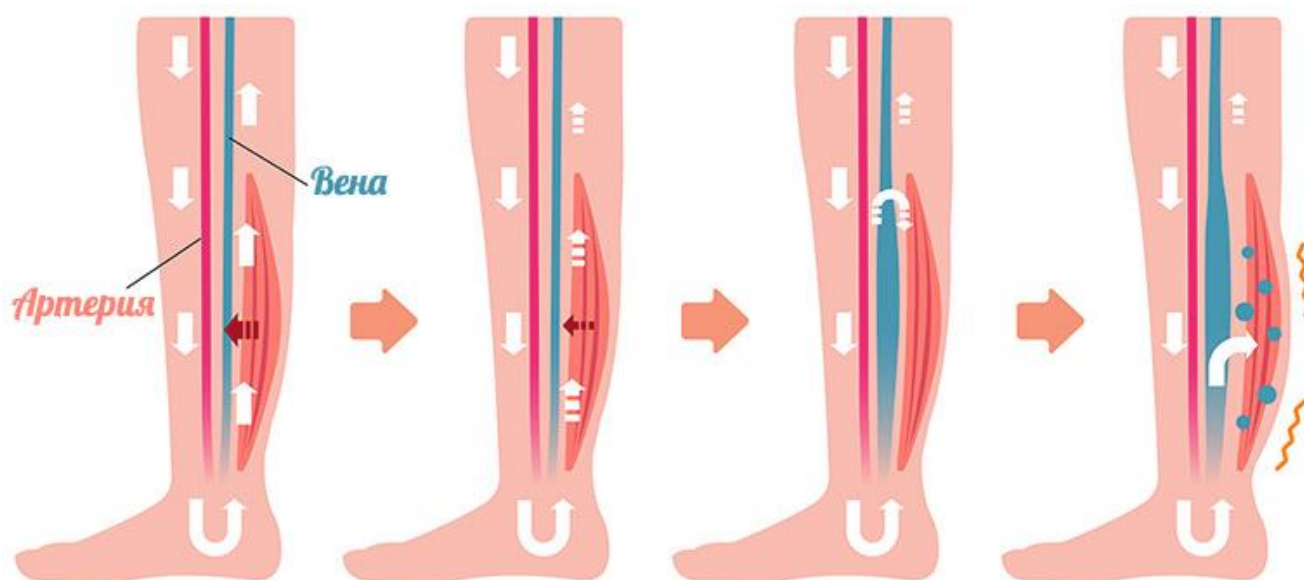
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**Abstract.** The article discusses the main properties of cinnamon and its impact on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. The chemical composition and nutritional value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



### Food for edema : 10 foods to combat excess liquid

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**Abstract.** The article deals with swelling of various parts of the body and their impact on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. Foods that will help reduce the level of puffiness are indicated, the scientific basis of nutrition against edema is considered.

**Keywords:** edema, diagnostics, useful products, dangerous products

Puffiness is a symptom, not a disease. Provoke swelling of kidney disease, heart failure, drugs. There are many other reasons that you shouldn't worry about. In most cases, the body retains a lot of water due to malnutrition, which brings discomfort and negatively affects the appearance. Reduce puffiness of the face in the morning and get rid of swelling of the legs due to long standing or sitting allow superfoods approved by nutritionists, nutritionists and scientists.

### Edema - why do they appear and how to get rid of them?

In mild cases, excess fluid accumulation occurs during pregnancy, due to long sitting or standing in one position, when consuming a lot of salt and before menstruation (PMS). Most often, swelling is observed on the feet, ankles, face, hands. If it is small and not associated with the disease, proper nutrition allows you to get rid of it.

Foods that can not be eaten with edema:

- salt - sodium binds to water in the body and slows down its excretion; <sup>[one]</sup>
- Refined carbohydrates (sugars and processed grains) – empty calories cause rapid spikes in blood sugar and insulin levels, which leads to sodium reabsorption in the kidneys. <sup>[2]</sup>

Exacerbate bloating, and at the same time water retention, can be carbonated drinks, cruciferous vegetables (the cabbage family), beans, starchy foods. You need to pamper yourself not just with healthy dishes, but with those that suit your digestive tract, taking into account all pathologies.

## **Top 10 useful products for edema**

### **1. Nuts**

Almonds, cashews and other types of nuts are rich in omega-3 fatty acids and magnesium. Fats control appetite, cravings for carbohydrates, and the mineral reduces water retention, especially with PMS, symptoms of dysmenorrhea. You can also get magnesium from whole grains, dark chocolate, and leafy green vegetables.

### **2. Bananas**

The fruit contains a lot of potassium, which lowers sodium levels and increases urine production. Vitamin B6 contained in bananas helps to flush out excess salt. If you don't like bananas because of their high glycemic index, replace them with spinach, beans, tomatoes, avocados. <sup>[3]</sup>

### **3. Celery**

The low-calorie plant has a lot of fiber and water, so healthy lifestyle fans snack on it to restore water balance and normalize the digestive tract. For better saturation, nutritionists advise spreading nut butter on celery sticks.

### **4. Parsley**

The herb has a reputation as a diuretic in folk medicine. It is added to dishes and a decoction is made from it. Infusion drink 1/3 cup twice a day. <sup>[four]</sup>

### **5. Garlic**

The bulbous plant is known for its antiseptic, choleretic and diuretic effects. Garlic relieves the pain of swelling and helps to get rid of them, as it is rich in antioxidants. <sup>[5]</sup>

### **6. Yogurt**

Although milk and cheese cause bloating in many people, yogurt has the opposite effect. Sugar-free fermented milk product with live active cultures contains effective probiotics that normalize the functioning of all organs, including the kidneys.

### **7. Red bell pepper**

Vitamins and minerals in sweet peppers maintain optimal water balance. The fiber contained in it gives a feeling of fullness and allows you not to overeat, to refrain from harmful snacks and desserts.

### **8. Sauerkraut**

The fermented product contains beneficial bacteria and improves intestinal motility, removes bad cholesterol and toxins, eliminates swelling on the face, especially under the eyes. It can be eaten in small quantities in the morning. <sup>[6]</sup>

### **9. Whole grains**

Whole grain and sprouted grain breads, quinoa and amaranth are rich in vitamins, minerals, protein, antioxidants and fiber. Unlike refined counterparts - white bread, pasta - fibrous carbohydrates fight inflammation and thus curb puffiness.

## 10. Sweet potato

Sweet potatoes are rich in vitamin B6 and potassium, two vital minerals needed to remove excess fluid from the body. It saturates no worse than refined carbohydrates and does not provoke insulin surges. <sup>[7]</sup>

## Other Ways to Reduce Puffiness

The following supplements will help normalize the condition and eliminate nutritional deficiencies: magnesium, B6, calcium, zinc, selenium and antioxidant vitamins A, C, E. Diuretic herbs - dandelion, horsetail, hibiscus, fennel, corn stigmas, nettle will be an excellent support for the body. , cranberry juice, St. John's wort, Ivan tea. <sup>[8, 9, 10, 11, 12]</sup> Take them as dried extracts (capsules, powders, teas) or tinctures.

## How else can you remove swelling:

- walk more - a little movement, raising the legs up helps to remove excess fluid;
- consume 2-2.5 liters of clean water - this seems illogical, but warm drinking stimulates metabolism and prevents stagnant processes; <sup>[13]</sup>
- exclude cow's milk, wheat ( gluten ), soy, corn, preservatives and chemical food additives from the diet - sometimes the rejection of food allergens completely solves the problem without drugs;
- wear compression stockings and comfortable shoes, clothes - they should not constrain the legs and fit around the wrists and ankles; <sup>[fourteen]</sup>
- lose weight, as excess weight disrupts blood circulation;
- engage in light physical exercise 5 days a week, if there are no contraindications;
- do a body massage before bathing with a rough washcloth or soft brush (moving from the fingertips to the heart) or a therapeutic massage to stimulate the outflow of lymph;
- resort to contrast hydrotherapy - alternate three-minute hot applications with cold ones for a minute (the cycle must be repeated three times 2-3 per day).

## Expert comment

### Tatyana Eliseeva, nutritionist, nutritionist

Each person is individual and the result of treatment always depends on the cause of the edema. If some methods turned out to be ineffective, do not despair - resort to other recommendations, combine them with each other. Talk to your doctor before taking supplements or increasing your activity level. This is vital if you have kidney problems or are on medication, as some types of exercise, potassium foods, and vitamin supplements may be contraindicated for you .

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### **Food for swelling: 10 foods to combat excess fluid**

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## **Benefit whites mushrooms - 5 good reasons to add a superfood to your diet**

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**Abstract.** The article discusses the main properties of the white fungus 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 white fungus in various types of medicine and the effectiveness of its use in various diseases are considered. The potentially adverse effects of the white fungus on the human body under certain medical conditions and diseases are analyzed separately.

**Key words:** ceps , benefits , harms, beneficial properties, contraindications

White mushrooms contradict the concept that the healthiest vegetarian foods are the brightest vegetables and fruits. Boletus mushrooms contain phytochemical compounds that have anti-cancer and anti-aging properties. Already at this stage, they could win the title of superfood , but their benefits are not limited to this. Doubt it's true? We've found five good reasons why you want to add a superfood to your diet.

The calorie content of white mushrooms is 22 kcal per 100 g. This is a low- carbohydrate , almost fat-free food with a low protein content. They also contain vitamin B6, folic acid, magnesium, zinc, potassium, riboflavin, niacin, and pantothenic acid, which helps provide energy by breaking down fats, proteins, and carbohydrates. It is also one of the best plant sources of selenium and vitamin D2.

### **Top 5 Health Benefits of White Mushrooms**

#### **1. Prevent Bone Loss**

Superfood has the potential to combat osteoporosis, mineralization defects, and muscle weakness. It contains copper, phosphorus and vitamin D2. The latter is converted in the body into the active form of vitamin D, which is necessary to maintain calcium levels. Want more D2 in mushrooms? Keep them in direct sunlight for 15-120 minutes. A simple intake increases the level of the substance to 10 µg per 100 g. <sup>[1, 2]</sup>

#### **2. Contains Antioxidants to Fight Any Inflammation and Cancer**

Scientists have found polyphenols, polysaccharides, selenium, vitamin C, as well as rare antioxidants ergothioneine and glutathione in porcini mushrooms . Valuable compounds do not lose their properties even after heat treatment. They are important for the body, as the conversion of food into energy causes oxidative stress and the formation of free radicals. Antioxidants protect organs and tissues from oxidizing agents and help to avoid many diseases. <sup>[3, 4]</sup>

#### **3. Support immunity**

White mushrooms are a food source of soluble fiber, beta- glucans . They activate T-lymphocytes and macrophages, stimulate them to capture and digest bacteria, foreign toxins and other dangerous compounds. Thus, beta- glucans increase the body's ability to fight infection, stop inflammation and tumor growth. The work of the immune system is also improved by the vitamins of groups B, C and selenium included in the composition. <sup>[5, 6, 7]</sup>

#### **4. Good for the heart**

Studies have shown that porcini mushrooms rapidly lower cholesterol levels in overweight adults. The ergothioneine contained in them and other plant components prevent the formation of plaques in the vessels and arteries. All this has a positive effect on the work of the heart, maintains normal blood pressure and blood circulation. <sup>[8, 9]</sup>

#### **5. Lower Blood Sugar and Improve Gut Health**

Polysaccharides in foods increase insulin sensitivity, prevent hyperglycemic syndrome - reduce sugar levels. Some compounds, such as beta - glucan, act as prebiotics and promote the growth of beneficial gut bacteria. Their role is difficult to overestimate, since the digestion of food, immunity, and brain function depend on the state of the intestine. <sup>[10, 11]</sup>

#### **Who should not eat porcini mushrooms - contraindications and precautions**

Mushrooms bought in the store are safe for everyone who does not have allergies and who is older than 7 years old - in young children the digestive system has not yet been formed, and the digestion of a heavy product can cause a malfunction in the stomach and intestines. There are also a few potential side effects to watch out for in people with GI problems: mushrooms can cause irritable bowel syndrome (IBS) upset, worsening ulcers or gastritis, pain, bloating, and constipation.

#### **How many white mushrooms are safe to eat each day?**

It is not necessary to consume the product daily, but it can be made part of a healthy diet. Nutritionists advise taking care that the menu is varied and that there are no more than 100 g of mushrooms every day. It is important that they are obtained from reliable sources and are non-toxic.

#### **How to eat porcini mushrooms: tips for adding to the diet**

Mushrooms are eaten at different stages of ripening, and stored in a paper bag in the refrigerator for 3-4 days. Therefore, freezing, canning, and drying are popular methods to extend their shelf life without sacrificing nutritional value. Before buying, it is important to check that the caps and legs are tight, not wet, without mold. Before cooking, remove dirt from them with a brush and rinse lightly with cold water.

Raw porcini mushrooms are added to salads, grilled, fried, stewed, baked and used in omelettes, casseroles, and roll fillings. Their taste is not pronounced, so marinades and sauces are crucial in a mushroom dish. Mushroom mushrooms are combined with many products and can replace meat in risotto, stew. They also replace part of the minced meat in order to reduce the calorie and fat content of the dish.

#### **Expert comment**

##### **Tatyana Eliseeva, nutritionist, nutritionist**

Useful porcini mushrooms help everyone to consume more antioxidants without exception - both vegetarians and vegans, and those who do not consider it necessary to monitor their diet. They protect against spikes in blood sugar and promote weight loss. The benefits can be much greater if combined with vitamin-rich vegetables and seasoned with healthy spices.

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### **Benefits of white mushrooms - 5 good reasons to add superfood to your diet**

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## Food for the brain - 12 foods for effective work

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**Abstract.** The article discusses the main functions of the brain for normal human life and its relationship with the body. A systematic review of modern specialized literature and relevant scientific data was carried out. A list of products useful for brain function is indicated. Potentially unfavorable products for brain activity are analyzed separately, general recommendations for maintaining its health are indicated.

**Keywords:** brain , health, healthy foods, dangerous foods, recommendations

The human brain is the most complex part of the body. It performs millions of operations every day and, unlike a computer, it never stops working. Therefore, it must be constantly fed. Although food does not increase IQ and does not make us smarter, it can energize us and help us concentrate. By adding smart foods to your diet, you will increase your chances of getting high grades in school, passing exams, successfully passing courses, getting a good job, and maintaining brain function in old age.

## Healthy food is the best fuel for the brain

First of all, glucose is needed for mental work. The body receives it from any carbohydrates and delivers it to every cell with the blood. The problem is that the brain cannot store its reserves and requires fuel every day. <sup>[one]</sup>

You can get glucose from slow and fast carbohydrates. The latter have a lot of harm and few (or no) valuable ingredients. If you do not feed the body with beneficial compounds, this will lead to feelings of fatigue, sadness and irritation.

Sleep problems, poor memory, difficulty solving problems are hardly something you want to experience every day while studying or working. Choose healthy foods that improve memory and make any learning process easier.

## **Top 12 Healthy Foods for Efficient Brain Functioning**

### **1. Oily fish**

Salmon, mackerel, tuna, herring, sardines are excellent sources of omega-3 fatty acids. The membrane of each cell is built from phospholipids, which is why the constant use of oily fish facilitates communication between neurons, accelerates blood circulation, mental functions and the ability to remember information. <sup>[2]</sup>

### **2. Dark chocolate**

Delicacy with 70% cocoa rich in flavonoids, caffeine, antioxidants. The compounds slow down age-related mental degradation, fight oxidative stress, and prevent cognitive impairment. <sup>[3]</sup>

### **3. Blueberries**

Antioxidants in berries are represented by anthocyanin, caffeic acid, catechin, quercetin. Herbal ingredients are known for their anti-inflammatory action. Some of them accumulate in the brain and slow down age-related neurodegenerative processes. In addition to blueberries, scientists advise eating strawberries, blackberries, blackcurrants, and mulberries. <sup>[4, 5]</sup>

### **4. Turmeric**

Curcumin, the active component of the spice, crosses the blood-brain barrier and directly affects the functioning of brain cells. It stimulates their growth in people with Alzheimer's disease, improves mood - the level of serotonin and dopamine. It is worth considering that turmeric is only 3–6% curcumin, and most studies use highly concentrated supplements at dosages of 500–2000 mg/day. <sup>[6, 7]</sup>

### **5. Nuts and seeds**

They contain omega-3 fatty acids, antioxidants, which makes them boosters of brain activity at any age, especially in the elderly. Vitamin E protects cells from oxidative stress caused by free radicals, reduces the risk of Alzheimer's disease, restores cognitive abilities - sensory and intellectual. <sup>[8, 9]</sup>

### **6. Whole grains**

Whole grains are another source of vitamin E. Brown rice, barley, wheat, buckwheat, oatmeal, and other whole grains reduce inflammation and preserve memory. They provide energy during the day and the necessary substances - thiamine, riboflavin, niacin, folate, iron, magnesium, selenium.

### **7. Coffee**

The drink relieves drowsiness, increases concentration and the ability to process a large amount of information. The antioxidants in coffee support these processes in adulthood—lifelong coffee consumption is associated with a reduced risk of stroke, Parkinson's, and Alzheimer's. <sup>[10]</sup>

### **8. Avocado**



Source of healthy monounsaturated fats reduces high blood pressure associated with cognitive impairment. Each fruit is also loaded with anti-inflammatory agents - phytonutrients , polyphenols, flavonoids . In addition, 20 different minerals and vitamins in avocados support the function of information-carrying nerves. <sup>[eleven]</sup>

## **9. Eggs**

Folic acid, choline, vitamins B6 and B12 are found in protein and yolk. They prevent brain contraction, support cognitive functions. Egg yolks are one of the most concentrated sources of choline, which the body uses to create the neurotransmitter acetylcholine. The latter is responsible for mood, memory. <sup>[12]</sup>

## **10. Broccoli**

Low-calorie asparagus is a rich source of dietary fiber and glucosinolate compounds . When they are broken down in the body, isothiocyanates are produced . These mustard oils reduce oxidative stress, a risk factor for neurodegenerative diseases. Other cruciferous vegetables with glucosinolates include bok choy , turnips, Brussels sprouts, and cauliflower. Broccoli also contains vitamin C and flavonoids for mental health. <sup>[13]</sup>

## **11. Oranges**

One medium orange can contain 90% of the daily value of vitamin C. According to one study, high blood levels are associated with better problem solving, focus, attention, and speed of decision making. It additionally fights free radicals that damage brain cells and protects against depressive disorders, anxiety, schizophrenia, Alzheimer's disease. <sup>[14, 15]</sup>

## **12. Green tea**

The caffeine in green tea improves alertness, performance, memory, and concentration. Another beneficial ingredient in the drink is the amino acid L- theanine . It reduces anxiety and makes a person feel more relaxed, thus offsetting the stimulating effects of caffeine. <sup>[16, 17]</sup>

## **Additional Ways to Improve Brain Performance**

Food supplements such as beta-carotene, magnesium, vitamins B, C and E increase brain activity and have a general strengthening effect. But resorting to dietary supplements is worth it if there is a shortage of these substances. You should also pay attention to dietary supplements with ginseng, curcumin .

An important role in brain health is played by 8-hour sleep, physical activity. Researchers have proven that sport is a powerful stimulator of neuroplasticity . Therefore, athletes are easier to switch off from the noise of life, process information faster than people without sports thinking. As a result, they have a healthier nervous system.

## **Expert comment**

### **Tatyana Eliseeva, nutritionist, nutritionist**

Is the number of recommendations on nutrition and lifestyle crazy and you just can't put them into practice? Then it's time to make a menu for the week, taking into account activity. The right diet will

not only improve the quality of life today, but will also greatly reduce the risk of developing neurological problems later in life.

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## Food for the brain - 12 foods for effective work

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### **Benefit quince - facts and proven science healing properties**

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

*Key words:* quince , benefit, harm, beneficial properties, contraindications

Golden yellow quince is one of the unusual fruits with unique health benefits that everyone should know about. Quince has been used in folk medicine for decades to boost immunity, fight viruses, treat digestive problems, and as a natural antidepressant. We have compiled a short list of how eating juicy fruits will keep you healthy and prolong your life.

The quince calorie content is low - 57 kcal per 100 g. The nutritional value of the fruit is unchanged, since it is the only representative of its kind. The fruit contains a lot of pectin, a small amount of vitamins B, C, calcium, potassium, magnesium, copper, iron. It does not contain a large percentage of any compounds, but it contains many different substances, including tannins - catechin and epicatechin .

### **Top 8 Benefits of Quince for Your Health**

## **1. Accelerates weight loss**

The pulp is rich in fiber, which helps the digestive tract work efficiently and regularly. It improves the condition of the entire digestive system, increases energy levels and relieves excess weight. This makes the fruit an ideal addition to the diet of those who want to lose extra pounds and exercise a lot - the vitamins and minerals included in the composition support health during intense exercise.

## **2. Relieve Nausea During Pregnancy**

Quince syrup not only reduces toxicosis, but helps better than vitamin B6. This was confirmed by a study involving 76 pregnant women: women were able to get rid of unpleasant symptoms by taking just a tablespoon of syrup three times a day. <sup>[one]</sup>

## **3. Prevents Peptic Ulcers**

The fruit contains unique compounds to fight the *H. pylori* bacterium, the main culprit in stomach ulcers. Numerous studies have also shown that the substances protect the walls of the stomach from damage from alcohol, unbalanced diets and during times of stress. <sup>[2]</sup>

## **4. Solves Digestive Problems and Protects the Liver**

Quince has proven effective in combating digestive disorders such as inflammatory bowel disease and ulcerative colitis. It supports the liver, reduces the symptoms of acid reflux GERD. In traditional Chinese medicine, its extract is used to eliminate heaviness in the abdomen, heartburn, bloating, and flatulence. <sup>[3, 4, 5]</sup>

## **5. Reduces Uncomfortable Allergy Symptoms**

Quince fruit and its juice alleviate atopic dermatitis, seasonal allergies and asthma attacks. As scientists have found, some compounds suppress the activity of immune cells responsible for allergic reactions. The substances are so effective that they are used in the manufacture of medicines for asthma and the common cold. <sup>[6, 7]</sup>

## **6. Calms and strengthens the nervous system**

Regular consumption of quince juice reduces stress levels in people who lead an overly active lifestyle. The calming properties of the product have also long been appreciated by yogis - teas, infusions and juices can be consumed after meditation, breathing techniques and asanas. The antioxidants in the fruit have been proven to help keep you calm throughout the day. <sup>[eight]</sup>

## **7. Has antitumor potential**

Quince reduces the risk of getting cancer - it does not allow harmful chemical compounds to oxidize in the cells of the body. It limits the activity of free radicals, has an astringent effect due to tannins. The components perfectly cope with the protection of mucous membranes from cancer - they combine with toxins, neutralize them and protect cell membranes from destruction. <sup>[9]</sup>

## **8. Supports good heart function**

Fruits are rich in chlorogenic acids, anthocyanins and flavonols, as well as catechins and polyphenols. Several studies have proven that they normalize blood pressure. And the natural soluble fibers contained in the fruits are useful for people with high cholesterol levels. <sup>[ten]</sup>

## **Harmful properties of quince**

Nutritionists do not recommend getting involved in superfood when taking medications and pregnant women. It is also worth limiting its use to those whose professional activities are related to the voice - some components negatively affect the vocal cords. People suffering from pleurisy and constipation should not eat fresh pulp - it has an astringent and fixing effect, which can lead to spasms.

## **How much quince can you eat?**

A close relative of the apple and pear can be eaten regularly, but in limited quantities - no more than 1-2 pieces per day. Ripe yellow fruits are full of valuable organic compounds and keep well for several weeks in the refrigerator. Green unripe foods should be avoided, as they are bitter and inedible, as well as dented and shriveled - they have no taste.

## **How to eat quince: tips for cooking and pairing with other foods**

Low-calorie fruit is useful raw and cooked. Its taste is not immediately delightful and you need to get used to it. Raw fruits are tough, astringent, sour, so they are mainly cooked by first cutting off the skin and cutting out the core. The tannins disappear with heat treatment - the temperature removes the astringency and releases the natural anthocyanin pigments. That is why, under the influence of heat and steam, the flesh turns orange-pink or red.

You can combine quince with almost everything that combines apples and pears: with meat, earthy vegetables (potatoes, beets), walnuts, almonds. Its fresh slices are served on a pillow of greens with cilantro, sprinkled with lime or lemon juice. To get a dessert, fruits are boiled with cinnamon and star anise or stewed for at least 40-50 minutes under the lid. Fruits are added to jams, jellies, marmalades. Juice is used as a flavoring because of the bright floral-fruity aroma.

## **Expert comment**

### **Tatyana Eliseeva, nutritionist, nutritionist**

Although quince is not particularly popular in cooking, it still deserves a place on your table due to its unique medicinal properties. There are many delicious recipes to help you enjoy this incredible ingredient and get the most of its health benefits.

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

### **Benefits of quince - facts and scientifically proven healing properties**

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



### **Cardamom: 8 Proven Benefits research**

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

*Keywords:* cardamom , benefit, harm, beneficial properties, contraindications

It's not the most popular spice in the ginger family, but it's fantastically healthy. It contains many antioxidants, including glutathione , which removes heavy metals and speeds up recovery from viral diseases. Substances slow down aging, reduce the risk of chronic diseases and cancer.

Calorie content of cardamom per 100 g - 311 kcal. Green and black seeds have similar nutritional value. Greens differ only in that they are harvested to full maturity, while blacks are additionally intensively dried and crushed. Unripe grains are preferable not only because of the mild sweet taste - they have a little more benefit.

## **Top 8 Health Benefits of Cardamom**

### **1. Lowers blood pressure**

The study showed that in order to normalize the pressure of hypertensive patients, it is enough to consume 3 g of cardamom powder daily. The exact reason for this result is unknown, but scientists suggest that it is associated with high levels of antioxidants and a diuretic effect. Some experiments have shown that the spice has great potential to fight heart disease - it protects the heart from oxidation and controls the concentration of cholesterol in the blood, even with an abundance of fat in the diet. <sup>[12]</sup>

### **2. Has anti-cancer properties**

The food supplement does not replace treatment, but can be used as a maintenance therapy - its phytochemical compounds help fight cancer. According to research, the powder enhances the ability of immune cells to attack cancer cells and stop their reproduction. For example, a short 15-day experiment resulted in a significant reduction in skin tumors. <sup>[3, 4]</sup>

### **3. Takes care of the liver**

In Ayurveda, cardamom is used to eliminate toxins and this property is scientifically confirmed. The ability to detoxify has a positive effect on the liver, which neutralizes harmful substances and cleanses the body of them. Green spice supplements additionally protect the liver from damage, improve the condition of the organ in non-alcoholic fatty disease, obesity and overweight. <sup>[5]</sup>

### **4. Improves breathing and oxygen consumption**

An increase in air flow to the lungs occurs during aromatherapy due to the invigorating aroma and when cardamom is taken orally - the extract relaxes the airways. Extract injections act faster, expanding the lumen of the larynx (relevant for asthma). Also grains have the potential in the fight against respiratory diseases.

### **5. Normalizes digestion and protects against ulcers**

Cardamom is a remedy for discomfort, nausea, and vomiting. Best known for its ability to heal the stomach, reduce acid reflux and heal ulcers. In mice, the extract completely prevented the development of ulcers and reduced the size of existing ulcers by 50%. In a test tube test, it protected against the bacterium *Helicobacter pylori*, which causes most stomach problems. Its methanol extract helps fight high acidity, flatulence, and stomach cramps. [6]

## **6. Prevents caries and relieves bad breath**

In ancient times, seeds were used instead of chewing gum to freshen breath after eating. Today, many companies use them in the production of chewing gums, toothpastes, mouthwashes - a natural product not only gives a fresh mint flavor, but also neutralizes bacteria in the oral cavity. Test-tube experiments have confirmed that the extract fights five caries-causing bacteria and reduces their numbers in saliva by 54%. [7]

## **7. Reduces blood sugar**

Regulation of glucose and insulin levels occurs due to the suppression of digestive enzymes - when they are less active, the digestion of starch and proteins slows down. Other laboratory studies have shown that cardamom reduces oxidative stress and inflammation in obese, prediabetic women. [eight]

## **8. Has antibacterial properties**

Candidiasis, staphylococcus, salmonella, campylobacter (one of the main causes of diarrhea in the world) and other dangerous bacilli die when exposed to the essential oil contained in cardamom grains. Natural compounds are not as effective as antibiotics, but they do not destroy beneficial bacteria. In the future, they may become an alternative therapy in the fight against antibiotic-resistant microbes. [9, 10]

## **Contraindications to the use of cardamom**

The use of seasoning is not safe in some cases:

- with diverticulitis ;
- Crohn's disease, IBS;
- gallstones;
- endometriosis ;
- pregnancy.

You should consult your doctor before consuming the spice, especially in large quantities.

## **The rate of consumption of cardamom**

There is no established safe dosage for cardamom pods or ground powder. For most people, 3 g is considered a daily allowance, but this portion is highly dependent on age, health, and allergies. You can buy a spice in advance and use it as needed - in a dry, dark, cool place, it is stored for at least a year.

## **What to cook with cardamom**

A healthy ingredient that gives a delicious flavor to popular autumn dishes, drinks, desserts such as gingerbread, cakes, cider, pumpkin latte. It is added to coffee and tea at any time of the year, and in the Scandinavian countries it is flavored with sweet pastries instead of cinnamon. Ground seeds are mainly seasoned with soups, a side dish of rice, stewed vegetables, fruit salads. The powder is also

mixed with honey and pepper to marinate the chicken. Whole green pods are used in vegetarian pulao , curries, and hot dishes.

## Expert comment

### Tatyana Eliseeva, nutritionist, nutritionist

Now you have enough reasons and excuses to add cardamom to your daily diet - you will get a lot of health benefits along with great taste and aroma. The spice enhances the antioxidant status of the body and is not in vain in almost every home in India, where it is considered a natural antidepressant, superfood for sexual health and high performance. Use spice in moderation, and it will greatly enhance the benefits of your usual sweet or savory dishes.

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## Cardamom: 8 Research Proven Benefits

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



### **Heart Food - Top 15 heart protection products \_ \_ diseases**

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**Abstract.** The article discusses the main functions of the heart for normal human life and its relationship with the body. A systematic review of modern specialized literature and relevant scientific data was carried out. A list of products useful for the work of the heart is indicated. Potentially unfavorable products for the activity of the heart are analyzed separately, general recommendations for maintaining its health are indicated.

**Keywords:** heart , health, healthy foods, dangerous foods, recommendations

Heart disease remains the leading cause of death worldwide. Provoke their plaques in the arteries and blood vessels. They block the flow of nutrients, oxygen to the heart muscle. Several factors trigger their formation, two of which you cannot control - age and heredity. But you can save your life by eliminating trans fats , sugar and other fast carbohydrates from your diet.

### **Heart and nutrition - the connection of food with the cardiovascular system**

According to the WHO, ischemic disease is the leading killer in the world. Women at the age of 55 and men at the age of 45 are more susceptible to it. Risk factors for heart disease include:

- unhealthy diet, obesity;

- insulin resistance and diabetes;
- heredity;
- high cholesterol and blood pressure;
- low physical activity;
- alcohol consumption, smoking;
- clinical depression.

People with diabetes and overweight are twice as likely to suffer from heart disease - there is a direct link between blood glucose levels and the health of blood vessels. Glucose rises after eating any food, but some foods do not cause sharp jumps in it and contain useful compounds that are similar in properties to drugs.

## **Top 15 useful products for blood vessels and the heart**

### **1. Leafy green vegetables**

Cabbage, kohlrabi, broccoli, arugula, lettuce, spinach, dill, parsley and other greens are full of minerals, vitamins, antioxidants. Vitamin K normalizes blood clotting, protects blood vessels and improves the function of the cells lining them. Consuming leafy greens significantly reduces the risk of ischemia, according to a study of 29,689 women. <sup>[12]</sup>

### **2. Avocado**

One fruit contains 975 mg of potassium, which is 28% of its daily value. To lower blood pressure by 8.0/4.1 mmHg . and the risk of stroke by 15%, it is enough to consume 4.7 g of potassium per day. Monounsaturated fats in avocados lower cholesterol in overweight people, the likelihood of developing metabolic syndrome. <sup>[3, 4]</sup>

### **3. Soy**

Soy protein, unlike animal protein, lowers bad cholesterol by an average of 3% and has many benefits for the cardiovascular system. Soy isoflavones play an important role in this - they reduce total cholesterol by 3.9 mg / dl and “bad” LDL by 5 mg / dl. <sup>[5]</sup>

### **4. Whole grains**

Compared to refined grains, brown rice, oats, rye, barley, buckwheat and quinoa contain more fiber. An analysis of 45 studies showed that eating three servings of whole grains daily reduced the likelihood of various heart conditions by 22%. <sup>[6, 7]</sup>

### **5. Oily fish**

Salmon, mackerel, sardines, and tuna provide your daily dose of omega-3s without supplementation. To lower systolic pressure, it is enough to consume three servings of oily fish per week. <sup>[eight]</sup>

### **6. Berries**

Eating blueberries daily improves the function of the cells lining blood vessels, helping to control blood pressure and blood clotting. Eating strawberries, blackberries, and raspberries has also been associated with an 11% reduction in excess weight, LDL, and markers of inflammation. The antioxidants anthocyanins provide benefits, which protect the body from oxidative stress. <sup>[9, 10]</sup>



## **7. Oranges**

An average orange contains about 62 kcal and 3 g of fiber. Pectin fights cholesterol, while potassium helps control blood pressure and improves blood vessel health.

## **8. Sweet potato**

Replace white potatoes with sweet potatoes with a lower glycemic index. Sweet potatoes do not cause a rapid spike in blood sugar, they also have fiber, vitamin A and lycopene . To enhance the taste, you can season it with cinnamon and lime juice. <sup>[eleven]</sup>

## **9. Walnuts**

It is an excellent source of fiber and trace elements such as magnesium, copper, and manganese. Studies have shown that regular consumption of walnuts reduces LDL levels by 16%, oxidative stress and inflammation. <sup>[12]</sup>

## **10. Dark chocolate**

High-quality dark chocolate with at least 70% cocoa is rich in flavonoids . Studies have confirmed that if you eat it five times a week, the risk of ischemia is reduced by 57%. Eating chocolate twice a week is associated with a 32% lower risk of calcified plaque in the arteries. <sup>[13, 14]</sup>

## **11. Beans**

Beans contain starch, which is not broken down by pancreatic enzymes - it is processed by bacteria in the large intestine. Resistant starch improves heart health by lowering triglycerides and LDL levels. Its action is complemented by folic acid, antioxidants, magnesium. <sup>[15, 16]</sup>

## **12. Tomatoes**

The composition of the vegetable includes the plant pigment lycopene with powerful antioxidant properties. It neutralizes harmful free radicals, preventing oxidative damage and inflammation—low blood levels of lycopene have been linked to heart attacks and stroke. <sup>[17]</sup>

## **13. Seeds**

Chia, flax, and hemp seeds are good sources of heart-healthy nutrients, including fiber and omega-3 fatty acids. Their addition to the diet prevents heart disease, including inflammation, high cholesterol levels. <sup>[eighteen]</sup>

## **14. Olive oil**

Antioxidants and other substances in olive oil reduce inflammation and prevent heart problems. A study of 7,216 adults found that patients who consumed more healthy dressing had a 35% lower risk of developing heart disease. <sup>[19]</sup>

## **15. Garlic**

The benefits of garlic are associated with the presence of the compound allicin, which is known for various therapeutic effects. A six-month study proves that the effect of daily intake of garlic extract in

doses of 600-1500 mg is equal to the effect of taking a prescription drug for lowering blood pressure. [20, 21]

## 5 steps to protect against heart disease

The ranking of the most useful foods for the heart did not include food that was less tested by scientists. But cardiologists and scientists have no doubt that you can also benefit from sweet red peppers, asparagus, acorn squash, cantaloupe cantaloupe, papaya, green tea, almonds, tofu, low-fat yogurt, and carrots. This food list is enough to create a tasty and healthy menu for the week - planning will help you follow the diet and track improvements.

When planning the menu, you should follow a few more rules:

- Control portion size. How much you eat is just as important as what you eat.
- Eat more vegetables and fruits. Natural whole foods are low in calories , high in fiber, and help cut down on unhealthy snacks.
- Choose low-fat protein sources. Lean meats, poultry, fish, low-fat dairy products, and eggs are some of the best sources of protein.
- Reduce the amount of salt in your food. Sodium raises blood pressure.
- Limit your intake of unhealthy fats. Cutting out trans fats is an important step in controlling your cholesterol levels.

## Expert comment

### Tatyana Eliseeva, nutritionist, nutritionist

Changing eating habits is often difficult, especially after years of unhealthy eating. On the right path, remember that willpower is a muscle. The sooner you start training it, the higher your chances of a comfortable old age without severe heart disease.

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### **Food for the Heart - The 15 Best Foods to Protect Against Heart Disease**

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**Abstract.** The article discusses the main functions of the heart for normal human life and its relationship with the body. A systematic review of modern specialized literature and relevant scientific data was carried out. A list of products useful for the work of the heart is indicated. Potentially unfavorable products for the activity of the heart are analyzed separately, general recommendations for maintaining its health are indicated.



## **Spirulina - benefits for the body , contraindications and instructions for use**

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**Abstract.** The article discusses the main properties of spirulina and its impact 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 spirulina is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of spirulina analyzed separately on the human body under certain medical conditions and diseases.

*Key words:* spirulina, benefits, harms, beneficial properties, contraindications

Spirulina is a healthy, environmentally friendly blue-green algae and the most promising product of the future. The powder stimulates the immune system, removes toxins, contains nine essential amino acids, which is rare for a vegetarian food source. Although spirulina has been around for over 2.4 billion years, we only started to consider its benefits 40 years ago, after NASA used the algae as a supplement for astronauts on space missions.

The calorie content of spirulina is low - in 100 g of dry powder there are only 290 cal. But it won the title of superfood for other reasons: the same serving contains 57 g of protein, 24 g of easily digestible carbohydrates and approximately 14 g of fats represented by omega-6 and omega-3. Vitamins A, E, B1, B2, B3, B12, copper, magnesium, potassium, iron, manganese, iodine are concentrated in cyanobacteria . That's why it's so effective at protecting cells and tissues from damage, boosting the immune system, and supporting the heart and bone strength.

### **Top 10 Health Benefits of Spirulina**

#### **1. Fights Anemia**

There are several types of anemia, but the most common is iron deficiency. It is characterized by a decrease in hemoglobin levels, leading to a constant feeling of fatigue and weakness. Scientists already have the first evidence that algae increase the amount of hemoglobin in red blood cells in older people. The effect was predictable - in 1 tbsp. l. as much iron powder as 700 g of young spinach. <sup>[one]</sup>

#### **2. Reduces total and bad cholesterol**

Bad LDL cholesterol is the culprit of atherosclerosis. Plaque formation in the coronary arteries can start at an early age and become a serious health threat over time, increasing the risk of heart attack and stroke. Just 1g of spirulina per day reduces LDL by 10.1% and triglycerides by 16.3%.

supplement improves blood circulation , reduces the risk of blood clots. A high concentration of omega-3s helps maintain normal cholesterol levels in those who follow a plant-based diet and avoid seafood. <sup>[2]</sup>

### **3. Has anti-cancer properties**

The effect of microalgae on oral cancer has been well studied. Studies show that as little as 1g per day can completely eliminate precancerous lesions in the mouth and reduce symptoms better than drugs. As for other types of cancer, the supplement reduces the risks of their development and the size of tumors. <sup>[3, 4, 5]</sup>

### **4. Reduces high blood pressure**

Too high blood pressure puts additional strain on the blood vessels, heart, brain, kidneys, and eyes. As a result, the risk of heart attacks, aortic aneurysms, vascular dementia, and kidney disease increases. To prevent them and reduce pressure, it is necessary to consume at least 4.5 g of spirulina per day . The supplement increases the production of nitric oxide. The latter makes the vessels softer and wider - improves blood flow, slows down the aging process. <sup>[6]</sup>

### **5. Reduces Allergy Symptoms**

Allergic rhinitis triggered by pollen, animal dander or other allergens is similar to the common cold. Its symptoms cause sleep problems and interfere with daily life. There is evidence that 2 g of spirulina per day improves the quality of life in seasonal allergic rhinitis - relieves sneezing, itching, nasal congestion, runny nose. <sup>[7]</sup>

### **6. Shows Powerful Antioxidant Properties**

Spirulina is an excellent source of antioxidants. It stimulates the brain, acts as an analgesic and anti-inflammatory agent, blocks free radicals - protects cells from oxidative damage. Most of the functions are performed by the plant protein phycocyanin , which fights any chronic inflammation. <sup>[eight]</sup>

### **7. Stimulates endurance and accelerates muscle recovery after exercise**

Spirulina helps athletes recover faster, improve their performance in the gym. It minimizes the damage caused to the body during intense exercise, increases endurance and strength. Legends say that envoys of the Aztec emperors used it to maintain health during marathon races. <sup>[9]</sup>

### **8. Helps Vegans and Vegetarians Eat Protein**

Microalgae is rich in complete plant-based protein, essential for building muscle and maintaining shape - protein levels comparable to eggs. It also contains a lot of pseudo-vitamin B12. If you follow a vegan or vegetarian diet, you know how difficult it can be to find plant-based sources of vitamin B12. <sup>[ten]</sup>

### **9. Detoxifies**

Spirulina has proven to be effective in removing pesticides, arsenic, cadmium and other heavy metals from the body from food. Detoxification can be expected at 20–30 g/day and in combination with zinc, which requires medical supervision. Experts note that dietary supplements are not only effective, but also relieve some of the side effects that occur during detoxification . <sup>[eleven]</sup>

## 10. Reduces Candida Overgrowth

The antimicrobial properties of the components are so great that they successfully fight Candida colonies, stop the reproduction of yeast-like fungi. Superfood also promotes the growth of beneficial bacteria in the intestines, helps to restore the mucosa. <sup>[12]</sup>

### Contraindications and potential harm - who should not take spirulina

Algae is contraindicated in children, adults with a severe hereditary disease phenylketonuria and in violation of blood clotting. Doctors advise buying spirulina only from trusted brands with 10-20 years of experience, testing products in third-party organizations (USP, ConsumerLab, NSF International). Also, you can not combine taking the supplement with drugs for diabetes, to increase blood clotting and other drugs. Before you start taking it, you must always consult with your doctor.

### How to take spirulina correctly ?

You can stir a small scoop of the powder into a glass of water, juice, smoothie, or add it to soup, pesto, or healthy dried fruit and nut candies. It is worth considering that the superfood turns food dark green or black, and its savory earthy taste is best compensated by sweet fruits such as banana, pineapple, mango.

### Dosage and safety of spirulina : instructions for use

The standard daily dose is 1-3 g, but this can be increased up to 10 g per day. The daily portion should be divided into 2-3 doses and gradually introduced into the diet. Do not exceed the dosage recommended by the manufacturer - instead of additional benefits, you will get indigestion.

### Expert comment

#### Tatyana Eliseeva, nutritionist, nutritionist

Nutritionists often recommend taking chlorella because of its richer composition: the only thing that spirulina has more is copper, the deficiency of which is rare. But the price of quality chlorella is higher and it is produced mainly in powder form. Whichever seaweed you choose, it's better than nothing. Dietary supplements are so rich in nutrients that they can protect against a variety of diseases and infections.

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### **Spirulina - benefits for the body, contraindications and instructions for use**

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**Abstract.** The article discusses the main properties of spirulina and its impact 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 spirulina is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of spirulina analyzed separately on the human body under certain medical conditions and diseases.



### **Food for the skin - 12 products for her beauty and health**

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**Abstract.** The article discusses the main functions of the skin for normal human life and its relationship with the body. A systematic review of modern specialized literature and relevant scientific data was carried out. The list of products useful for the skin is indicated. Potentially unfavorable



products for skin activity are analyzed separately, general recommendations for maintaining skin health are indicated.

*Keywords:* skin , health, healthy foods, dangerous foods, recommendations

The skin is the largest organ of the body. It protects us from the external environment and reflects the state of health. Her appearance is only partly due to genes and cosmetics used, because beauty starts from the inside. We've rounded up the top superfoods that have no side effects and bring back a clear, radiant complexion, shiny hair, and strong nails.

### **What should you eat to keep your skin clear?**

If you constantly eat processed foods or meals without fiber that are high in sugar and fat, this will lead to acne, increased sebum production , dark circles under the eyes.

The main causes of acne , peeling, early wrinkles:

- smoking and excessive alcohol consumption;
- malnutrition - lack of antioxidants and fatty acids;
- lack of SPF protection against UVA and UVB rays;
- lack of sleep and stress.

Prevention is an effective way to fight aging. A balanced diet rich in vitamins A, B2, B3, B6, C, D, E, zinc and selenium will help in this. A varied diet provides all these nutrients without the need for supplements. <sup>[one]</sup>

## **Top 12 Beauty and Skin Health Products**

### **1. Avocado**

The pulp of the fruit combines vitamins E and C - the most effective combination for the production of collagen, protection against oxidative damage caused by the environment. The fats in avocados increase skin elasticity and firmness, according to a study of over 700 women. <sup>[2, 3]</sup>

### **2. Dark chocolate**

Daily use of cocoa powder, which is high in antioxidants, makes skin more hydrated and less sensitive to the sun, a 3-month study proves. Scientists also note an improvement in blood circulation - the delivery of oxygen and nutrients to cells. The same effect was obtained by people who consumed 20 g of dark chocolate with 70% cocoa. <sup>[4, 5]</sup>

### **3. Oily fish**

The healthiest sources of omega-3s are mackerel, salmon, herring, and sardines. Polyunsaturated fatty acids PNU maintain the density and elasticity of the skin, reduce their sensitivity to UV rays. They fight inflammatory and autoimmune diseases that cause inflammation, redness, acne, dermatitis. Also, fish contains the well-known antioxidant vitamin E to fight free radicals, and zinc for the production of new cells, wound healing. <sup>[6, 7]</sup>

### **4. Tomatoes**

An affordable source of vitamin C contains all the major carotenoids , including lycopene , lutein . They provide sun protection and prevent wrinkles. The components are best absorbed with fats, so nutritionists advise eating tomatoes with cheese and olive oil. <sup>[8, 9]</sup>

## **5. Sweet Potato**

In 100 g of baked sweet potato, there is 6 times more beta-carotene (provitamin A) than the body needs per day. Antioxidant preserves the health of the skin - it penetrates the cells and protects them from death, loss of moisture. <sup>[ten]</sup>

## **6. Red and yellow bell peppers**

One cup of crushed red bell pepper contains 156% of the daily value of vitamin A, 211% - vitamin C. They are necessary to maintain elasticity, strengthen blood vessels, and fight signs of aging - thickening, uneven skin. <sup>[eleven]</sup>

## **7. Red grapes**

Wine producers often talk about the benefits of the drink because of the resveratrol that is part of it . But you don't have to drink alcohol to get the full benefits of the polyphenolic compound - the component is found in red grapes (especially the skins). Test-tube studies show that it slows down the production of free radicals and the aging process. <sup>[12]</sup>

## **8. Broccoli**

Broccoli contains zinc, vitamins A and C, carotenoid lutein . The components support the level of collagen, protect against oxidative damage and, as a result, wrinkles. In inflorescences there is a special substance sulforaphane . The compound has anti-cancer activity, neutralizes dangerous free radicals and activates the body's defense systems - it reduces damage from UV radiation by 29%. <sup>[13, 14]</sup>

## **9. Walnuts**

Essential fats, zinc, vitamin E, selenium and protein - these and other nutrients in the nuclei contribute to the formation of a reliable protective barrier and wound healing, fight bacteria, inflammation. Walnuts have the highest concentration of omega-3 and omega-6, as well as a good ratio of these compounds. <sup>[fifteen]</sup>

## **10. Soy**

Soy isoflavones reduce fine lines and restore skin firmness, according to a 12-week study in middle-aged women. In postmenopause, soy increases skin hydration and increases the amount of collagen - keeps it smooth, supple. <sup>[16, 17]</sup>

## **11. Sunflower seeds**

Grains are valued for their high concentration of vitamin E and selenium - 28 g contains 49% and 41% of the daily value, respectively. Their mineral and vitamin composition normalizes the functioning of internal organs, stimulates the synthesis of collagen.

## **12. Green tea**

The drink is rich in catechins and antioxidants, which slow down aging and protect against sun damage. In one study, taking it daily reduced sun redness by 25%. To increase the effectiveness of catechins, you need to drink tea with milk. [18, 19]

### **Beauty menu - other ways to improve skin condition**

Start taking the lead in fighting wrinkles and acne today by eating a balanced diet, avoiding alcohol, and staying active. It is important to maintain water balance - drink 6-8 glasses of water a day - and add pre-, probiotics to the diet .

Avoiding dairy products helps some people overcome breakouts, as cow's milk contains A1 beta-casein. Protein is not suitable for many people with inflammatory processes and other pathologies, and not just those who have lactose intolerance. Coconut and almond milk remain the best alternatives. Milk from cereals (oatmeal, rice, etc.) is not beneficial - it is water with flour, a quick carbohydrate.

### **Expert comment**

#### **Tatyana Eliseeva, nutritionist, nutritionist**

When it comes to dieting from another Monday and draconian restrictions, it threatens to falter. Everything in moderation is the best mantra to write on the fridge. Dieticians and nutritionists advise to consume 80% of healthy food and occasionally indulge in useless goodies. But if you notice that the cheat meal - “cheating with food”) have become more frequent, return to compiling the menu for the day or week. Fresh vegetables, fruits and properly prepared meals will make your skin glow again!

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### **Food for the skin - 12 products for its beauty and health**

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## **Food how natural laxative to treat constipation**

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**Abstract.** The article discusses the causes of constipation and their impact on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. Foods that will help cleanse the intestines are indicated, the scientific basis of nutrition against constipation is considered.

**Keywords:** constipation, natural laxative, diagnostics, healthy foods, dangerous foods

Almost 20% of the world's population suffers from irregular and difficult bowel movements. Most of them are women, which is related to hormones. Not all people dare to see a doctor with a delicate problem and endure discomfort for years. Luckily, there are safe, scientifically backed treatments—it's easy to get your bowels started today without drugs.

### **What provokes constipation - the main causes and the path to recovery**

Physical exercise, dietary habits, health status, age, and even gender affect the number of bowel movements per day. Violation of the secretory and evacuation function of the large intestine often occurs for three reasons - dehydration, low physical activity, lack of fiber in the diet. In more severe cases, constipation causes stress, hormonal changes, spinal injuries, muscle problems, cancer, IBS, and other digestive disorders.

To solve the problem, many people resort to laxatives, but their frequent use disrupts the electrolyte balance and changes the acid-base balance, which in the long term leads to damage to the heart and kidneys. Avoiding problems is easy - you need to add natural laxatives to the menu: vegetables, fruits, legumes, nuts, seeds.

The American Dietetic Association recommends 25 grams of fiber per day for women and 38 grams for men. <sup>[1]</sup> To follow the recommendation, you need to fill your plate 50% with fruits and vegetables. At least half of the grains consumed per day should be whole grains . They contain ingredients that are beneficial for the digestive system and protect against any inflammatory processes.

### **Top 15 Foods Instead of a Laxative**

#### **1. Kefir and yogurt**

Fermented milk products are made from milk fermented with friendly bacteria - mainly lactic acid and bifidobacteria . Bacteria convert some of the lactose into lactic acid, so kefir and yogurt can be drunk by people with lactose intolerance. The probiotics included in them normalize the stool, improve the condition after taking antibiotics, with IBS and other diseases of the gastrointestinal tract. <sup>[2, 3]</sup>

#### **2. Prunes**

Dried plum is one of the most famous and effective natural laxatives. Studies have confirmed that dried fruit is better than psyllium , increases peristalsis, stimulates natural emptying. Its effect is provided not by fiber, but by sugar alcohol - sorbitol attracts water to the intestines and promotes its emptying. <sup>[4, 5, 6]</sup>

### **3. Berries**

Fiber-rich strawberries, blueberries, blackberries are a safe and gentle natural laxative. Unlike greens, apples and pears, berries do not cause bloating and flatulence, and the antioxidants included in the composition reduce inflammation. <sup>[7]</sup>

### **4. Sauerkraut**

The ancient dish has probiotic properties and, in addition to fiber, is rich in antioxidants, vitamins C, B and K, and also contains iron and manganese. These substances improve the state of the immune system, prevents the development of inflammation. If you regularly eat a vegetable, you can quickly get rid of constipation. It is also desirable to add broccoli, cauliflower and Chinese cabbage to the menu.

### **5. Kiwi**

The laxative properties of the fruit are associated with a high content of pectin, insoluble and soluble dietary fiber. To increase peristalsis, it is enough to eat two kiwis daily. This is confirmed by 4-week studies involving healthy people and patients with IBS-3. <sup>[8, 9]</sup>

### **6. Coffee**

Many people notice that drinking a cup of coffee in the morning increases the urge to go to the toilet. The natural laxative effect of the drink is due to the fact that it activates gastrin . The hormone stimulates the production of stomach acid, which breaks down food, and increases the undulating contraction of the intestinal muscles. <sup>[10, 11]</sup>

### **7. Flax seeds**

Flax seeds are high in omega-3s, high in protein, and combine soluble fiber with insoluble fiber. Substances have natural laxative properties, reduce the time it takes for food to pass through the intestines. They help with both constipation and diarrhea - they normalize digestion for various disorders. <sup>[12]</sup>

### **8. Olive oil**

The product mainly contains healthy monounsaturated fats. The body uses them to facilitate bowel movements, protect the rectum from inflammation. In ongoing studies, olive oil was effective in preventing constipation and enhancing the effects of magnesium hydroxide laxatives. <sup>[13, 14]</sup>

### **9. Leafy greens**

Spinach, lettuce, arugula are rich in nutrients with a low calorie content. These products contain a lot of magnesium. The mineral activates the evacuation-motor function of the intestine and is part of laxatives. <sup>[15, 16]</sup>

### **10. Legumes**

Chickpeas , lentils, peas, and peanuts cause the body to produce more butyric acid, which promotes fecal matter. Legumes also act as an anti-inflammatory for Crohn's disease and other health problems. <sup>[17]</sup>

### **11. Castor oil**

The ingredient releases ricinoleic acid, known for laxative properties. It activates a special kind of receptors in the digestive tract and stimulates the muscles of the intestines. Natural supplement reduces strain during bowel movements and eliminates the feeling of incomplete emptying. <sup>[eighteen]</sup>

### **12. Chia seeds**

Superfood is especially high in fiber - 11 g per 28 g of grains. Therefore, when soaked, the seeds quickly turn into jelly. This gel-like mass facilitates the passage of food through the intestines and facilitates bowel movements. <sup>[19]</sup>

### **13. Oat bran**

Powder from the shell of oat grains fights constipation, hypertension, helps with diabetes, lowers cholesterol and triglycerides. Soluble fiber forms bulk when swelled and stimulates peristalsis, accelerating the transit of substances. The composition also contains beta - glucans, which absorb bile, harmful substances in the intestinal tract and remove them from the body. <sup>[twenty]</sup>

### **14. Apples**

Thanks to dietary fiber and pectin, food passes through the large intestine faster. Pectin also acts as a prebiotic - it acts as a breeding ground for good bacteria, increases their number and promotes intestinal health. <sup>[21]</sup>

### **15. Rhubarb**

A wild plant known as pie filling has incredible properties thanks to the compound sennoside A. Scientists have determined that the substance facilitates bowel movements - increases water absorption and leads to a laxative effect. Top pharmaceutical companies use it in the manufacture of drugs. <sup>[22]</sup>

### **Other lifestyle changes to normalize stools**

For proper bowel function, you need to drink eight glasses of clean water daily between meals. You also need to exercise at least 150 minutes a week, breaking the total time into 3-5 sessions. Not only training in the gym is useful, but also other types of activity:

- swimming,
- walking,
- jogging,
- aerobics.

probiotics also help to solve the problem with bowel movements. Herbs do not directly treat constipation, but they do relieve associated symptoms. For example, green and mint teas reduce nausea and bloating. The addition of honey enhances their laxative properties. Positive effects are also provided by teas with hay and dandelion.

### **Expert comment**

**Tatyana Eliseeva, nutritionist, nutritionist**



Prevention of constipation through increased activity and fiber intake is the best treatment. This method does not harm health and does not cause addiction, unlike drugs. Whole grains and vegetables will satisfy your daily fiber needs, fill your body with amino acids, antioxidants, vitamins, and trace elements. They not only relieve constipation, but also increase immunity, protect against many diseases.

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## **Food as a natural laxative for constipation**

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**Abstract.** The article discusses the causes of constipation and their impact on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. Foods that will help cleanse the intestines are indicated, the scientific basis of nutrition against constipation is considered.



## **Cilantro - proven health benefits and recommended intake \_ \_**

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

**Key words:** cilantro , benefit, harm, beneficial properties, contraindications

It is an excellent source of antioxidants. It lowers blood glucose levels, improves the condition of the brain, heart and digestive system. The herb gives food such a rich flavor and aroma that it encourages

people to reduce their salt intake. In dishes, you can add not only the leaves of the plant, but also seeds called coriander.

The calorie content of cilantro is 23 kcal per 100 g of fresh leaves, which is less than that of parsley and dill. If we compare fresh greens with dried ones, then it is less caloric (in dried 279 kcal / 100 g) and contains more essential oils, vitamins A, C and K, as well as potassium, calcium, magnesium, phosphorus. If we compare a fresh plant with coriander, then it has much more vitamins, but less minerals.

## **Top 10 Health Benefits of Cilantro**

### **1. Protects Against Oxidative Stress and Cancer**

The plant has anticarcinogenic properties - it reduces the activity of genes in prostate cancer cells. Cancer becomes less invasive, its rate of spread slows down. The root, stem and leaves also act against breast and colon cancer and prevent damage to healthy cells. <sup>[12]</sup>

### **2. Pain relief**

The evidence that cilantro may be beneficial for inflammation and pain has been supported by several studies. She showed one of the best effects in the fight against migraines - when taken along with conventional painkillers, she significantly reduced the severity, duration and frequency of attacks. <sup>[3]</sup>

### **3. Supports Gut Health**

The extract reduces many symptoms associated with gastrointestinal diseases. After taking it, people with IBS note that they have improved digestion, appetite, discomfort and bloating. <sup>[four]</sup>

### **4. Supports brain health and reduces anxiety**

Parkinson's and Alzheimer's, multiple sclerosis, and many other brain diseases are linked to inflammation, which cilantro prevents. It protects nerve cells from damage, improves memory and even helps to cope with anxiety. Animal studies have shown that the extract is as effective as diazepam, a drug used to treat anxiety disorders. <sup>[5, 6]</sup>

### **5. Reduces Blood Sugar and Diabetes Risk**

The components in the leaves stimulate the pancreas, activate the synthesis of the hormone insulin. In studies, the extract reduced blood sugar levels by 4 mmol /L in just 6 hours - the effectiveness of the natural supplement was as high as that of the drug glibenclamide for diabetics. <sup>[7, 8]</sup>

### **6. Removes heavy metals**

Heavy metals enter the body from water, the environment, fish, certain vaccines, dental fillings, and household items. They slow down mental and physical development. To prevent this from happening, it is worth using cilantro - it helps to get rid of mercury, lead, aluminum. Detoxification ( chelation ) works best when combined with chlorella.

### **7. Stimulates the immune system**

As part of a natural product, antioxidants were found - terpinene, quercetin, tocopherols. They improve the protective functions of the body, maintain the integrity of neurons and actively fight

inflammation. During the experiments, scientists also noticed that the compounds reduce the activity of free radicals, do not allow them to start dangerous chain reactions and destroy cells. <sup>[9, 10]</sup>

## **8. Supports Heart Health**

In populations that consume a lot of cilantro, the incidence of heart disease is much lower. The secret of effectiveness lies in the fact that the aromatic herb reduces high blood pressure and the level of “bad” LDL cholesterol. Blood pressure is lowered due to the diuretic action - excess sodium and water are washed out of the body, which in addition helps to get rid of puffiness. <sup>[eleven]</sup>

## **9. Fights food poisoning**

The plant contains the natural antibiotic dodecenal . It is twice as effective as gentamicin - it can fight salmonella and other bacteria that provoke life-threatening food poisoning. <sup>[12]</sup>

## **10. Protects the body from infections**

The natural antibiotics in cilantro and other compounds fight fungal infections. Experiments show they inhibit the growth of *Candida albicans* - help in the treatment of candidiasis (thrush) and reduce unpleasant symptoms. A positive effect has also been found in the treatment of urinary tract infections. <sup>[13, 14]</sup>

## **Potential cilantro harms and possible side effects**

Spicy greens are safe when taken with food in small amounts, so smoothie lovers should not get carried away with superfoods . In some cases, it must be used with caution:

- with low sugar levels and taking diabetes medications - can lower the concentration of glucose too much and cause hypoglycemia;
- if there are problems with the kidneys - contains a lot of potassium;
- during pregnancy and lactation - no accurate safety data;
- with blood clotting disorders, before and after surgery - there are fears that it lowers blood clotting.

It is also known that the plant sometimes causes allergies.

## **How much cilantro can you eat every day?**

The question of a safe daily portion remains open - the scientific community and doctors do not have accurate data on this. Researchers only advise eating it in moderation. This is especially true for chelation - at high dosages, dizziness and weakness may appear.

## **How to store and use cilantro: chef's recommendations**

The most useful is the fresh herbaceous part. To keep it longer in the refrigerator, you need to place the stems in water. Keep in mind that the stems are less commonly used in cooking - they have more bitterness. Choose leaves and combine them with chili, avocado, beef, tropical fruits (citrus, pineapple), cucumber, cream cheese. Greens are usually added to salads, curries, soups, Asian dishes, vegetable and meat fillings for pancakes, pita rolls .

## **Expert comment**

**Tatyana Eliseeva, nutritionist, nutritionist**

Cilantro tastes like parsley and citrus, and its unusual smell is caused by aldehydes. Studies have shown that some people compare its taste to soap for a reason - this sensation is caused by a certain DNA variation in the olfactory receptor gene family. Therefore, people with a different DNA variation instead of a soapy aftertaste feel a pleasant aroma, freshness. Regardless of which group you belong to, the herb has a positive effect on the body, mind and should be added to your menu.

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**Cilantro - proven benefits for the body and the recommended intake**

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



### **Muscle Food - Top 10 Healthy Foods products**

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**Abstract.** The article discusses the main functions of muscles for normal human life and its relationship with the body. A systematic review of modern specialized literature and relevant scientific data was carried out. A list of foods useful for muscle work is indicated. Potentially unfavorable products for muscle activity are analyzed separately, general recommendations for maintaining their health are indicated.

**Keywords:** muscles , health, healthy foods, dangerous foods, recommendations

The path to the ideal figure with muscles without fat depends on genetic data, training and nutrition. Protein is the main macronutrient in the athlete's diet, but the role of carbohydrates, which replenish glycogen stores and help avoid overwork, cannot be underestimated. To succeed, you need to focus on the diet, because harmful foods negate all the work and move away from achieving the goal. We understand what food benefits muscles and health.

### **Diet for gaining muscle mass**

The International Society for Sports Nutrition ISSN recommends 1.4-2.0 grams of protein per kilogram of body weight daily. In this case, the amount of carbohydrates should be 45-55% of daily

calories. This is enough to build and maintain muscle for most trainees. However, with high-intensity resistance training, the need for nutrients increases.

A person should receive amino acids and nutrients with every meal, snack - you must give up empty calories, limit the use of alcohol, fried foods and sugar. This guarantees the replenishment of the nutrients the body needs to maintain health during intense exercise. To perform any training program and build muscle, the body needs to receive vitamins, minerals, healthy fats and at least 2-2.5 liters of clean water every day.

Mass gain and drying are integral parts of the training program of competing athletes. But ordinary people do not need such cycles. Creating an excess or deficit of calories can be very harmful to health.

During preparation for competitions, athletes reduce their calorie intake and percentage of body fat as much as possible: men - up to 5-10%, and women - up to 10-15%. This leads to sleep problems, negatively affects mood and weakens the immune system. Want to improve your fitness and strength without sacrificing? Information about healthy food will help you avoid mistakes and quickly recover from hard exercises.

## **Top 10 Healthy Muscle Foods**

### **1. Eggs**

Egg white is about 90% water. The remaining 10% contains the nine essential amino acids needed by the body to function at its best. Especially a lot in the composition of leucine, one of the components of BCAA. Cholesterol and fat are concentrated in the egg yolk. Studies show that this cholesterol is safe for most people. <sup>[12]</sup>

### **2. Meat**

About 26 g of protein can be obtained from 85 g of chicken breast, 25 g from turkey breast, 21.6 g from lean beef, and 18 g from pork tenderloin. Chicken and turkey meat also have a rich composition of B vitamins, which help the body to build muscle, maintain the correct functioning of systems and organs during exercise. <sup>[3, 4, 5]</sup>

### **3. Seafood**

Shrimps and scallops remain the leaders among seafood in terms of the content of nutrients, pure protein - 18 and 20 g, respectively. They are not only rich in amino acids for gaining muscle mass, but also low in calories. <sup>[6]</sup>

### **4. Legumes**

A half cup of boiled soybeans provides approximately 14 grams of protein (one of the highest quality plant sources), as well as healthy unsaturated fats, vitamin K, phosphorus, and iron for oxygen transport. Popular varieties of beans do not differ much from soybeans, but are richer in composition due to B vitamins, phosphorus, and insoluble fiber. Chickpeas are slightly inferior to their fellows in terms of usefulness. <sup>[7, 8]</sup>

### **5. Dairy products**

Greek yogurt is a mixture of fast-digesting whey protein and slow-digesting casein protein. It has twice the nutritional content of regular yogurt and this combination of macronutrients helps build muscle.



Fat-free cottage cheese has its own benefits - it provides the body with the essential amino acid leucine, which protects muscle tissue and is a good source of energy. <sup>[9, 10, 11]</sup>

## **6. Oily fish**

The best choice for gaining muscle mass and improving health are mackerel, salmon, tuna. The optimal combination of amino acids and omega-3 slows down age-related loss of strength and muscle. Fish also improves performance, energy levels. An important role in this is played by vitamins B6 and B12, which are necessary for the health of blood cells and nerves. <sup>[12]</sup>

## **7. Olive oil**

The monounsaturated fats in olive oil stimulate protein production and prevent muscle breakdown. Mediterranean Favorite increases insulin sensitivity in muscles, allowing them to make optimal use of glucose, amino acids and nutrients.

## **8. Whole grains**

100 g of green unroasted buckwheat contains 18% of the daily protein requirement. Low-calorie nutritious superfood has an impressive composition of useful compounds - B vitamins, magnesium, manganese, phosphorus. Brown (brown) rice, although it does not belong to protein boosters, but whole grains are as fat-free as possible and cover the need for slow carbohydrates. Its main competitor is gluten-free quinoa. Grains contain a lot of magnesium, which is useful for the functioning of muscles and the nervous system. <sup>[13]</sup>

## **9. Almond**

½ cup of blanched almonds provides 16g of protein, plenty of phosphorus, magnesium, vitamin E. Phosphorus plays a special role in the family, helping the body use carbohydrates and fats for energy at rest and during exercise. Almonds are high in calories so should be consumed in moderation. <sup>[fourteen]</sup>

## **10. Beets**

One study found that two medium-sized beets eaten 15 or 60 minutes before a workout increased performance by reducing perceived exertion. An inexpensive vegetable allows you to train longer and harder.

## **Supplements to Help Build Muscle**

A good diet should focus on whole foods, but there are times when nutritional supplements are needed. If you find it difficult to get the protein norm from traditional food, then you should add protein shakes to the menu. The most popular types are casein, whey protein. These supplements make life easier during the work day or travel. <sup>[15, 16]</sup>

## **Expert comment**

### **Tatyana Eliseeva, nutritionist, nutritionist**

It is worth considering that many bodybuilders who advertise protein gain mass with the help of anabolic steroids. The ads are misleading and develop unrealistic expectations about what muscles can be built naturally. For the sake of a beautiful body, you will have to work hard, and not only in the

gym, but also in the kitchen - you need to plan the menu in advance and fill the refrigerator with healthy dishes to make it easier to resist harmful snacks.

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## Muscle Food - Top 10 Healthy Foods

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### **Echinacea - benefits for women and men, contraindications and rules for use**

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**Abstract.** The article discusses the main properties of echinacea and its impact 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 echinacea is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of echinacea analyzed separately on the human body under certain medical conditions and diseases.

*Key words:* echinacea, benefits, harms, beneficial properties, contraindications

Our ancestors used echinacea to treat scarlet fever, malaria, diphtheria, and toothache. The popularity of the plant began to fade in the 20th century after the advent of antibiotics, and now it has again been crushed thanks to the trend towards organic nutrition. Today, people use it to strengthen the immune system, reduce sore throat, against the common cold and cough. However, scientists have proven that the extract helps not only with colds and flu.

The calorie content of echinacea is almost zero, but sweetened syrups can contain more than 200 kcal per 100 g. The plant comes in three types - narrow-leaved, pale and purple. All varieties have a common name but different activity profiles. Their therapeutic effect is provided by polysaccharides,

glycoproteins, alkalamides, flavonoids and other substances. More oils are concentrated in the roots, and more beneficial compounds in the above-ground parts for activating the immune system.

## **Top 7 Health Benefits of Echinacea for Women and Men**

### **1. Boosts Immunity and Fights Colds**

The polysaccharides, glycoproteins and other chemicals that make up natural raw materials help the body produce white blood cells to fight upper respiratory tract infections. They reduce the risk of a cold by 50%, reduce its duration by an average of 1.5 days. They may also be effective in combating bronchitis, an acute productive cough without chronic lung disease. <sup>[12]</sup>

### **2. Lowers the degree of anxiety**

Alkamides, rosmarinic and caffeic acids help with anxiety, depression, social phobias, attention deficit hyperactivity disorder (ADHD). In one study, scientists found that plant components relieve irritability, feelings of fear and at the same time do not reduce the level of activity, do not cause drowsiness. <sup>[3, 4]</sup>

### **3. Reduces Inflammation**

Stress, toxins, poor sleep contribute to the development of long-term inflammation. But regular use of echinacea can reverse the dangerous process, boost the immune response, and lower inflammatory markers. With rheumatoid arthritis, inflammation of the eyes and many other problems, it is enough to take herbal tea. Positive effects are reported by people who are not helped by non-steroidal anti-inflammatory drugs. <sup>[5, 6]</sup>

### **4. Normalizes blood sugar levels**

Echinacea purpurea extract inhibits carbohydrate digestion enzymes, so less glucose enters the bloodstream. At the same time, the PPAR receptor is activated, making the cells more sensitive to insulin. A similar process in the body is triggered by drugs for diabetes. <sup>[7, 8]</sup>

### **5. Fights cancer**

The medicinal value of Echinacea's phytochemicals has enthralled scientists. Rare components have the potential to fight tumors - they cause controlled death of cancer cells (apoptosis) without side effects. Supplements may be effective in combination with traditional therapies, but require further research into drug compatibility. <sup>[9, 10]</sup>

### **6. Pain relief**

Echinacea helps with sore mouth, throat and urinary tract infections. One of the studies proved that during its administration, the secretion of cytokines increases. The latter reduce inflammation and muscle soreness. <sup>[11, 12]</sup>

### **7. Helps with digestion**

Echinacea in the form of tea acts as a mild laxative and stimulates the bowels and helps in the treatment of constipation. To do this, it is enough to drink one cup of a healing drink a day. But keep in mind that drinking 2-3 cups of herbal tea per day can lead to diarrhea. The reasons for this effect are yet to be elucidated.

## **Harm of Echinacea - contraindications and adverse reactions**

Supplements rarely cause negative effects. They are mostly faced by people with asthma, allergies to chamomile, ragweed, chrysanthemum, marigolds. The risk of drug interactions is low, but echinacea does affect some well-known drugs:

- enhances the effect of the antifungal drug econazole ;
- reduces the effectiveness of immunosuppressants, which are used to treat cancer, after organ transplantation;
- increases the time of splitting and excretion of caffeine.

Echinacea should not be taken by people with multiple sclerosis, tuberculosis, leukemia, diabetes, connective tissue and liver disease, any autoimmune disorder, HIV and AIDS. How safe the supplement is during pregnancy and breastfeeding remains to be seen, so it is not recommended for women during these periods.

## **How many days do you need to drink echinacea to get the effect?**

To stimulate the immune system for colds, flu, infections of the upper respiratory tract or bladder, the remedy is taken three times a day for at least 10 days. A prophylactic autumn course to maintain immunity may be longer, but taking it on an ongoing basis is not recommended - addiction develops and after the supplement is canceled, a decrease in immunity is observed.

When taking nutritionists, nutritionists are advised to follow the manufacturer's instructions. Suggested daily doses depend on the form:

- dry extract in powder form - 300-500 mg;
- liquid extract in the form of a tincture - 2.5-10 ml: 20-40 drops for adults and 10-20 drops for children.

To activate the brain and increase muscle activity, you can start a course with Eleutherococcus or Rhodiola rosea at a dosage of 5-10 drops in the morning and afternoon, gradually increasing the dose over 2 weeks. Then proceed to taking the immunostimulant in tincture or capsules.

## **How to take echinacea before or after food?**

The herbal remedy is available in the form of alcohol tinctures, tablets, capsules. Can be combined with other immunostimulating herbs, vitamins, minerals. Most dietary supplements should not be taken on an empty stomach - it is better to drink liquid echinacea 30 minutes before. before meals or one hour after, drinking plenty of water. If you're planning to buy a supplement, choose a reputable brand - a study by an independent company found that only 4 out of 11 brands had ingredients that were as advertised on the label.

## **Expert comment**

### **Tatyana Eliseeva, nutritionist, nutritionist**

In Germany, where herbs are regulated by the state, echinacea root is approved for treating flu-like illnesses, and its aerial parts are approved for colds, slow-healing wounds, upper respiratory and urinary tract infections. Therefore, there is no doubt that a natural remedy can provide your body with additional support during the cold and flu season. Proper dosage and caution are critical in getting all the benefits.

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## Echinacea - benefits for women and men, contraindications and rules for use

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## **Curly kale is a superfood for weight loss and fighting cancer**

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**Abstract.** The article discusses the main properties of curly cabbage and \_ impact 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 kale in various types of medicine and the effectiveness of its use in various diseases are considered. Potentially adverse effects of curly hair were analyzed separately. cabbage on the human body under certain medical conditions and diseases.

*Key words:* kale, kale , benefit, harm, beneficial properties, contraindications

Kale is a green leafy vegetable in the cruciferous family. The most common variety is called kale and is one of the best superfoods in the world. The product is rich in antioxidants to fight cancer, heart and gastrointestinal diseases. It has advantages over broccoli, kohlrabi and other types of cruciferous, so it should definitely be added to the diet.

Calorie content of different varieties of kale is approximately 40-50 kcal / 100 g. One cup (67 g) of raw curly cabbage has 33 kcal, almost 3 g of protein and 2.5 g of fiber, which is ideal for health. Dietary fiber is useful in that it normalizes blood sugar levels, gives a feeling of satiety. At the same time, fat in a serving is less than 1 g and it is represented by omega-3 - another plus of a vegetable plant recommended for people with diabetes, overweight. You can also extract 100% of your daily value of vitamin C and 300% of vitamin K from this serving.

## **Top 8 Benefits of Curly Kale**

### **1. Clears skin, strengthens hair and nails**

Curly cabbage is rich in beta-carotene, a carotenoid that the body converts into vitamin A. It is essential for the growth and maintenance of all body tissues, including skin, hair, eyelashes, and nails. Ascorbic acid supports the growth of the structural protein collagen and thus protects the skin from flabbiness, wrinkles, stretch marks. <sup>[one]</sup>



## **2. Promotes detoxification , weight loss without harm to health**

The fiber and sulfur in kale improve digestion, lower cholesterol, detoxify, and support liver health. Vitamin C hydrates the body and speeds up metabolism, which leads to weight loss and lower blood sugar if levels are too high. <sup>[2, 3]</sup>

## **3. Prevents the development of cancer**

Greens contain indole-3-carbinol, which affects the production of estrogen in the body and may protect against breast cancer. The component neutralizes the negative estrogen effect - it is useful for everyone who has been diagnosed with estrogen-related diseases (myoma, mastopathy, endometriosis , etc.). New research also shows the effectiveness of kale against colorectal cancer. <sup>[4, 5, 6]</sup>

## **4. Helps with Diabetes**

Consuming dietary fiber, which is rich in cabbage, reduces blood sugar levels and the risk of developing type 2 diabetes, which is confirmed by the American Diabetes Association. But if the disease could not be avoided, vitamin C and alpha-linolenic acid will relieve complications and reduce unpleasant symptoms. <sup>[7, 8]</sup>

## **5. Supports Heart Health**

To reduce the risk of high blood pressure and cardiovascular disease, the American Heart Association recommends consuming more potassium and less salt. A cup of cooked kale has three times the amount of potassium you need in a day. And it also has enough fiber to reduce the level of fats, bad cholesterol.

## **6. Improves eye health and protects against cataracts**

Lutein and zeaxanthin are the perfect combination of antioxidants in leafy greens. This duo reduces the risk of developing cataracts and other eye diseases that progress with age. Their effect is increased by the vitamins and microelements included in the composition - E, C, beta-carotene, zinc. <sup>[9]</sup>

## **7. Normalizes digestion and restores the microbiome**

Fiber and water prevent constipation and improve the condition of the digestive tract. Kale also contains a lot of chlorophyll. Although the body is not able to absorb the antioxidant in large quantities, it binds to carcinogens and removes from the body, reduces the negative impact of harmful fried foods. This effect is supported by vitamin C, beta-carotene, selenium.

## **8. Strengthens bones**

Healthy bones require more than just calcium and phosphorus. Micronutrients are critical, but vitamin K1 also benefits. The specific form differs from vitamin K2 found in animal foods and fermented soybeans. K1 is important for blood clotting and helps prevent heart disease and osteoporosis. <sup>[10]</sup>

## **Who should not eat kale - risks and contraindications**

The minus of a superfood is that it is on the list of vegetables at risk of pesticide contamination. Nutritionists recommend buying it from reliable suppliers and washing it thoroughly before eating. People with a tendency to form oxalate kidney stones need to limit its consumption or completely

eliminate it from the diet . A vegetable is not recommended when taking blood-thinning drugs and beta-blockers for the heart.

### **How much kale should you eat and how to choose it?**

Nutritionists advise adding curly cabbage to your diet 2-3 times a week. Its effect on the body will largely depend on how well the digestive system tolerates cruciferous. To get the most benefit from an organic product, darkened wilted leaves should be avoided - they should be dark green without yellowing, hard and dry, not wilted and soft. The vegetable will keep for up to five days in the refrigerator (if not wrapped tightly), after which the leaves become tough.

### **How to eat and cook kale for health, weight loss?**

The taste and nutritional value of the product varies slightly depending on the species. For example, Tuscan lacinato is less bitter than curly cabbage, and the delicacy red Russian is sweet and tender with a touch of lemon and pepper. Any variety of curly cabbage can be eaten raw, steamed, stewed, boiled, fried. It should be borne in mind that heat treatment reduces bitterness, but reduces the amount of antioxidants and minerals.

Superfood grows well in winter and helps out when other vegetables are less available. The leaves caught by frost do not lose their properties and become softer, sweeter. The exception is the middle rib - it is tough, fibrous, the most bitter and it is desirable to remove it (by hand or with kitchen scissors). The stems do not have to be thrown away - you can fry in a small amount of olive oil with the addition of sea salt. A healthy vegan treat will be a great addition to the side dish.

### **Expert comment**

#### **Tatyana Eliseeva, nutritionist, nutritionist**

The fantastic benefits of kale make it clear that you should definitely add it to your menu. You can make smoothies , soups, casseroles, rolls, sandwiches, potatoes, pesto , savory pies and more with it. Definitely one of the best natural products on the planet that your body deserves!

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### **Curly kale is a superfood for weight loss and fighting cancer**

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**Abstract.** The article discusses the main properties of curly cabbage and \_ impact 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 kale in various types of medicine and the effectiveness of its use in various diseases are considered. Potentially adverse effects of curly hair were analyzed separately . cabbage on the human body under certain medical conditions and diseases.



### **Food to work out collagen**

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**Abstract.** The article discusses the production of collagen and its effect on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. The

food products that will help the production of collagen are indicated, the scientific basis of nutrition for its normalization is considered.

*Keywords:* collagen, healthy foods, dangerous foods

The Collagen Diet is a diet plan that focuses on eating foods with collagen and substances that stimulate its production. The filamentous protein is found in the skin, digestive organs, bones, blood vessels, muscles and tendons. An interesting fact is that the more glycoprotein in the body, the more the body is able to produce it. Therefore, it is so important to make the right menu and maintain this domino effect at any age.

### **Fibrillar protein - what is it and why does the body need it?**

Collagen accounts for about 30% of the protein in the human body. <sup>[1]</sup> It consists of 19 amino acids - mainly glycine, proline, hydroxyproline, lysine, arginine. It is also divided into 28 species, of which type I-III is mainly present in humans:

- I - ligaments, tendons, tissues, organs, bones and dermis;
- II - joints, cartilage tissue;
- III - organs and skin (responsible for the elasticity of blood vessels, heart tissues, skin).

With age, the production of collagen in the body decreases dramatically. <sup>[2]</sup> As a result, tendons and ligaments become stiffer, gastrointestinal problems appear, joint pain, osteoarthritis, muscles contract and weaken. In addition, hair and skin become thinner. When the epidermis loses its elasticity, it leads to wrinkles and sagging.

When taking collagen in any form, the body first covers its deficiency in tissues, organs, bones. And only when the main problems are solved, it begins to deliver the glycoprotein to the skin. With large deficiencies, nutritional supplements do not help to improve the appearance, which leads to unjustified expectations and erroneous statements about the uselessness of dietary supplements.

### **Collagen Diet Benefits: Benefits and Expected Effects**

The products contain a bioavailable form of collagen and are completely safe, unlike unresearched supplements. <sup>[3]</sup> Taking them has many positive effects, but people generally note:

- reduction of hair loss;
- more even skin tone, increased elasticity;
- improvement of immune protection;
- normalization of sleep;
- increased energy levels;
- detoxification ;
- improving the quality of muscle mass and strength;
- strengthening bones;
- restoration of hormonal and sexual health.

The glycoprotein does not have a single source - different substances are needed for its synthesis. The amino acids proline, lysine, glycine, vitamin C, the minerals zinc and copper are especially important. Antagonist foods include all refined carbohydrates - processed grains, sugars, etc. They cause inflammation and damage collagen fibers. If it is not possible to completely eliminate them from the diet, which is strongly recommended by nutritionists and nutritionists, then you need to at least minimize consumption.

## **Top 15 Foods That Stimulate Collagen Production**

### **1. Bone broth**

The elixir of health is brewed for at least 12 hours from the bones with the addition of apple cider vinegar to bring all the amino acids and other useful components into the water. The finished dish protects and heals the mucous membrane of the digestive tract, fights against any inflammatory processes, improves joint health, brain function, promotes weight loss and muscle gain. <sup>[four]</sup>

### **2. Fish**

Marine collagen is very useful and easy to digest, but concentrated in the inedible parts of the fish - scales, head, eyes. It is their companies that are used for the production of dietary supplements , cosmetics. There is less bioactive protein in fish meat, but in addition there are minerals necessary for its synthesis and maintenance of youth. <sup>[5]</sup>

### **3. Chicken**

Dietary chicken meat contains a lot of fibrillar protein, as well as chondroitin and glucosamine to restore cartilage. All substances help the body fight inflammation, pain. <sup>[6]</sup>

### **4. Cashew**

A delicious, low-carb snack that is rich in zinc and copper. Protein cofactors also increase immunity, strengthen bone mass and joints, and are involved in the formation of hemoglobin.

### **5. Chicken eggs**

Collagen is found in both the shell and the yolk. It has the right combination of essential 18 amino acids and high amounts of proline . At the same time, the product does not raise blood sugar levels, does not cause constipation or bloating - it is well absorbed. <sup>[7]</sup>

### **6. Citrus**

Vitamin C plays an important role in the creation of procollagen . The easiest way to get an antioxidant is from fruits such as orange, grapefruit, lemon, lime. Ascorbic acid is necessary for the natural strengthening of the skin, detoxification of the body, especially the intestines and liver. <sup>[8, 9]</sup>

### **7. Tropical fruits**

Mango, kiwi, pineapple are also rich in ascorbic acid, which, like glue, binds collagen fibers together. The role of vitamin C in the hydroxylation of collagen molecules is well understood - this process is necessary for its extracellular stability and support of the epidermis.

### **8. Berries**

Strawberries contain more vitamin C than oranges. A considerable dose of the substance can be obtained from raspberries, blueberries and blackberries. Berries are also rich in other antioxidants needed to protect against oxidative stress - free radicals.

### **9. Bell pepper**

Bulgarian pepper allows you to get more vitamin C and not increase blood sugar levels. The fragrant red vegetable also contains capsaicin, an anti-inflammatory compound that fights the signs of aging.<sup>[ten]</sup>

## 10. Garlic

The immune stimulant is rich in sulfur and helps to synthesize collagen, preventing its breakdown. Despite the benefits, it is important to eat garlic in moderation or you risk heartburn, indigestion, and bleeding when taking blood thinners.

## 11. Tomatoes

One medium tomato can provide about 30% of the daily value of vitamin C. An additional benefit of tomato fruit is a large amount of the amino acid lycopene, useful for maintaining youth.<sup>[eleven]</sup>

## 12. Beans

Beans, soybeans and other legumes contain a germ, therefore, together with eggs, seeds, they form a group of embryonic products. In addition to amino acids, they are rich in fats, fatty acids, minerals - the main agents for the production of collagen fibers.

## 13. Avocado

If you've been looking for a delicious way to slow down aging, this fruity fruit is the perfect candidate. The pulp contains enough vitamin E to neutralize free radicals and protect collagen from decay. Healthy fats and fiber enhance its restorative properties.<sup>[12]</sup>

## 14. Greenery

Spinach, sorrel, cabbage and other greens are important sources of nutrients and the antioxidant chlorophyll. Studies have shown that its consumption increases the amount of procollagen in the skin. Your daily serving of green vegetables depends on your activity level - the more you move, the more you can eat. The minimum portion for those who do not have problems with the gastrointestinal tract is 2 cups of greens per day.

## 15. Pumpkin seeds

A vegetable source of zinc accelerates the synthesis of glycoprotein and slows down the rate of its breakdown. In addition, the microelement accelerates wound healing. Raw seeds are healthier than fried ones, since at temperatures above 90 ° C, essential oils evaporate and an oxidative process occurs.

## Other Ways to Increase Collagen Levels in the Body

Keeping track of your diet and learning how to combine foods is hard work. Therefore, many people resort to collagen supplements. However, this is a new area of research and scientists are in no hurry to draw conclusions about their 100% effectiveness, even despite some evidence. One test showed that after four weeks of taking women, skin elasticity increased.<sup>[13]</sup> In another 12-week experiment, a 13% reduction in wrinkle depth was noted.<sup>[6]</sup>

Dietitians and nutritionists say that an overdose of a dietary supplement can be harmful, and they advise getting all the necessary substances from food. To improve their absorption, they recommend

replacing ordinary teas with herbal teas - brew knotweed, gynostemma pentaphyllum, horsetail, ashwagandha, and gotu kola.

## Expert comment

### Tatyana Eliseeva, nutritionist, nutritionist

After 20 years, the production of collagen in the body decreases at a rate of 1% per year, and starting from 40 years old, by 2%. This process is inevitable and our main task is to correct the diet to make up for the potential deficiency. A balanced diet will not only strengthen your joints, but also improve the condition of your hair, skin, and nails, helping you save money on medical consultations, medicines, and beauty treatments.

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## Food for collagen production

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**Abstract.** The article discusses the production of collagen and its effect on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. The food products that will help the production of collagen are indicated, the scientific basis of nutrition for its normalization is considered.



### **Food stimulating outflow bile**

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**Abstract.** The article considers the influence of bile and its effect on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. Food products that will help to remove bile are indicated, the scientific foundations of choleretic nutrition are considered.

**Key words:** bile, choleretic products, diagnostics, useful products, dangerous products

There are many conditions that can lead to cholestasis —stagnation and reduced flow of bile. In this case, the digestive fluid does not enter the small intestine, does not break down fats and does not remove toxins from the body. This leads to digestive problems, the accumulation of toxins. Many factors can provoke the disease, but malnutrition and an unhealthy lifestyle are the main reasons. Fortunately, the disease can be avoided if the diet is adjusted in a timely manner.

### **Why does the body need bile?**

The greenish-yellow liquid is mainly composed of cholesterol, bile acids, and bilirubin, a breakdown product of hemoglobin. Also contains water, salts (potassium, sodium), copper and other metals. <sup>[1]</sup> It is the main antiseptic in the body and performs many functions:

- removes toxins into the stool to prevent toxic overload;
- stimulates the secretion of water in the large intestine, improves motility and prevents constipation;
- distributes antioxidants, immunoglobulins through the intestines;
- has an antimicrobial function and does not allow the development of dysbacteriosis;
- neutralizes stomach acid for the work of pancreatic enzymes.

If these processes are disturbed, there is a constant feeling of fatigue, a white or yellow coating on the tongue, bad breath, sugar cravings and weight gain in the abdomen. <sup>[2, 3]</sup> The problem cannot be ignored, because violations can lead to dangerous liver pathologies, especially if biliary dyskinesia is diagnosed. You need to start with a change in nutrition - even doctors admit that the right diet is often more effective than drugs. <sup>[four]</sup>

### **bile flow sequence**

- the liver produces 500–600 ml of bile daily;
- half of the fluid excreted between meals enters the small intestine;
- the rest is taken to the gallbladder for storage, where 90% of the water is absorbed into the bloodstream - this makes the reserves very concentrated;
- when food with fat enters the small intestine, a series of hormonal and nerve signals causes the bile to contract, and the sphincter of Oddi to relax and open so that bile flows to food and performs digestive functions;
- about 90% of bile acids are reabsorbed into the bloodstream through the walls of the small intestine, after which the liver removes them from the blood and re-excretes them into bile - the components go through this cycle 10-12 times a day;
- a small amount of acids reaches the large intestine, where it is broken down by bacteria - some is reabsorbed, and some is excreted in the feces, giving it a dark color. <sup>[5]</sup>

## **Top 15 Foods to Improve Bile Flow**

### **1. Chicken**

Steamed, baked, or boiled fillets contain lean protein. Dietary protein is valuable because it stimulates the secretion of the hormone cholecystokinin (CCK). It causes contraction of the gallbladder and secretion of pancreatic enzymes.

### **2. Radish**

Contains sulfur to help remove deposits from the gallbladder and vitamin C to prevent their further formation. The composition also contains the enzyme cholesterol-7-alpha-hydroxylase, which lowers cholesterol and triglycerides. Despite the benefits, radishes are not indicated for everyone and you should consult a doctor before using them. <sup>[6]</sup>

### **3. Broccoli**

Cabbage is rich in fiber and calcium, which are essential for a healthy digestive tract. Dietary fiber improves peristalsis, microflora, reduces the production of bile, which is important during its stagnation. <sup>[7]</sup>

### **4. Coffee**

Studies have found that caffeine inhibits the crystallization of cholesterol, increases the outflow of fluid from the gallbladder. However, decaffeinated coffee does not have these effects. <sup>[eight]</sup>

## **5. Turmeric**

Bright orange spice reduces the symptoms of bloating and gas in indigestion, has a choleric property (especially when combined with black pepper). Turmeric, although it improves lipid metabolism, is not recommended for cholelithiasis. <sup>[9]</sup>

## **6. Sweet red and green peppers**

Bell peppers are the best source of vitamin C among vegetables. It also replenishes B vitamins, magnesium, folic acid, and phytonutrients to protect the gastrointestinal tract from many diseases. <sup>[ten]</sup>

## **7. Milk Thistle**

The herb is involved in the formation of enzymes, increases the production of bile, soothes mucous membranes and reduces inflammation. However, milk thistle is not recommended for Gilbert's syndrome - it accelerates the first phase of detoxification, thereby increasing the level of bilirubin in the blood.

## **8. Oranges**

The pulp is rich in vitamin C, due to the lack of which cholelithiasis develops. This is confirmed by doctors and an annual study involving 2129 people. Since vitamin C supplementation increases the risk of kidney stones, it's best to source the vitamin from natural foods, such as oranges and other citrus fruits. <sup>[eleven]</sup>

## **9. Tomatoes**

Tomato fruits stimulate bile flow and remove toxins through the digestive tract, and also reduce inflammation. Tomato juice without sweeteners has the same properties.

## **10. Salo**

The product contains 40% unsaturated fatty acids, rich in fat-soluble vitamins A, D, E. Therefore, fat binds and removes toxins, has choleric properties.

## **11. Low fat dairy products**

Low-fat milk, cheese, kefir, yogurt, yogurt do not burden the digestive tract, do not delay gastric emptying and do not cause bloating. Additionally, fermented milk products contain the necessary pre- and probiotics.

## **12. Legumes**

Beans, soybeans, lentils are rich in vegetable protein. For problems with bile, it is more useful than an animal, which is confirmed by studies. <sup>[12]</sup>

## **13. Flaxseed**

Flaxseed oil reduces pain, has an anti-inflammatory effect. But it cannot be taken in acute pancreatitis (only during remission), as additional bile secretion provokes spasms.

#### **14. Nuts.**

Some studies have shown that almonds and walnuts prevent the formation of gallstones. Due to their high fat content, it is important to eat them in small amounts.

#### **15. Tofu**

100 g of vegetarian cheese contains 345 mg of calcium, 8–13 g of protein, and only 5–10 g of fat. A dietary product will help avoid bouts of pain in the right hypochondrium, diversify the menu and prevent blockage of the bile ducts.

#### **Other ways to normalize the outflow of bile**

The worst enemy of the gallbladder is low-calorie diets and weight loss of 1-1.5 kg per week. They increase the risk of stone formation and other diseases, since with a reduction in food intake, the need for bile decreases - the secret becomes thick, concentrated. To help your body, you need to follow other rules:

- eat fractionally by the hour - 5-6 times a day at the same time;
- there is a lot of thermally processed and crude fiber; <sup>[13]</sup>
- avoid fatty foods and consume 20–40 g of fat per day;
- exclude from the diet all fried foods, crusty dishes and refined carbohydrates - added sugars, sweeteners, white flour, instant cereals, pastries, desserts;
- give up alcohol;
- do not eat ice cream, cold foods and drinks - cold blocks the work of the body;
- exclude canned vegetables and fruits from the menu;
- drink 2-2.5 liters of clean water between meals;
- do not get carried away with ginger, as it stimulates the liver to secrete more bile juice, but does not accelerate its release; <sup>[fourteen]</sup>
- maintain a moderate level of activity - exhausting workouts make the liver more actively produce bile, but do not improve its outflow. <sup>[fifteen]</sup>

#### **Expert comment**

##### **Tatyana Eliseeva, nutritionist, nutritionist**

Studies confirm that bitter foods and bitter herbs - dark green leafy vegetables, beets, artichokes, dandelion root tea, celery juice - help to solve the problem of bile flow. Discoveries in this regard continue. So in 2020, it was documented that bile acids are produced by microbes in the gut. This once again confirms that it is necessary to take care of the gastrointestinal tract as a whole, and not about individual organs.

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### **Food that stimulates the flow of bile**

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**Abstract.** The article considers the influence of bile and its effect on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. Food products that will help to remove bile are indicated, the scientific foundations of choleretic nutrition are considered.



## **The benefits of pears - Top 8 useful properties**

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**Abstract.** The article discusses the main properties of a pear and its impact 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 pear in various types of medicine and the effectiveness of its use in various diseases are considered. The potentially adverse effects of pear on the human body under certain medical conditions and diseases are analyzed separately.

**Keywords:** pear , benefit, harm, beneficial properties, contraindications

The mild sweet pear has amazing health benefits. It contains a lot of fiber, and as part of a balanced diet, it reduces weight and the risk of getting cancer. Doctors also advise people with diabetes and heart disease to eat it. Still doubting that the fruit is worthy of praise? We have collected for you its main useful properties, as well as recommendations for use.

The calorie content of a pear does not exceed 57 kcal per 100 g. It has less fructose than an apple, but it is much sweeter. And there is more fiber in the pulp than in a glass of cabbage. From one fruit, we can get more than 20% of the recommended daily intake of dietary fiber. In addition, fruits have a low glycemic index, so they do not cause a spike in blood sugar levels.

## **Top 8 Benefits of Pear for Health and Beauty**

### **1. Promotes the proper functioning of the stomach and intestines**

Eating one fruit a day will keep your entire digestive system healthy. Fiber prevents constipation. And the pectin contained in the fruits plays the role of prebiotics for beneficial intestinal bacteria - it increases their population and improves immunity, promotes healthy aging. <sup>[12]</sup>

## **2. Takes care of the heart**

Since pears are rich in fiber and potassium, they neutralize excess sodium. Meanwhile, anthocyanins, which give the fruits a ruby red hue, improve heart health and strengthen blood vessels, while quercetin and other antioxidants reduce the stiffness of heart tissue and lower bad cholesterol. Studies have shown that in order to obtain positive effects, it is enough to eat at least 80 g of pulp per day (1/2 of a medium pear) per day. At the same time, every 25 g of fruit reduces the risk of stroke by 9%. <sup>[3, 4, 5]</sup>

## **3. Has anti-cancer properties**

Fruits cannot replace treatment, but prevent cancer due to the high level of antioxidants. An important function is performed by anthocyanins, cinnamic acid. Chemical compounds counteract free radicals, protect cells from damage, reduce the risk of lung, stomach, urinary, breast, ovarian cancer and even neurodegenerative diseases such as dementia. <sup>[6]</sup>

## **4. Prevents inflammation from developing**

Ripe fruits are rich in flavonoids, which help fight inflammation and reduce the risk of developing serious diseases. They also contain copper, vitamins K and C. The ingredients complement each other and reduce inflammatory markers called C-reactive protein. <sup>[7, 8]</sup>

## **5. Reduces the risk of getting diabetes**

Juicy pears, especially red varieties, contain many anti-diabetic substances. Some of them are only in the peel, so you should not throw it away. Fiber slows down digestion, giving the body more time to break down and absorb carbohydrates. This allows you to regulate and control your blood sugar levels. A study has shown that to protect against diabetes by 23%, you need to eat at least five red fruits per week. <sup>[9]</sup>

## **6. Helps to lose weight**

Low-calorie, rich in dietary fiber and water, pears contribute to rapid satiety and weight loss. Women who eat three small fruits daily lose weight faster and improve cardiovascular health, as evidenced by research. <sup>[ten]</sup>

## **7. Removes toxins**

Regular bowel movements play a major role in removing toxins from the bile. Pears contribute to this process - the effect is provided by the optimal combination of fiber and fructose. Smoothies with detox fruit will help you recover after holiday dinners. The drink can also be a great daily snack. <sup>[eleven]</sup>

## **8. Improves the condition of hair and skin**

All varieties contain vitamin A - one of the most valuable components for maintaining the health and beauty of the skin, hair, nails. Its action is complemented by zeaxanthin and lutein, which are involved in many enzymatic reactions. Useful substances help maintain youth, reduce age spots and wrinkles.



## **To whom pears are contraindicated: harm and adverse reactions**

Pears contain fructose and sorbitol, natural sugars that some people find difficult to digest. They cause gas, bloating, pain, and diarrhea in those suffering from irritable bowel syndrome (IBS). Some varieties cause constipation if taken before meals and have a laxative effect if eaten after meals.

Pears are the least allergenic of all fruits. Negative reactions appear occasionally in those who suffer from an allergy to birch pollen. Symptoms usually develop within minutes and may include itchy mouth and throat, coughing, and red patches on the skin.

## **How many pears should you eat every day?**

Three fruits a day can be part of a healthy diet if there are no contraindications. Most nutritionists still argue that 1-2 fruits are enough to meet the needs of the body. It is important that they are ripe, without rotting. Strange imperfect shapes, scratches and yellow spots from impacts are not dangerous - they are a product of nature, not a factory.

## **How to eat pears to lose weight and improve health?**

By snacking on fresh sweet fruit, you can satisfy your sugar cravings and benefit your digestive tract at the same time. Fragrant slices can be eaten with nuts, nut butter, prosciutto, cheeses. They are easy to add to oatmeal, smoothies, arugula salads.

Pears pair especially well with chicken, pork, cinnamon, nutmeg, lemon, and chocolate. Chefs add them to roasts with bell peppers, onions and zucchini, use them as pizza toppings to add lightness and sweetness. Popular cooking methods include frying, poaching. Whatever cooking method you choose, don't cut off the skin to get more nutrients.

## **Expert comment**

### **Tatyana Eliseeva, nutritionist, nutritionist**

Overall diet is the most important dietary factor in disease prevention and health improvement. It is better to eat a varied diet than to concentrate on individual foods and sit on a pear mono-diet. Fresh, bright pears with a firm texture and rich flavor make for a healthy dessert that never disappoints or hurts your figure.

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### **Benefits of Pears - Top 8 Health Benefits**

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**Abstract.** The article discusses the main properties of a pear and its impact 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 pear in various types of medicine and the effectiveness of its use in various diseases are considered. The potentially adverse effects of pear on the human body under certain medical conditions and diseases are analyzed separately.



### **Apples - benefits and harms proven \_ nutritionists**

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**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. <sup>[1, 2, 3]</sup>

### **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. <sup>[four]</sup>

### **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. <sup>[5, 6]</sup>

### **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. <sup>[7]</sup>

### **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. <sup>[8, 9]</sup>

## **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. <sup>[ten]</sup>

## **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. <sup>[eight]</sup>

## **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. <sup>[11, 12]</sup>

## **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!

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### **Apples - the benefits and harms proven by nutritionists**

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### **Liver Foods - Top 15 products for her health and recovery**

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**Abstract.** The article discusses the main functions of the liver for normal human life and its relationship with the body. A systematic review of modern specialized literature and relevant scientific data was carried out. A list of foods useful for the liver is indicated. Potentially unfavorable products for the activity of the liver are analyzed separately, general recommendations for maintaining its health are indicated.

**Keywords:** liver , health, healthy foods, dangerous foods, recommendations

The liver is an organ located under the rib cage on the right side of the abdomen. It detoxifies, synthesizes proteins, regulates blood clotting, maintains healthy sugar levels, and performs 500 other functions. Her health is critical to the condition of the body as a whole, which is why it is so important to keep her working. Although it is impossible to control all risk factors, the consumption of certain foods and drinks still has a huge impact on the gastrointestinal tract.

### **Interesting facts about the liver**

The largest glandular organ of the human body and the second largest after the skin works no less than the heart. It has an amazing ability to self-heal, which makes it possible to transplant it - when people donate half, the remaining part restores the removed site.

Normally, the liver is 10% fat. With an increase in its amount, the risk of developing type 2 diabetes increases. It is difficult to find out about the problem, since the organ does not have pain receptors and cannot get sick - discomfort in the right hypochondrium and pain symptoms are given by its shell or neighboring organs. Although the largest gland can withstand a lot of abuse, it is like an elastic band - able to stretch until it breaks.

### **What does the liver do: functions and role in the body**

Hundreds of processes have been identified with it, but the most important are:

- produces bile, which is subsequently stored in the gallbladder and removes waste, toxins, breaks down fats in the small intestine during digestion;
- creates blood circulating through the body and regulates the concentration of amino acids in it;
- produces proteins for blood plasma and transport of fats throughout the body;
- converts excess glucose into glycogen for storage and reverse conversion for energy;
- accumulates vitamins and nutrients from food to use when deficient;
- converts toxic ammonia into urea - the end product of protein metabolism, which is excreted in the urine;
- cleanses the blood of drugs and toxic substances;
- counteracts infections;
- removes toxic bilirubin (a product of the breakdown of hemoglobin), with the accumulation of which the skin and eyes turn yellow.

The body also performs many other functions. Isn't there enough reason to take care of his health? The best way to keep it functioning properly is to lead a healthy, active lifestyle.

### **Top 15 Liver Health Foods**

#### **1. Coffee**

Studies have shown that the drink increases levels of the antioxidant glutathione, reducing the risk of cancer, cirrhosis and permanent organ damage in chronic diseases. This is due to the ability of the drink to prevent the accumulation of fat and collagen - two main markers of its diseases. <sup>[12]</sup>

#### **2. Cruciferous**

Brussels sprouts and broccoli sprout extract enhance detoxification, protect the liver from damage, tumors. Substances in Brussels sprouts retain properties even after cooking. <sup>[3]</sup>

#### **3. Beet juice**

antioxidants betalaines reduce oxidative damage and inflammation and enhance the elimination of toxins. Studies have been done on humans and animals with beetroot juice, but it can be assumed that drinking beetroot would bring a similar effect. <sup>[4, 5]</sup>

#### **4 Grapefruit**

Naringenin and naringin are the two main antioxidants found in citrus. Both reduce inflammation and prevent the development of fibrosis. Naringenin reduces the amount of fat in the liver and starts the process of burning it, and naringin counteracts some of the negative effects of alcohol. <sup>[6, 7]</sup>

#### **5. Berries**



Blueberries, blueberries and cranberries contain anthocyanins, pigments with antioxidant properties. Their regular use protects the body from damage, increases the response of immune cells, slows down the development of fibrosis and the growth of cancer cells. [8, 9, 10]

## **6. Grapes**

Red and purple varieties contain a particularly valuable compound resveratrol . The substance reduces inflammation, prevents damage, increases the level of antioxidants. And grape seed extract has super potential and can improve liver function. [11, 12]

## **7. Tea**

Black tea extract reverses many of the negative effects associated with malnutrition and also improves blood counts that indicate organ health. People who drink green tea are less likely to develop cancer and non-alcoholic fatty liver disease (NAFLD). [13, 14, 15]

## **8. Nuts**

Fats, antioxidants and other beneficial plant compounds in almonds , walnuts protect against pathological changes in tissues. Studies have shown that men who eat them regularly have a low risk of developing NAFLD. [16]

## **9. Oily fish**

Mackerel, cod, halibut, sardines are rich in omega-3 fatty acids that reduce liver fat, triglycerides in people with NAFLD and non-alcoholic steatohepatitis . [17]

## **10. Olive oil**

The use of 1 tsp. olive oil per day increases the production of enzymes and protein necessary for normal metabolism. As a result, fat accumulation is reduced, blood circulation in the organ and insulin sensitivity are improved. [eighteen]

## **11. Leafy greens**

Spinach and other leafy greens help fight NAFLD. In 2021, scientists discovered that the effect is provided by the polyphenols contained in it. Raw spinach showed the best results, while cooked spinach turned out to be ineffective - heat treatment reduces the activity of polyphenols and antioxidants. [19]

## **12. Legumes**

Beans, soybeans, lentils, chickpeas, peas contain resistant starches that improve gut health. The use of legumes lowers the risk of many diseases of the gastrointestinal tract, blood glucose and triglycerides in obesity. And the consumption of soy ( miso soup, soy products) protects the liver from diseases due to the high content of the protein  $\beta$ -conglycinin . [twenty]

## **13. Oatmeal**

Whole grains improve the functioning of the body due to the high percentage of fiber. They saturate for a long time, normalize digestion, help get rid of extra pounds and belly fat, which is a good way to prevent many diseases. [21]

## 14. Turmeric

High doses of curcumin, the active compound in turmeric, have been shown to reduce markers of liver damage. Studies have shown that its use as a supplement normalizes ALT and AST levels (enzymes are elevated in people with NAFLD).

## 15. Garlic

In 2019, scientists found that frequent consumption of fresh garlic by men, but not women, reduces the risk of developing NAFLD. And in 2020, it was found that taking garlic powder in the form of a dietary supplement - 800 mg / day for 15 weeks - reduces the concentration of lipids and increases the production of enzymes. <sup>[22, 23]</sup>

## Other Ways to Help the Liver: Unhealthy Foods and Beneficial Activities

Doctors advise not only to consume more omega-3s, but also to reduce the consumption of omega-6s. To improve health, you need to replace sources of saturated fats (butter, sausages, fatty and dried meat), sources of unsaturated lipids - avocados, olive and nut oils, fatty fish. It is equally important to eliminate sugar from the diet.

## In addition to diet, there are a few other lifestyle changes you can make:

- engage in aerobics for at least 30 minutes a day, remain active throughout the day and not try to compensate for its lack with more intense workouts;
- control blood sugar levels – diabetes and fatty liver disease often occur at the same time;
- drink enough clean water - 6-8 glasses daily;
- eliminate occasional binge drinking and reduce its consumption in general;
- add polyphenol-rich oregano, sage, rosemary and other spices to dishes;
- replace chips and pastries with healthy snacks;
- be careful with medicines;
- get vaccinated against hepatitis.

## Expert comment

### Tatyana Eliseeva, nutritionist, nutritionist

Your liver does a tremendous job every day and deserves at least a healthy diet. She can recover quickly as long as she remains healthy, and all hepatologists strongly advise keeping her in this condition. In most cases, the organ can be protected through lifestyle and dietary measures. A diet rich in fiber, protein, and healthy fats is the best way to keep her healthy.

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### **Food for the liver - 15 best foods for liver health and recovery**

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**Abstract.** The article discusses the main functions of the liver for normal human life and its relationship with the body. A systematic review of modern specialized literature and relevant scientific data was carried out. A list of foods useful for the liver is indicated. Potentially unfavorable products for the activity of the liver are analyzed separately, general recommendations for maintaining its health are indicated.



### **Benefit Pumpkins - Top 7 Useful properties and interesting facts**

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**Abstract.** The article discusses the main properties of pumpkin and its impact 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 pumpkin is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of pumpkin were analyzed separately on the human body under certain medical conditions and diseases.

*Key words:* pumpkin , benefit, harm, beneficial properties, contraindications

Golden gourd is considered a vegetable due to its high nutritional value, but scientifically it is classified as a fruit. Its pulp and seeds provide a powerful array of antioxidants, nutrients, and support digestion—their role in promoting optimal well-being is hard to dispute. For those of you who haven't yet added fleshy fruits to your diet, we've rounded up the latest health benefits backed by scientific research.

The calorie content of pumpkin is 26 kcal per 100 g. Such a low calorie content is due to the fact that it is 94% water. The pulp is also high in fiber and has an impressive nutrient profile. Most of all, it contains beta-carotene, which the body converts into vitamin A - a cup of boiled product contains 245% of the daily value. The same portion contains 10-19% of the daily value of vitamin C, potassium, copper, manganese, vitamin B12.

### **Top 7 Benefits of Pumpkin and Interesting Facts**

## **1. Protects eyesight**

Bright fruits are a good source of  $\beta$ -carotene, lutein and zeaxanthin . Powerful antioxidants protect against progressive macular degeneration, a major cause of blindness among the elderly. Vitamin C and E in the pulp also protect against degenerative eye damage with age. This is confirmed by the study of age-related eye diseases conducted in 2019. These substances are better absorbed when they are eaten with a small amount of healthy fats, such as olive oil. <sup>[one]</sup>

## **2. Improves heart function**

High blood pressure provokes cardiovascular disease . Both the rejection of salt and sufficient potassium intake help to reduce it. This theory was tested by scientists in 2017 with the support of 2722 volunteers. The fiber and vitamin C contained in the pulp, as well as the components of pumpkin seed oil, improve the functioning of the heart muscle, reduce diastolic blood pressure and increase good cholesterol. <sup>[2]</sup>

## **3. Reduces the risk of cancer**

A diet rich in beta-carotene suppresses and slows down the growth of cancer cells in throat, pancreatic, prostate, and colon cancers. Carotenoids neutralize the free radicals that cancer cells produce to multiply quickly. Research has shown that only pumpkin and other vitamin A-rich foods are beneficial— supplements do not provide the same level of protection. <sup>[3, 4, 5]</sup>

## **4. Prevention of diabetes and obesity**

Pumpkin polysaccharides have incredible potential in fighting insulin resistance and helping control blood sugar levels. They may protect against the development of type 2 diabetes and become the basis of anti-diabetic drugs in the future. As for weight loss, pumpkin does not have superpowers and does not help burn fat, but it allows you to eat less due to its low calorie content and high fiber content - it saturates faster, gives a feeling of satiety for a long time.

## **5. Helps with an overactive bladder**

Pumpkin seeds strengthen the pelvic floor muscles and maintain bladder control through two processes - inhibit 2 enzymes, increase testosterone. At the same time, the seeds relieve bladder hypertonicity by increasing the ability to retain urine and reducing the frequency of urination. Pumpkin seed oil is no less useful for various urinary disorders. <sup>[6]</sup>

## **6. Improves skin condition and protects it from UV rays**

Carotenoids , lutein , zeaxanthin , vitamin E and many other antioxidants increase the protection of skin cells from harmful UV rays. Ascorbic acid, in addition, promotes the production of collagen, a protein that keeps the skin beautiful and healthy. <sup>[7]</sup>

## **7. Increases immunity**

The composition includes many substances that strengthen the immune system. A complex of vitamins, iron, folic acid and other compounds speed up wound healing, increase the production of white blood cells and help immune cells work more efficiently. <sup>[8, 9]</sup>

## **Who should not eat pumpkin: contraindications and harm**

The fetus cannot harm a healthy person. Due to too frequent use, swelling and problems with the stool can only appear, which applies to all vegetables. Individual intolerance manifests itself in a tiny percentage of people. In extreme cases, allergies, nausea, itching, diarrhea appear - history knows no more serious precedents. Scientists also found that cucumbers and watermelons contain similar allergens, and if you are allergic to them, you should be careful with pumpkin dishes.

### **How many pumpkins can you eat every day?**

There is no need to eat the product daily and in large quantities - an excessive passion for vitamin A leads to hypervitaminosis, jaundice (yellowing of the eyes and skin). It is worth considering that overdose can be a serious problem for babies and children. There are also unhealthy pumpkin products with added sugar, such as lattes, candies, pie fillings. It is better to refuse them completely.

### **How to choose a pumpkin and cook it correctly?**

There are many ways to regularly enjoy the fruit with health benefits - only the fibrous part that holds the seeds is inedible. When buying, it is better to choose small oblong-shaped fruits with no signs of decay. The smaller their size, the sweeter and less fibrous they are - giants weighing more than 10 kg are grown as feed varieties for animals. Among culinary specialists, the Muscat-type butternut variety is especially famous, known for its nutty flavor and delicious aroma.

You can eat pumpkin raw, but most people find its taste and smell disgusting - the finished product brings the greatest health benefits and pleasure. The fruit is often found in recipes for soups and stews, it is boiled, steamed, baked on parchment with butter. Ready-made pumpkin puree is added to breakfasts, dinners, light snacks - oatmeal, pancakes, energy bars, muffins. This versatile ingredient is also used as a base for pizza or pasta, mixed with chili peppers.

### **Expert comment**

#### **Tatyana Eliseeva, nutritionist, nutritionist**

Ribbed bright fruits are needed not only for carving lanterns for Halloween. I recommend using them in sweet and savory recipes to support weight, immunity, eyesight and enjoy the benefits of natural foods.

If you have any favorite pumpkin recipes, be sure to share them in the comments and share your cooking secrets!

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### **Pumpkin Benefits - Top 7 Health Benefits and Interesting Facts**

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**Abstract.** The article discusses the main properties of pumpkin and its impact 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 pumpkin is considered in various types of medicine and the effectiveness of its use in various diseases. Potentially adverse effects of pumpkin were analyzed separately on the human body under certain medical conditions and diseases.