



## Apricot ( lat . *Prunus armeniaca* Lin.)

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

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

## Beneficial features

Table 1. Chemical composition of apricot (according to [Food+](#) ).

Main substances (g / 100 g):	Fresh apricot <sup>[1]</sup>
Water	86.35
Carbohydrates	11.12
Sugar	9.24
Alimentary fiber	2
Squirrels	1.4
Fats	0.39
Calories (kcal)	48
Minerals (mg/100 g):	
Potassium	259
Phosphorus	23
Calcium	13
Magnesium	ten
Sodium	one
Iron	0.39
Zinc	0.2
Copper	0.078

Manganese	0.077
<b>Vitamins (mg/100 g):</b>	
Vitamin C	ten
Vitamin E	0.89
Vitamin PP	0.6
Vitamin B6	0.054
Vitamin B2	0.04
Vitamin B1	0.03

Apricot contains citric, malic, tartaric acids, phenolic and tannins, flavonoids, pectin, a large amount of carotene (up to 16 mg/100 g). The pulp of apricot fruits contains a lot of sucrose, glucose, sorbitol and fructose (up to 28% in total). Moreover, in hybrids and varieties of late harvest, higher levels of sugar and lower levels of magnesium are noted, which is already quite small in fresh fruits.

Relatively little in apricot and most other minerals: iron in 100 g - about 5% of the daily requirement, calcium and phosphorus - 3%, magnesium - 2%. The exception is potassium, according to the content of which apricot occupies one of the leading places among products of plant origin. One hundred grams of fresh fruits provide about 10-12% of the daily human need for this mineral. And one hundred grams of dried fruits prepared from apricots (dried apricots, apricots, etc.) provide about 70% of the body's daily need for potassium.

It should be noted that with such a comparison of dried fruits and fresh fruits, the erroneous impression often arises that the content of nutrients in all dried fruits increases dramatically for some reason. In fact, if you compare one fruit before and after drying, the difference will not be so significant. And the error arises due to the fact that usually the amount of useful substances in the tables is taken based on 100 grams of the product, but these hundred grams “fit” a different number of fresh and dried fruits.

Therefore, in 100 grams of dried fruits that have lost moisture, iron, phosphorus, magnesium, and potassium are indeed several times more than in 100 grams of fresh apricots. But 100 g of dried apricots contains only 30-31% of water, and in fresh fruit - 85-90% in 100 g.

### Medicinal properties

Apricot preparations (oil, extracts of pulp and fruit seeds) in studies and experiments demonstrate various medicinal properties:

- **Antitumor.** In the experiments of Japanese scientists in vitro (“in vitro”) and in vivo (“inside a living organism”), the antitumor effect of Japanese apricot extract was found in relation to human cancer cells. In particular, the inhibitory effect of the extract on skin transit metastases in a patient with malignant melanoma was confirmed. High sensitivity to MIAPaCa-2 pancreatic cancer cell extract was also found. At the same time, the fatal effect on cancer cells did not affect normal cells and did not create side effects. <sup>[2]</sup> Other studies have found the ability of the same extract to inhibit the growth of breast cancer cells. <sup>[3]</sup>
- **Bactericidal.** Another group of Japanese scientists revealed the ability of the Japanese apricot to suppress the development of *Helicobacter pylori*, due to which the manifestations of chronic atrophic gastritis were less pronounced. <sup>[four]</sup> In other studies, the ability of apricot juice to inhibit the development of putrefactive bacteria was also established.
- **Antioxidant.** The fruit pulp and various extracts of sweet and bitter apricot kernels also show an antioxidant effect. <sup>[5]</sup> At the same time, in the works of scientists, a more pronounced relationship was established between the total antioxidant capacity of apricots and the content of phenol, rather than carotenoids. <sup>[6]</sup>

- **Painkiller.** Amygdalin, a plant glucoside isolated from apricot kernels, showed an analgesic effect in animal experiments when administered as an intramuscular injection. It is assumed that it can be used as an analgesic with anti-inflammatory action. <sup>[7]</sup>

The results of studying the extracts of different parts of the apricot show that in the future, with their help, it may be possible to treat diseases of the heart, liver, kidneys, intestines, respiratory tract, the consequences of pathologies of the nervous system and brain dysfunction.

- Researchers have found that eating apricots can reduce the risk of steatosis (fatty liver disease) and damage caused by free radicals. <sup>[8]</sup> Also, a therapeutic and prophylactic effect against liver fibrosis was achieved through the use of preparations based on apricot kernels. <sup>[9]</sup>
- The apricot diet prevented damage to the kidney tissue of mice and apoptosis of kidney cells, which was artificially provoked by exposure to methotrexate. <sup>[ten]</sup> With the help of the fruit, scientists were able to significantly reduce the toxic effects of methotrexate and suggest that by eating apricots, it will be possible to reduce damage to the kidneys by toxic drugs.
- An aqueous extract of apricot seeds showed anti-asthma activity in an experiment on mice. Oral administration of the extract relieved the asthma symptoms and airway inflammation that resulted from an allergen reaction. <sup>[eleven]</sup>
- Apricot oil had a protective effect on the development of ischemia in laboratory rats. Experimental studies have shown that apricot oil can be considered as a nutrient for the treatment and prevention of myocardial infarctions, since it has a strong cardioprotective effect. <sup>[12]</sup>
- Apricot kernel extracts and oil, orally and intra-abdominally, have been tested as a treatment for ulcerative colitis in rats. The scientists found that, although the oil fractions did not enhance the properties of the extracts, the anti-inflammatory effect in the intestines was pronounced, especially with the injection method of drug delivery. <sup>[13]</sup>
- Apricot carotenoids showed anti-amyloidogenic activity in vitro, which gave researchers hope for their use in the prevention of Alzheimer's disease. <sup>[fourteen]</sup>

## In medicine

Apricot fruits, seed oil, decoctions and infusions of dried apricots are used in various therapeutic programs.

- Apricot seed oil (*Oleum persicorum*) is used in medicine as a solvent for drugs - fat-soluble drugs intended for intramuscular and subcutaneous injections. In composition, this fatty oil is close to peach and almond. It includes various acids - linoleic (20%), stearic (14%), myristic (5%) - and can not dry out for a long time, but deteriorates from exposure to oxygen and light.
- In the complex therapy of cardiovascular and renal diseases, thick decoctions and / or infusions of some types of dried apricots can be included. They are used as a diuretic product in case of edema.
- As part of the magnesium diet for hypertension, dried and fresh fruits are introduced into the diet.

In addition, apricot extracts and extracts from apricot kernels are widely represented on the pharmacological market. The latter are better known under the commercial name "Laetrile", or vitamin B17. Laetrile is positioned as a means of preventing and treating cancer. However, in addition to the unproven effectiveness, there are additional risks associated with this cyanide-containing drug, which you can read more about in the "Hazardous Properties" section of this article.

## In folk medicine

The basis of modern "home" therapeutic practice with the use of apricot fruits was laid by the ancient medical recipes of the peoples of Central Asia. The inhabitants of this region got to know the apricot earlier than anywhere else on the planet, and, accordingly, they also learned about the healing properties of the fruit before others.

Already ancient healers noticed that apricots can remove bad breath, and dried fruits from it can control sweet and sour belching, relieve the heat of the stomach, and stimulate the excretion of bile. In continuation of this tradition, and today in folk medicine, with the help of infusions of dried fruits, they normalize digestive processes and provoke choleretic function. Fresh apricots are now widely used as a laxative.

But along with the medicinal manifestations of the fruit, its side effects were also found. For example, it was believed that overeating apricots could lead to the formation of patches of skin with pigmentation disorders, and eating raw apricots could harm people with a weak stomach. Only the elderly should avoid apricots in their daily diet. But all people (including healthy people) were advised never to drink apricots with cold water, not to eat fruit on an empty stomach and not to finish heavy meals with apricots.

Today, for medicinal purposes in folk therapy, it is customary to use not only the pulp, but also other parts of the plant:

- **Bones.** In the form of water infusions, the bones are used to restore the work of the heart, and to remove intestinal parasites. They also get rid of helminths with the help of bitter seed oil. In addition, they also treat hemorrhoids (externally) and urolithiasis (when ingested). Ear pain is relieved by instillation of apricot oil into the auricle.
- **Leaf decoction.** The brewed leaves of the plant also serve as an anthelmintic. If necessary, the same decoction is used as a diuretic.
- **Fruit juice.** In folk medicine, it is used for dysbacteriosis and stomach problems caused by low acidity. They also drink it to lower blood pressure.

### Recipes for drugs and infusions

Medicinal folk remedies are prepared both from one apricot ingredient and from several components:

- An infusion of dried apricots is taken to relieve swelling of the legs. Dried fruits (50 g) are poured with boiling water (250 ml) and kept for 3-4 hours. After straining, the infusion is taken ½ cup twice a day.
- A mixture of dried apricots, walnut kernels and honey is prepared to improve the functionality of the cardiovascular system and improve metabolic processes. To do this, all components are taken in equal proportions. At the same time, dried apricots with nuts are ground in a blender. The remedy is recommended to be taken daily for 1 tbsp. l.
- Another complex remedy from apricot kernels (20 pcs.), Honey (500 g) and lemon (500 g) is used in folk therapy for palpitations and heart rhythm disturbances. Before mixing with honey, the kernels are crushed in a mortar, and the lemon in a meat grinder. The composition is stored in the refrigerator and taken 1 tbsp. l twice a day (after waking up and before going to bed).
- A similar composition with the addition of juice of 30 red geranium leaves is used for hypertension. To reduce pressure, the drug should be drunk 2 hours after meals three times a day, 1 tbsp. l.
- Ashes from the shell of apricot seeds are taken to purify the blood. During the cooking process, the bones are broken to separate the core, and the shell is burned in a pan or baking sheet until ash forms. The tool is taken in 1 tsp. at least a week.

## in oriental medicine

The ancient oriental traditions of using apricots in healing were laid down both by the school of Arab-Persian-Tajik medicine (the works of whose representatives were translated into Chinese back in the Middle Ages), and by their own earlier heritage of Chinese healers.

During the existence of the Eastern Han Dynasty in China (20-225), the healer, whose name was Dong Feng, became famous for centuries. With herbal medicine and acupuncture, he treated mainly commoners and was so successful in this that his fame spread throughout the country. As a reward for healing, Dong Feng offered the healed to plant an apricot pit in his garden. And after a few years, the healer's dwelling was buried in apricot trees, the fruits of which the doctor used for medical practice. Therefore, until now in China, a "speaking" definition is sometimes used for apricot fruits - "Dr. Dong's fruits", and all Chinese traditional medicine is called "apricot garden".

In general therapy, apricot is widely used in China to cleanse the body of poisons and toxins, to rejuvenate and improve brain function. It is no coincidence that this fruit used to be included in the menu of emperors, and today it is in the diet of astronauts.

However, for the treatment of specific diseases and pathological conditions in traditional therapy, apricot pits are still used more often. With their help, they get rid of cough, hiccups, and when other herbal medicines are added, they treat respiratory diseases (tracheitis, bronchitis, whooping cough, laryngitis), gastrointestinal tract and inflammation of the kidneys. For example :

- with Chinese ephedra (Ma Huang) infusions of stones are used for difficult breathing;
- with hemp seed (Ho Ma Ren), the nucleoli are used as a laxative for constipation caused by "dry intestines";
- with black nettle leaves (Zi Su Ye), apricot seeds are prescribed to get rid of dry cough and "cold wind".

For the treatment of bronchial asthma, bitter apricot seeds are also used in Korean folk medicine. The Japanese also have their own national apricot "fruit of health", extremely rich in ascorbic and citric acids. Prunus mume apricot fruits are traditionally salted and fermented on the islands, with the help of which the inhabitants of Japan relieve fatigue, restore heart function, treat throat diseases, and stimulate the activity of the digestive system.

## In scientific research

Most of the scientific work devoted to the study of the chemical properties of the fruit relates to the topic of the influence of various extracts of apricot kernels in experiments in vitro and in vivo. In recent years alone, dozens of studies have been carried out on the potential of apricot kernels in the fight against allergic reactions, diseases of the liver, kidneys, intestines, and oncology. As an example, here are just a few studies that were published during 2018-19.

### **Apricot kernel extract prevents inflammation of the cornea and conjunctiva, which was caused by particulate matter contained in urban smog.** <sup>[fifteen]</sup>

In the experiment, eye drops containing 0.5 mg/ml or 1 mg/ml apricot kernel extract were injected into the eyes of female laboratory rats with characteristic eye lesions. In parallel, the expression of inflammatory factors was studied in the epithelial cells of the conjunctiva "in vitro".

As a result, it turned out that both concentrations of the extract inhibited damage to the epithelial layer of the cornea, protected from the destruction of the protective layer on the surface of the eye, and local

administration of drops of 1 mg/ml weakened the decrease in the secretion of tears. Scientists suggest that the pharmacological activity of apricot kernel extracts may be partly due to the presence of amygdalin in the composition.

**Apricot kernel oil protects the gastric mucosa of rats from damage due to its anti-inflammatory, antioxidant, and anti-apoptotic effects, and may be useful in reducing the severity of gastric ulcers.** <sup>[16]</sup>

Stomach ulcers, artificially provoked by ethanol in male albino rats, scientists tried to treat with apricot oil. After staining the gastric tissue for apoptosis, measuring the expression of gastric IL-10 and IL-6, analyzing some enzymes (catalase, superoxide dismutase, etc.), the scientists found that in the "apricot oil + ethanol" group of animals, the area and degree of gastric damage was significantly less than in the "ethanol without apricot oil" group.

**Apricot kernel extracts have the potential to be used in the future in dietary anti-cancer therapy in the treatment of human colon cancer.** <sup>[17]</sup>

Studies were conducted on HT-29 colon cancer cells. The interactive role of three different nuclear extractions in modulating cell proliferation, apoptosis, and cell cycle progression was monitored for 24, 48, and 72 h periods. As a result, scientists have received a complex picture of the effect of apricot extracts, which in a possible therapy will require detailed dosages and clarification of procedures.

For example, after 24 hours, all apricot kernel extracts had a biphasic proliferative effect on HT-29 cells. But on a 24-hour time period, 500 µg / ml extract inhibited the growth (proliferation) of cells, and after 72 hours the same concentration already stimulated this process. At the same time, in the case of further study of the mechanisms of influence, scientists see prospects for the use of extracts containing amygdalin in dietary anticancer therapy.

## **Weight regulation**

Taking into account the high content of various sugars, apricots, with their calorie content of 45-50 kcal / 100 g, are used in diets aimed at losing weight in a limited amount - no more than 100-150 g per day. With their help, you can provide the body with some of the necessary vitamins and minerals, but this sweet fruit cannot be called an ideal assistant in the fight against extra pounds.

Existing mono-diets, designed for 3 days, allow eating 1 kg of fruit per day, divided into 5-6 meals. With such a diet, the body receives only about 500 kcal per day, which, while maintaining physical activity, easily creates a negative balance when more energy is expended than supplied. But to maintain full activity, eating only apricot, is quite difficult. And not everyone can withstand fasting for three days. Therefore, individual "apricot" fasting days are more often practiced, and even then - in the absence of contraindications.

## **In cooking**

Fresh apricots in themselves are a dessert delicacy, but different types and varieties of these fruits have their own "culinary specifics", due, for example, to different amounts of pectins, high or low acidity, etc. So, in the confectionery industry for the manufacture of jelly, marmalade, jam, marshmallow, fruits with a high pectin content are more suitable. And the fruits of the Japanese apricot, due to their high acidity, are more often in demand in the production of marinades, pickles, seasonings.

In particular, in Japan there is a tradition of fermenting apricot fruits using a technology similar to the one we use to make sauerkraut: unripe fruits are removed from the tree, mixed with salt and left in

their own juice under oppression in a cool place for a month. This seasoning is called umeboshi and is usually served with rice. Whole fruits extracted from sourdough are considered an excellent snack. Properly cooked apricot retains a dense texture and light fruity flavor. But sometimes, as a basis, you can find sun-dried, dried fruits, which, after brine, are usually blanched in boiling water to soften.

Dried apricots are widely used in cooking. In this form, dried fruit is known by various names:

- Dried apricots are an apricot fruit divided into two slices, from which the stone was removed before drying. It is used as a filling for poultry dishes, pies, casseroles, yoghurts, sweets.
- Apricot is a whole fruit with a stone. This is how small-fruited varieties are usually dried, so that later they can be added to compotes and jelly.
- Kaisa is a dried whole apricot, in which the stone is removed without breaking the fruit through the place where the stalk is attached.
- Ashtak-pashtak is also a whole-dried apricot fruit, but, unlike kaisa, after removing the stone, it is split to get the core, which is then returned to the apricot again.

In one version of the recipe for a traditional Armenian sweet called alani, not the usual peaches are used, but slightly underripe or dried apricots of predominantly white varieties. In dried fruits, the stone is replaced with crushed walnut kernels mixed with sugar and spices. There are recipes in which dried apricots are steamed with boiling water to get a soft aromatic mass, and then this apricot raw material is baked like dough.

Quite a lot of alcoholic drinks are made on the basis of apricot. In the traditional apricot, the fruit juice is first fermented and then distilled (distilled).

The fruits of the Japanese apricot also serve as the basis for the 10-15% sweet and sour umeshu liquor popular in various Asian countries, which the Japanese began to cook at home since the 17th century.

### **In cosmetology**

In cosmetology, apricot components have been used for more than 2 thousand years. The pulp of the fruit is mainly used in the manufacture of home cosmetics. It is used to make "quick" nourishing and moisturizing face masks, anti-aging products.

So, for a simple homemade nourishing mask, you only need ripe fruits and mineral water. Apricots (3 pieces) are kneaded into porridge with a wooden spoon and applied in a thick layer to the previously cleansed skin. After a quarter of an hour, the "porridge" is washed off with ordinary water, and the skin is rubbed with a mixture of freshly squeezed apricot juice and mineral water without gas in a 50/50 ratio.

Apricot pits are used more widely. From finely ground kernels, pastes are made to even out the tone of the face, moisturizing and nourishing serums, anti-inflammatory ointments, and coarsely ground shell powder is added to scrubs. Seed-based oil is included in many skincare products from various manufacturers. Such oils and extracts are labeled as *Prunus Armeniaca* Extract, *Prunus Armeniaca* Kernel Oil or *Armeniaca* Seed Powder (INCI classification). Burnt apricot kernels are used in carcass production.

Also, apricot components can be easily found in the composition of hair care products. Although it is not difficult to prepare a mask from the pulp and apricot kernel oil to strengthen hair at home. According to the recipe, oil (3 tablespoons) is heated in a water bath to a comfortable warm state, mixed with the yolk of one egg and the pulp of one fruit. The mask is applied to the scalp at the base of

the hair and "rubbed" with a comb with rare teeth. To eliminate dandruff, lemon or tea tree oil is added to the composition.

### **Dangerous properties of apricot and contraindications**

A large amount of various types of sugars (about 9-9.5 g / 100 g) in the pulp of apricot fruits imposes certain restrictions on the use of these fruits by diabetics. But the glycemic index of fresh fruits is low (up to 34), it is even lower for dried apricots (about 30), therefore, both in the form of dried fruits and fresh, diabetics can afford to eat several fruits (while controlling blood sugar levels).

More significant risks are associated with self-medication with apricot kernel extracts, which contain hydrocyanic acid, a deadly cyanide. More precisely, apricot seeds contain amygdalin glycoside, which, decomposing upon hydrolysis, forms a hydrocyanic acid molecule.

Small portions of cyanide the human body is able to neutralize on their own. Glucose in the blood binds cyanides, so people with diabetes, for example, are more resistant to this kind of poisoning. But even 1 gram of amygdalin can already be fatal, and this amount corresponds to about 100 grams of apricot kernels. Children, on the other hand, can get poisoned with a smaller amount, having eaten the kernels of only 10-12 seeds.

In 2017, a report was published <sup>[18]</sup> about a 67-year-old Briton who, by daily use of two teaspoons of a home-made apricot seed extract and three Novodal dietary supplement tablets (based on the same seeds), brought himself to chronic intoxication in 5 years, which nearly cost him his life. At the time of the examination, the level of cyanide exceeded the norm by 25 times. The reason for the apricot drug craze was the belief that amygdalin provided cancer prevention, although such properties of amygdalin are now openly denied by the medical community.

Supporters of alternative medicine, this glycoside is better known under the brand name "Laetrile". It was registered as a drug for the treatment of disorders of intestinal fermentation <sup>[19]</sup>, but later they "remembered" that at the end of the 19th century they tried to treat cancer with amygdalin, after which a large-scale and profitable campaign was launched to popularize the anti-cancer properties of the drug. Traces of this company are easy to find in Runet, where amygdalin is often written about as the so-called vitamin B17. In the United States, the distribution of the drug "Laetrile" is now prosecuted by law.

Dried apricots also pose a certain danger. In the process of its industrial preparation, to improve consumer qualities, sulfur dioxide is used, which is indicated on the packaging as a preservative E220. This additive has been assigned the 3rd hazard class and is approved for use in all countries of the world. However, even low concentrations of sulfur dioxide can cause allergic reactions in some people. The risk group includes asthmatics, who are better off not eating "store-bought" dried apricots, people with chronic allergic diseases, as well as patients with gastrointestinal diseases who are more sensitive to sulfur dioxide due to changes in the acidity of gastric juice.

At the same time, you need to know that sulfur dioxide does not accumulate in the human body and is quite easily excreted in the urine. Therefore, in case of an overdose, you should simply drink more water.

Due to poor chewing of dried apricot fruits or swallowing them whole, intestinal obstruction may occur in children <sup>[20]</sup> and those adults who, due to the state of their teeth, are not able to sufficiently chew dried apricots before swallowing. <sup>[21]</sup> Cases are described when even single small fruits, after swelling, blocked the lumen of the small intestine, although, in general, episodes of intestinal blockage by phytobezoars are quite rare.



## Selection and storage

To buy ripe apricot fruits, you should choose fragrant fruits with already soft and pliable, but still firm flesh and rich orange skin without spots, dents or damage.

Fully ripened fruits are not stored for a long time - they must be eaten or processed immediately. Slightly unripe fruits lie well in the refrigerator. Before use, it is enough to take them out of there, put them in a paper bag and wait 2-3 days until they become ripe. At the same time, if a completely green fruit got into the refrigerator, then it will not be possible to bring it to ripeness.

Recently, apricots have been often frozen. To do this, they are simply pre-washed, dried and placed in the freezer. However, the most common way to prepare an apricot for long-term storage is drying the fruit.

To get a kilogram of dried apricots, you need to dry 3-4 kg of fresh fruit. To do this, selected dense apricots are washed, divided into slices (the stone is removed), and in turn they are dipped in portions for 10-15 minutes in water acidified with lemon juice. For 3 kg of fresh fruits, you need about 1 liter of water mixed with 250 ml of lemon juice. After that, apricot slices are either dried in the sun for a week, trying to prevent moisture from entering, or sent to the oven for 9-12 hours, while the baking sheet is pre-covered with baking paper, and the slices themselves are regularly turned over every hour.

Dried apricots are stored in hermetically sealed glassware, preventing moisture from entering, due to which dried fruits quickly become moldy and deteriorate. At the same time, blanks should not be kept under direct sunlight either, because ultraviolet light will have time to destroy ascorbic acid and affect the taste of the product. Therefore, usually a closed jar of dried apricots is sent for storage in the cellar or in the refrigerator.

All this, however, does not mean that the apricot cannot be called a healthy fruit. A variety of studies prove its potential value, including in matters of maintaining and improving health. But you can't build a therapeutic nutrition program on just one apricot, no matter what the myths about this delicious fruit say.

## Literature

1. US National Nutrient Database, [source](#)
2. Hattori M., Kawakami K., Akimoto M., Takenaga K., Suzumiya J., Honma Y. Antitumor effect of Japanese apricot extract (MK615) on human cancer cells in vitro and in vivo through a reactive oxygen species dependent mechanism // Tumori . 2013. Mar-Apr. 99(2). P. 239-248. doi: 10.1700/1283.14199.
3. Nakagawa A, Sawada T, Okada T, Ohsawa T, Adachi M, Kubota K.. New antineoplastic agent, MK615, from UME (a Variety of) Japanese apricot inhibits growth of breast cancer cells in vitro. Breast J. 2007 Jan-Feb;13(1):44-9. doi: 10.1111/j.1524-4741.2006. 00361.x.
4. Enomoto S., Yanaoka K., Utsunomiya H., Niwa T., Inada K., Deguchi H., Ueda K., Mukoubayashi C., Inoue I., Maekita T., Nakazawa K., Iguchi M., Arii K., Tamai H., Yoshimura N., Fujishiro M., Oka M., Ichinose M. Inhibitory effects of Japanese apricot (*Prunus mume* Siebold et Zucc.; Ume) on *Helicobacter pylori*-related chronic gastritis // Eur. J.Clin. Nutr. 2010 Jul. 64(7). P. 714-719. doi: 10.1038/ejcn.2010.70.
5. Yiğit D., Yiğit N., Mavi A. Antioxidant and antimicrobial activities of bitter and sweet apricot (*Prunus armeniaca* L.) kernels // Braz. J. Med. Biol. Res. 2009. Apr. 42(4). P. 346-352. doi: 10.1590/s0100-879x2009000400006.

6. Drogoudi PD, Vemmos S., Pantelidis G., Petri E., Tzoutzoukou C., Karayiannis I. Physical characters and antioxidant, sugar, and mineral nutrient contents in fruit from 29 apricot (*Prunus armeniaca* L.) cultivars and hybrids // J Agric Food Chem. 2008 Nov 26;56(22):10754-60. doi:10.1021/jf801995x.
7. Hwang HJ, Kim P., Kim CJ, Lee HJ, Shim I., Yin CS, Yang Y., Hahm DH Antinociceptive effect of amygdalin isolated from *Prunus armeniaca* on formalin-induced pain in rats // Biol. Pharm. Bull. 2008. Aug. 31(8). P. 1559-1564. doi: 10.1248/bpb.31.1559.
8. Ozturk F., Gul M., Ates B., Ozturk IC, Cetin A., Vardi N., Otlu A., Yilmaz I. Protective effect of apricot (*Prunus armeniaca* L.) on hepatic steatosis and damage induced by carbon tetrachloride in Wistar rats // Br. J. Nutr. Dec. 2009 102 (12). P. 1767-1775. doi: 10.1017/S0007114509991322.
9. Manal K Abdel-Rahman. Can Apricot Kernels Fatty Acids Delay the Atrophied Hepatocytes From Progression to Fibrosis in Dimethylnitrosamine (DMN)-induced Liver Injury in Rats? Lipids Health Dis. 2011 Jul 7;10:114 . doi: 10.1186/1476-511X-10-114.
10. Vardi N., Parlakpinar H., Ates B., Cetin A., Otlu A. The protective effects of *Prunus armeniaca* L (apricot) against methotrexate-induced oxidative damage and apoptosis in rat kidney // J. Physiol. Biochem. Sept. 2013 69(3). P. 371-381. doi: 10.1007/s13105-012-0219-2.
11. Jeong-Su Do, Jin-Ki Hwang, Hyo-Jung Seo, Won-Hong Woo, Sang-Yun Nam. Antiasthmatic Activity and Selective Inhibition of Type 2 Helper T Cell Response by Aqueous Extract of Semen *Armeniacae Amarum*. Immunopharmacol Immunotoxicol. 2006;28(2):213-25. doi:10.1080/08923970600815253.
12. Zhang J., Gu HD, Zhang L., Tian ZJ, Zhang ZQ, Shi XC, Ma W. H. Protective effects of apricot kernel oil on myocardium against ischemiareperfusion injury in rats // Food Chem. Toxicol. Dec. 2011 49(12). P. 3136-3141. doi: 10.1016/j.fct.2011.08.015.
13. Minaiyan M., Ghannadi A., Asadi M., Etemad M., Mahzouni P. Anti-inflammatory effect of *Prunus armeniaca* L. (Apricot) extracts ameliorates TNBS-induced ulcerative colitis in rats // Res. Pharm. sci. 2014. Jul-Aug. 9(4). P. 225-231.
14. Shigeru Katayama, Hirofumi Ogawa, Soichiro Nakamura. Apricot Carotenoids Possess Potent Anti-Amyloidogenic Activity in Vitro. J Agric Food Chem. 2011 Dec 14;59(23):12691-6. doi:10.1021/jf203654c.
15. Soo-Wang Hyun, Junghyun Kim, Bongkyun Park, Kyuhyung Jo, Tae Gu Lee, Jin Sook Kim, Chan-Sik Kim. Apricot Kernel Extract and Amygdalin Inhibit Urban Particulate Matter-Induced Keratoconjunctivitis Sicca. Molecules. 2019 Feb 12;24(3):650. doi: 10.3390/molecules24030650.
16. I Karaboğa, MA Ovalı, A Yılmaz, M Alpaslan. Gastroprotective Effect of Apricot Kernel Oil in Ethanol-Induced Gastric Mucosal Injury in Rats. Biotech Histochem. 2018;93(8):601-607. doi: 10.1080/10520295.2018.1511064.
17. Wagheda Cassiem, Maryna de Kock. The Anti-Proliferative Effect of Apricot and Peach Kernel Extracts on Human Colon Cancer Cells in Vitro. BMC Complement Altern Med. 2019 Jan 29;19(1):32. doi: 10.1186/s12906-019-2437-4.
18. Alex Konstantatos, Malini Shiv Kumar, Aidan Burrell, Joel Smith. An unusual presentation of chronic cyanide toxicity from self-prescribed apricot kernel extract. BMJ Case Reports. Volume 2017. dx.doi.org/10.1136/bcr-2017-220814.
19. Benjamin Wilson, MD The Rise and Fall of Laetrile. May 18, 2019.
20. Lino Piotto, Roger Gent. Dried Apricots: An Unusual Cause of Bowel Obstruction Case Reports. Pediatric Radiol. 2005 Dec;35(12):1224-6. doi: 10.1007/s00247-005-1552-1.
21. Gümüş M., Kapan M., Onder A., Tekbas G., Yagmur Y. An unusual cause of small bowel obstruction: dried apricots // J. Pak. Med. Assoc. Nov. 2011 61(11). P. 1130-1131.

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### **Apricot - useful properties, composition and contraindications**

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**Abstract.** The article discusses the main properties of apricot 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 apricot in various types of medicine and the effectiveness of its use in various diseases are considered. The potentially adverse effects of apricot on the human body under certain medical conditions and diseases are analyzed separately. Considered scientific basics diets With his application .