



Plum (lat. Prúnus)

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

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

Beneficial features

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

Basic substances (in 100 g)	Fresh plums ^[2]	Dried plums (prunes without further processing) ^[3]	Dried plums (boiled prunes, no added sugar) ^[4]	Dried plums (boiled prunes with added sugar) ^[5]	Canned plums in syrup ^[6]
Water	87.23	30.92	69.73	65.08	76.06
Carbohydrates	11.42	63.88	28.08	32.88	23.12
Squirrels	0.7	2.18	0.96	1.09	0.44
Fats	0.28	0.38	0.16	0.22	0.14
Alimentary fiber	1.4	7.1	3.1	3.8	1.5
Calorie content (kcal)	46	240	107	124	89
Minerals (mg/100 g)					
Potassium	157	732	321	312	93
Phosphorus	16	69	thirty	33	fifteen
Magnesium	7	41	eighteen	19	5

Calcium	6	43	19	21	ten
Iron	0.17	0.93	0.41	1.04	0.84
Zinc	0.1	0.44	0.19	0.22	0.07
Sodium			one	2	19
vitamins (mg/100 g)					
Vitamin C	9.5	0.6	2.9	2.7	0.4
Niacin	0.417	1.882	0.723	0.675	0.291
Vitamin E	0.26	0.43	0.19		0.26
Vitamin B-6	0.029	0.205	0.218	0.203	0.028
Thiamine	0.028	0.051	0.024	0.022	0.017
Riboflavin	0.026	0.186	0.1	0.093	0.041
Vitamin A	0.017	0.039	0.017	0.014	0.02
Vitamin K	0.0064	0.0595	0.0261		0.0064
folate	0.005	0.004			0.003

Due to the high water content in the plum pulp, the calorie content of the fruit is relatively low. In canned form, the calorie content of products from plums (including prunes) increases significantly.

In general, the amount of vitamins and minerals found in fresh plums and prunes differs little. The content of vitamin K, B vitamins, individual minerals in prunes is higher than in fresh plums. Compared to fresh fruits, prunes have more calories, fiber and carbohydrates.

Fresh plums (fruits) contain 6-17% sugars (with a predominance of glucose and fructose), up to 1.6% organic acids (malic, citric, oxalic, succinic, quinic), diphenylisatin, pectins, flavonols (quercetin, isoquercitrin), anthocyanins and leucoanthocyanins, carotene, vitamin E, ascorbic acid, B vitamins, potassium, iron, iodine, copper, and zinc compounds. Kernels of bones contain up to 42% fatty oils. ^[7]

Plum leaves contain vitamins E and C, flavonoids, phenol carboxylic acids. The composition of plum flowers includes flavonoids, cyanogenic glycoside, flavonoid glycoside kaempferol and kaempferin, homoisoflavone glycosides prunosides. ^[eight]

Medicinal properties

Plum fruits in fresh and dried form (also compotes from them or juice with pulp) have a slight laxative effect. They are recommended for constipation and intestinal atony, for cleansing the intestines in the presence of inflammatory processes in it. If these diseases are accompanied by diabetes mellitus or obesity, before eating the plum, it is necessary to get rid of sugar and acids during the processing. With non-infectious hepatitis, plums are useful for the liver; they improve the condition of patients with atherosclerosis; contribute to the removal of cholesterol, excess water and salt deposits from the body. The content of dietary fiber (both soluble and insoluble) in plums improves digestion. Pectins in plums remove radioactive substances. The fresh bark of the plum tree is used in homeopathy. ^[7]

Use in medicine

The pulp of plums is part of the pharmacy combined laxative "Kafiol". In addition to this component, the preparation also contains crushed leaves and fruits of senna, figs and vaseline oil. "Kafiol" refers to drugs that cause chemical irritation of the intestinal mucosa. It has a number of contraindications: proctitis, hemorrhoidal disease in the acute stage, intestinal obstruction, perforated ulcer, spastic colitis and constipation, disorders of water and electrolyte metabolism, etc.

In folk medicine

- A recipe is used as a laxative: remove the stones from the plums and pour cold boiled water over night. In the morning, boil the fruits for an hour, adding hot water as the liquid evaporates. Then drain the decoction and consume boiled plums before each meal (about 10 pieces at a time).^[7]
- To strengthen the immune system, a decoction is useful: pour 20 g of finely chopped plum leaves into 250 ml of boiling water and boil over low heat for half an hour. Strain and drink ¼ cup three times a day before meals.
- In inflammatory processes in the kidneys, a drug from the bark of a plum tree is used: pour 10 g of crushed bark with a glass of boiling water and cook a decoction in a water bath for half an hour. Strain, increase the volume by adding 50 ml of boiling water and drink ¼ cup three times a day before meals.
- For constipation, an infusion is prescribed: rinse plum tree branches (50 g) well, chop, pour 0.5 liters of boiling water, let it brew for 2 hours. Strain and drink 50 ml up to three times a day.
- For gastritis (with low acidity), a recipe is useful: immediately before use, mix the juice of homemade plums, prickly plums (thorns) and honey (in proportions 4:2:1). Take the composition of a tablespoon three times a day. Such treatment is contraindicated in diabetes.
- To improve the functioning of the digestive tract, dry plum flowers (25 g) pour 250 ml of hot water. Let it brew, strain and drink the infusion ¼ cup three times a day before meals.^[9]
- Traditional healers offer to dissolve and remove stones from the gallbladder using the resin (gum) of the plum tree. 100 g of resin should be dissolved in 1 liter of dry white wine. Drink 50 ml three times a day half an hour before meals. It is noteworthy that this recipe is mentioned as early as The Complete Herbalist (1653) by N. Culpeper.

Externally:

- For stomatitis, rinsing with a decoction of plum leaves is recommended: pour 20 g of dried leaves with a glass of boiling water, boil for a quarter of an hour and then add boiled water, bringing the volume of liquid to the original.
- Alcohol tincture on plum pits helps with sciatica: split the pits. Grind the plum kernels to a powder state (25 g will be needed in total) and pour a glass of vodka. Let it brew for a week and strain. This tincture rub the inflamed areas of the back.
- With an advanced form of weeping eczema, traditional healers advise vinegar decoction of plum leaves. Combine half a glass of vinegar (wine, fruit) with the same amount of boiling water and bring to a boil. Pour a glass of finely chopped fresh plum leaves into the vinegar broth and let it boil again. Infuse for one hour in an enamel bowl under the lid. Soak a gauze bandage with cooled broth and apply to damaged skin. After 10 minutes, wash the sore spot with warm boiled water and lubricate with propolis ointment.^[9]

in oriental medicine

In Indian medicine, plums are included as one of the main components in the composition of drugs used in the treatment of gynecological diseases (leucorrhea , unstable cycle, pregnancy failure).

In Chinese folk medicine, plum fruits are used as a remedy for vomiting, and an expectorant effect is also attributed to the plum .

In scientific research

The scientific interest in the study of the medicinal properties of plums is due to the high content of phenols in its fruits, mainly anthocyanins, which are natural antioxidants.

In the work of Igve E., Charlton K., the connection between the use of plums and the improvement of cognitive function (in particular, a positive effect on memory and related processes) is substantiated. In addition to the above and antioxidant properties, the relationship between the inclusion of plum fruits in the diet and the reduction of risk factors for cardiovascular diseases is emphasized.

The anti-inflammatory, analgesic, antibacterial and anti-cancer properties of plum gum are analyzed in a study by Nazar W., Raza A. et al.

University studies (Oklahoma, Florida) have proven the benefits of dried plums for strengthening bone tissue. Regular consumption of dried plums in the diet directly increased bone density, and a positive effect was found in cases of fractures and osteoporosis.

A number of scientific papers emphasize the following: the chemical composition of the plum fruit makes it possible to use this fruit as a source of raw materials for the production of antioxidants in the food industry. ^[10,11]

Weight regulation

Low-calorie plum can become the basis for both a one-component express diet (designed for 2-3 days) and fasting days (during which water and unsweetened green tea are also used). In the absence of contraindications, plum juice is included in the diet.

The biologically active compounds contained in plum fruits help in the fight against metabolic syndrome. Flavonoids and phenolic components such as anthocyanins, chlorogenic acids, quercetin and catechins counteract obesity by inhibiting the growth of fat cells. A study from the University of Liverpool (Institute of Psychology and Health) concluded that eating prunes as part of a weight management diet actually speeds up the weight loss process. ^[one]

In cooking

Plum is a fruit universally used in the field of cooking, which is used both in confectionery and in additives to meat dishes.

- Compotes, preserves, jams, marmalade, confitures are cooked from fresh plums, fruit puree, marmalade and marshmallow, candied fruits are made. Pectins and pectin-like substances contained in plums have high gelling properties. Plums are prepared as a side dish for meat, they are added to fruit salads and pastries. Plums are dried, frozen (with or without pits), pickled.
- Dried plums (prunes) are used in compotes, for snacks and desserts, in combination with stewed or baked meat. Varieties, the fruits of which are used for drying, the manufacture of dried fruits, must have a high content of solids and sugars. The pulp of suitable varieties for this is dense, and the stone is small.
- Spicy and sweet and sour sauces (plum chutney, tkemali) are prepared from certain varieties of plums. In various recipes, plums go well with many spices: cloves, allspice, cinnamon, nutmeg, vanilla and even garlic.

Spicy plum sauce

Ingredients: 3 kg of plums, 50 g of garlic, 15-20 g of basil greens, 100 ml of vegetable oil, 5-7 g of ground cinnamon, 150-200 g of sugar, salt and ground pepper to taste. Wash plums and remove pits. Put the fruits in a saucepan and simmer over low heat until they become soft. Then wipe the stewed plums through a sieve. Crush the garlic, chop the greens. Mix vegetable oil, salt, pepper, spices, sugar,

herbs and garlic with plum puree. Boil the sauce over low heat for 25 minutes, stirring occasionally. Pour hot sauce into sterilized jars and close.

- **How to quickly peel plums?** Wash the plums, on the surface of the fruit (in the place opposite the location of the stalk), make small cross-shaped cuts with a knife. Boil water, dip the plums in boiling water for half a minute, then immediately transfer the fruits to ice water (with ice cubes), also for half a minute. After that, pry off the peel in the area of the incision - the drain will be easily cleaned.
- To keep the fruits fresh longer, plums should not be washed in advance, but immediately before use.
- In order for the plucked, but slightly unripe, plums to ripen, the fruits must be put in a paper bag with bananas (or apples), wrapped tightly and left for a couple of days. Ethylene released by bananas will speed up the ripening process of plums. ^[1,9]

Beverages

- A lot of both alcoholic and non-alcoholic drinks are prepared from plums, and often the national plum drink becomes one of the gastronomic calling cards of the country.
- Xuan plum sweet and sour tea is popular in China Meitan , a soft drink that is rarely dispensed with in the summer.
- Demson Gin is a British plum liqueur. It takes pride of place in the list of gifts that are customary to give at Christmas.
- Jerkam is a traditional alcoholic drink from a range of light fruit wines, plum cider, which made the area famous in Worcestershire , England. Jerkam is also prepared from other stone fruits: peach, nectarine, apricot.
- Slivovitz is a famous plum brandy, the production of which is widespread in Central and Eastern European countries (Czech Republic, Hungary, Slovakia, Poland, Serbia, etc.).
- In Japan, the traditional plum liqueur is called umeshu . Umesu is served with ice, mineral water, added to cocktails.
- Slivyanka is a popular plum liqueur, for the preparation of which you can count more than one prescription option.

Slivyanka at home : fill a bottle with plums of the "Hungarian" variety and pour vodka so that it completely covers the fruits. Keep the bottle covered tightly with a lid in a dark place for 6 weeks. Then drain the vodka, and cover the plums with sugar (in quantity - "how much will go in"). Close the bottle tightly and infuse for 2 weeks. Then drain the resulting syrup and mix it with the previously drained vodka infused with plums. Filter the filling, pour into containers and cork. Store in a cold place, the exposure period is at least six months. ^[12]

Plums in winemaking

Varieties like "Hungarian" are suitable for making wine . Of the white plums, only plums with low acidity and plums of the early ripening type are unsuitable. Plums make excellent dessert wines. The difficulty for the winemaker is that the plum is a fruit that is hard to "give" the juice, so the plums must be pre-processed. Plum wine is opaque, cloudy, and needs to be clarified. The longer you store plum wine, the better it tastes. ^[13]

In cosmetology

Plum-based cosmetics use plum juice or ripe fruit pulp.

Plum face masks for dry skin

Option 1

Nourishes, softens and tones dry skin with the following recipe: grind one egg yolk with a teaspoon of plum juice. Apply the mixture on the face, after 20 minutes, rinse with warm and then cool water.

Option 2

A mask is useful for dry skin: peel and puree one ripe plum . Put the mass on your face (previously lubricated with a nourishing cream) and wash off after a quarter of an hour.

Plum masks for normal skin

Option 1

Puree the peeled ripe plum fruit , mix with a tablespoon of cottage cheese or sour cream, and apply the mass on the face. Wash off after 15 minutes with room temperature water.

Option 2

To prepare a nourishing mask, grind until smooth a tablespoon of butter, one yolk, a teaspoon of honey and a tablespoon of plum puree. Keep the mask on the face for half an hour, then remove the residue with a soft paper towel or cotton pad (this mask is also suitable for dry skin).

Mask for oily skin: peel and puree soft ripe plums . Mix plum puree with one beaten egg white and apply the mass on the face. Wash off with warm water after 20 minutes.

Tones, rejuvenates the following mask: mix egg yolk, 4 tablespoons of plum puree, 0.5 teaspoon of honey and 2 tablespoons of grated oatmeal. Apply a homogeneous mass on the face, décolleté, neck and hands. Wash off the mask after 20 minutes.

For any skin type, a procedure is recommended: moisten several cotton pads or a layer of cotton wool in 100 ml of ripe plum juice and apply such lotions to the face. After a quarter of an hour, wipe your face with a clean sponge with light movements . ^[1]

To cleanse the body

Plum fruits are used in a variety of detox recipes that work to cleanse the body of accumulated toxins and toxins.

Plum smoothie with cinnamon

For cooking you will need: 3 large plums, pitted and finely chopped, a quarter cup of apple juice, a quarter cup of blueberries, half a teaspoon of cinnamon and ice cubes. Grind all ingredients in a blender until smooth. The calorie content of such a smoothie is approximately 115 kcal.

A decoction of prunes and raisins also gives a good cleansing effect. ^[fourteen]

Dangerous properties of plums and contraindications

Plums are not recommended for people suffering from obesity, diabetes; prone to low blood pressure (hypotension). Sour varieties of plums are contraindicated in gastritis with high acidity (hyperacid), gastric or duodenal ulcers.

During the drying process, prunes are treated with sulfites (to prevent the oxidation of phenols in fruits). Therefore, the use of prunes can cause serious allergic reactions in patients with hypersensitivity to sulfite substances, up to anaphylactic shock.

It is important to remember that the use of plums before a diagnostic test for carcinoid tumors can lead to a false positive result: this type of tumor provokes an increase in the level of serotonin in the blood, and plums contain a significant amount of this substance.

Early childhood is also a contraindication to the intensive and systematic inclusion of plums in the diet (plum puree is allowed in a small amount). [1,7,8]

Selection and storage

It is best to pluck plums when the fruits are 4-5 days from the stage of final maturity. When buying, preference should be given to still sufficiently elastic plums with a waxy coating. Fruits with a thin skin have a very short shelf life. It is advisable to store plums in a plastic bag with small holes in the vegetable and fruit compartment of the refrigerator. The average shelf life of unripe fruits in such conditions is up to 20 days. Prunes are stored in glassware or linen bags in a dry and cool place. [one]

Varieties and cultivation

The plum tree is moderately demanding on lighting and, compared to other stone fruits (peach, cherry, apricot), is a more shade-tolerant plant. European varieties of plums are characterized by a high need for moisture and intensive watering, since their formation took place under conditions of fairly abundant moisture. Along with this, plum species such as blackthorn and Canadian plum are drought-resistant. Plum grows well on various types of soil. However, highly productive plantations of this crop can be created in fertile areas, on soil with favorable physical characteristics. Salt, waterlogged, stony soils clogged with rubble or lime are unsuitable for growing plums. Loamy chernozem, sod-alluvial and chestnut soils are suitable for plum. One of the most important factors is the thermal regime. It should be remembered that the area of plums is limited primarily by temperature conditions. Plum is a heat-loving plant (varieties of the Ussuri plum are less susceptible to cold). According to the degree of winter hardiness, all plum varieties are grouped into low, medium and relatively winter hardy.

According to the ripening period of fruits, plum varieties are divided into **early** (Early blue, Apricot, Renklod Franz Joseph), **medium** (Renklod Altana , Moldavian blue, Mirabell Nancy, Kirk , Jefferson) and **late** (Hungarian ordinary, Anna Shpet , Renklod Bove).

One of the most significant varietal differences is the taste of the fruit. It depends on the presence and harmony of the combination in the fruits of various substances, primarily sugars and organic acids.

Based on the taste of fruits, varieties are conventionally divided into three groups:

1. **dessert** (fruits with high palatability) - Renklod Altana , Montfort , Mirabell Nancy, Renklod Briangston , Hungarian Italian, Anna Shpet , Peach, Splendor ;
2. **table** (fruits with a good or satisfactory taste) - Hungarian ordinary, Renklod reform, Edinburgh , Moldavian blue, Apricot. The taste of the fruits of these varieties is estimated by a score of 3.5-4;
3. **technical grades** - Prunes Kozlovsky , Big blue, Niagara, Renklod purple. The fruits of these varieties received a taste rating of no higher than 3.5 points at tastings.

It should be noted that the taste qualities of fruits in almost all varieties change significantly over the years. This is due to more or less favorable weather conditions throughout the year. Warm, sunny, moderately humid weather during fruit ripening contributes to the formation of high taste characteristics. ^[16]

In modern fruit growing, plum is a fruit crop that is cultivated in almost all countries of the world. Plum fruits are distinguished by a rich chemical composition, high nutritional value and excellent taste characteristics.

Literature

1. Healing products. Food is medicine, medicine is food. Compound. A.D. Milskeya , - H.: Phoenix, 1998. - 479 p.
2. Plums , raw , [source](#)
3. Plums , dried (prunes) , uncooked , [source](#)
4. Plums, dried (prunes), stewed, without added sugar, [source](#)
5. Plums, dried (prunes), stewed, with added sugar, [source](#)
6. Plums, canned, heavy syrup, drained, [source](#)
7. Medicinal plants: encyclopedic reference book / ed. A. M. Grodzinsky. – K.: Olimp, 1992. – 544 p.: ill.
8. Turaeva N. I. Medicinal properties of plums// Electronic scientific journal "Biology and Integrative Medicine" 2017 No. 1 (January)
9. Nikolaeva Yu. Berries, fruits and juices. Useful properties and the best folk recipes . : Ripol - classic, 2012. - 192 p.
10. A Systematic Review on the Health Effects of Plums (Prunus domestica and prunus salicina), [source](#)
11. A multi-target therapeutic potential of Prunus domestica gum stabilized nanoparticles exhibited prospective anticancer, antibacterial, urease-inhibition, anti-inflammatory and analgesic properties, [source](#)
12. List of plum dishes , [source](#)
13. Shestov P.V., Kazakov P.K. Homemade wines are natural. - M .: "Capital", 1991. - 64 p.
14. Cinnamon plum smoothie , [source](#)
15. Luther Burbank , [source](#)
16. Vlasjuk S.G. Plum and cherry plum. - K .: Harvest, 1989. - 152 p. ill.

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Plum - useful properties, composition and contraindications

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