The healing properties of nuts and seeds

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SUMMARY

The article summarizes information about the fruits of some nut and oil plants growing on the territory of Russia and traditionally used in Russian and other national cuisines on the territory of the former USSR. The correct use of these fruits in nutrition can provide real help in the treatment of patients with various diseases, as well as avoid complications from their use. For each plant (common hazel (Corylus avellana L.), common almond (Amigdalus communis L.), walnut (Juglans regia L.), annual sunflower (Helianthus annuus L.), Siberian pine (Pinus sibirica (Rupr.) Mayr)) provides information on the chemical composition and main types of action of biologically active substances contained in its fruits, ways of using it for food and medical purposes, and possible contraindications and restrictions to their use.

In previous publications (Traditional Medicine Nos. 1, 2, 3; 2008), materials were presented on the therapeutic use of apricot fruits, some representatives of citrus and tropical fruits, which are most widely used in our country. This article is devoted to nuts and seeds - the fruits of walnut, oil and some other plants growing and cultivated in Russia. The next article will describe the medicinal properties of nuts imported to Russia.

Many of these plants have traditionally been used in Russian and other national cuisines and traditional medical systems, including in the former USSR. They were also used as a medicinal food. We have studied this folk and traditional medical experience and subjected it to critical analysis with the aim of its further rational application in modern medical practice and nutrition. In this article, we provide information about seeds and nuts, which are often used in any home. Plants are listed alphabetically. More complete information in terms of the botanical characteristics of plants, habitat, non-food ways of their use are presented by us in the monograph "The medicinal properties of food plants" (Moscow: Publishing house of FNECTMDL Roszdrav, 2008. - 533 p.).

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REGULAR HAZEL (HAZEL)

Corylus avellana L.

Fresh and dried fruits and leaves, as well as dried bark of a plant are used as food and medicinal raw materials.

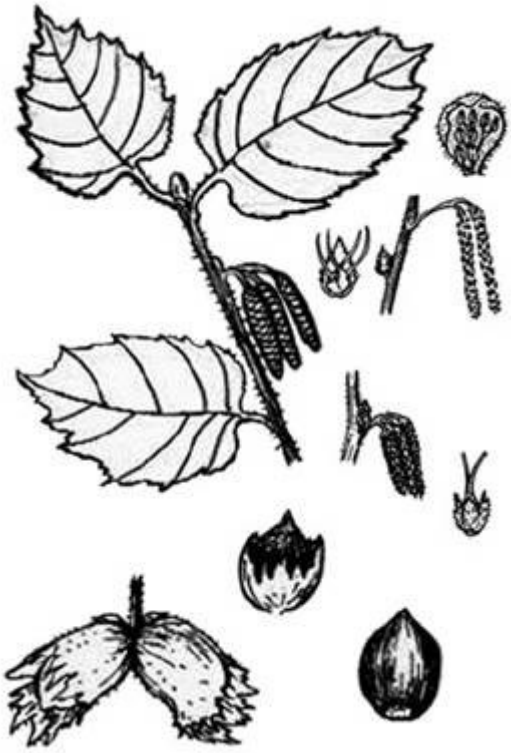
The kernels of nuts contain [7, 28, 31, 33, 38]:

- 58-71% fatty oil (which contains a lot of unsaturated fatty acids);
- 14-22% proteins and amino acids, incl. hazel-specific protein Korelin;
- 2–5% carbohydrates - sugar (mainly sucrose), fiber;
- vitamins: B1 (0.4-0.9 mg%), B2, B6, pantothenic, folic acid, PP, C, E, A, biotin;
- polyphenolic compounds: flavonoids; tannins;
- phytosterols (up to 50 mg%);
- minerals: salts of iron and other macro and microelements.Leaves contain essential oil (0.04%); flavonoids (quercitrin, myricitrin); vitamins: C, carotene; tannins (up to 11%) [7, 10, 31, 38, 39].

Found in hazel bark [7, 10, 31, 38]: essential oil; tannins (about 10%), incl. flobaphenes; triterpenoids (betulin - 0.2%); resin; dyes.

Kernels of nuts are a valuable nutritious food product, they are eaten raw, dried and fried (roasted), used for making cakes, sweets, creams, various fillings, liqueurs [7, 14, 28, 33].

Hazel seed oil has a pleasant taste and aroma, is highly nutritious and can be used for food. In the food industry, it serves as a substitute for almond. The cake remaining after pressing it is used for making halva.



Rice. 1. Common hazel (hazel).Corylus avellana L.

Daily consumption of 100 g of HAZELNUTS fully satisfies the daily human need for protein, so they become an indispensable product in case of great physical exertion and chronic fatigue. It is especially useful to use them in order to recuperate after serious illnesses (especially with reduced appetite) and in chronic debilitating diseases. Sometimes for debilitated patients, nutritious "milk" and "cream" are made from fresh nuts by rubbing them with a little water.

As an adjuvant [3, 7, 10, 14, 17, 20, 25, 26, 33, 39], hazel fruits are used in folk medicine for diabetes mellitus, arterialhypertension, obesity and atherosclerosis. High content of unsaturatedfatty acids involved in lipid metabolism and phytosterols, with the systematic use of nuts, helps to normalize metabolism, improve the condition of patients with cerebral and coronary atherosclerosis and hypertension.

In folk medicine, hazel seeds are recommended for urolithiasisdiseases, and when mixed with honey they are considered a good remedy for anemia and rheumatism. Nuts are used to increase lactation in lactating women.Hazelnut OIL is traditionally used internally asan antihelminthic agent for the treatment of ascariasis, as well as for epilepsy.

As an external agent, the oil is still rubbed into the scalp forimproving hair growth.

Hazel is also used in cosmetic practice: an emulsion obtained by rubbing nuts with a small amount of water can be successfully used to remove age spots on the face, soften the skin and relieve redness.

The presence of essential oil, phenolic compounds and some other components in the LEAVES and BARK of common hazel is explainedvasoconstrictor, capillary-strengthening and anti-inflammatory effectextracts from them. In folk medicine, leaf infusion and bark decoction were used for varicose veins, phlebitis, trophic ulcers of the leg, capillary hemorrhages (inside and in the form of compresses). Currently, preparations from hazel leaves officially approved for use are used for various types of peripheral vascular diseases.

Traditional is the use of hazel for benignhyperplasia of the prostate gland, acute and chronic prostatitis: thisdue to the high content of phytoestrogens in LEAVES, which have a pronounced effect on lipid metabolism in the body.

In domestic folk medicine, plant leaves were used to treat diseasesliver, stomach and intestines. Infusions from them were taken for colds, fever, hemoptysis.

A decoction of the bark has been used in the past for malaria.

However, when eating hazel nuts, it should be borne in mind that their excessive consumption, like many other nuts, can lead to headaches.pain. It is also not recommended to consume large amounts of kernels whenobesity, as well as to avoid exacerbations of chronic stomach diseases,liver, gallbladder and pancreas [23, 38].

ALMOND ORDINARY

Amigdalus communis L.

Fresh and dried almond seeds are used as food and medicinal raw materials. Allowed for medical use on the territory of Russia [6]: sweet almond seed, bitter almond water (from the seeds of the bitter form of almonds) and almond oil - a solvent for injections.

Rice. 2. Common almonds.Amigdalus communis L.

Not only by the taste of the kernels, but also by their chemical composition, almonds are divided into two forms: bitter and sweet.

Seeds of both forms contain [7, 16, 22, 35, 38, 39]:

- 20-60% fatty oil (it contains mainly triglycerides unsaturated fatty acids - oleic, linoleic);
- 20-30% protein substances;
- carbohydrates: sugars (2-3%);
- enzyme emulsin;
- glycokinins (substances with insulin-like activity);
- phytosterols (25-50 mg%);
- vitamins: B2, etc.

The seeds of the bitter form of almonds contain 2.5–5.0% of the cyanogenic glycoside amygdalin, while the seeds of the sweet form contain only traces of it.

For food purposes, only seeds of the sweet form of almonds are used. The kernels of fruits (nuts) are eaten fresh, fried, salted and candied, widely used in baking cookies, in the production of confectionery and sweets. Nuts are also used in the manufacture of alcoholic beverages and to obtain oil [7, 16, 28, 33]. Medicinal and cosmetic products used in official and folk medicine and in everyday life are obtained from the seeds of both plant forms [7, 8, 22, 28, 33, 35].

Fatty OIL of seeds of both forms is similar in its composition. It is obtained by cold and hot pressing. Cold-pressed oil is a medical grade used for the preparation of a number of medicines, incl. injectable drugs. Hot-pressed oil is used in the food and perfume industries.

Almond oil, both in traditional and modern medical practice, is used internally as a mild laxative for constipation (improves the sliding of feces), as well as an emollient and wound healing agent. To soften cough and improve sputum separation, oil is prescribed orally for bronchitis.

Heated oil in folk medicine is recommended to be buried in the ears when otitis media as an analgesic and anti-inflammatory agent.

OIL SEEDS OF BITTER ALMOND, containing about 0.1% of free and bound hydrocyanic acid, is used to obtain bitter almond water. It is used as a sedative and pain reliever.remedy for nervous disorders, abdominal pain, painful cough.

SEEDS OF SWEET ALMONDS called "almond bran" are used as a medical and cosmetic product to soften dryskin, with cracks in the skin, acne, for removing freckles. Derived from itemulsion ("almond milk") is used externally for the same indications, and internally - as a light enveloping and laxative. Emulsion from sweet almond seeds reduces the secretion of gastric juice and can be prescribed for hyperacid gastritis, gastric ulcer and12- duodenal ulcer, ulcerative colitis.

Noteworthy are the recommendations mentioned in the treatises of Avicenna on the use of SEEDS of sweet almonds for the treatment of cholestatic jaundice. Substances with insulin-like activity (glycokinins) present in almond seeds slightly lower blood glucose levels, so eating seeds is useful for diabetes mellitus.

A high content of triglycerides of unsaturated fatty acids, which prevent the deposition of cholesterol in the walls of blood vessels, in combination with a significant amount of phytosterols, which also haveanti-atherosclerotic action, allows you to recommend seedsalmond and almond oil for hypercholesterolemia, hypertension, obesity.

Bitter almonds containing the cyanogenic glycoside amygdalin are poisonous andnot suitable for food use. In the body, amygdalin in the presence of the enzyme emulsin (β-glucosidase), also present in the seeds, decomposes into glucose, benzaldehyde and hydrocyanic acid. Hydrocyanic acid blocks the enzymes of the respiratory chain, leading to tissue hypoxia.

Despite the fact that the kernels of sweet almonds contain only traces of amygdalin, if eaten excessively, they can also be poisoned. Children are especially sensitive to it, in whom symptoms of poisoning may appear even from a small amount of sweet almond seeds [8, 28, 29].

WALNUT (O. VOLOSHSKY)

Juglans regia L.

Fresh and dried fruits, leaves, pericarps, walnut partitions are used as food and medicinal raw materials (raw materials are unofficial in the Russian Federation).

Walnut kernels contain [7, 8, 10, 16-19, 25-27, 30, 37, 39, 40]:

- fatty oil (45-77%), consisting mainly of glycerides unsaturated fatty acids
- protein substances (8-21%), which contain 18 amino acids, of which 8 irreplaceable;
- free amino acids (about 1%);
- carbohydrates: sugars (glucose, sucrose), polysaccharides;
- vitamins: β-carotene, B1 (up to 0.38 mg%), B2, B6, C (in immature - up to 2.5%, to maturity content decreases to 13-48 mg%), P, E (up to 60-73 mg%), K1;
- plant hypoglycemic substances;
- phytosterols β-sitosterol and its glucoside;
- tannins;
- minerals: potassium, calcium, magnesium, manganese, iron, copper, cobalt, iodine, zinc, etc.

Found in the leaves

- vitamins: up to 3-4% ascorbic acid, carotenoids (up to 30 mg% β-carotene, violaxanthin, flavoxanthin, cryptoxanthin, etc.), groups B, P;
- essential oil;
- compounds of a polyphenolic nature: tannins; flavonoids, anthocyanins; hydroxycinnamic acids: caffeic;
- quinones: naphthoquinone juglone (juglandin), α and β-hydrojuglons;
- alkaloids.

The green pericarp contains:

- vitamins: ascorbic acid (up to 3%);
- tannins;
- quinones: α and β-hydrojglons.

Walnut kernels taste very good and the oil squeezed out of them is edible. When ripe, they are used fresh and fried (roasted) for food, home cooking and confectionery. Walnuts, nut sauces and spices are a great addition to meat dishes and cheeses. Jam, syrups, tinctures, liqueurs are prepared from unripe seeds.

Rice. 3. Walnut (Voloshsky Island).Juglans regia L.

In terms of calorie content (due to the high content of proteins, fats, carbohydrates) and digestibility, walnuts are not inferior to animal products. The high energy value of this product allows you to quickly satisfy hunger and increase efficiency [7, 8, 16, 33, 37].

NUTS are recommended to be added to the diet in case of severe physical andmental work, overwork; they are useful for anemia andthe recovery period after infectious diseases. It is advisable to use them with juicy fruits, vegetables, herbs, while the healing and nutritional effect increases several times.

Nuts are of great importance in dietary nutrition at hypercholesterolemia, atherosclerosis, hypertension, obesity: they are rich in phytosterols and polyunsaturated fatty acids (linolenic and linoleic), which reduce serum cholesterol and have an anti-atherosclerotic effect. Unsaturated fatty acids are part of cell membranes, ensure normal metabolism, elasticity of blood vessels. Linoleic and linolenic acids, the content of which in oil is up to 73%, can increase the body's resistance to radiation exposure.

In addition to fatty acids, walnut oil contains up to 60-70 mg%

vitamin E, which is a natural antioxidant, a universal protector of cell membranes from free radical damage,antihypoxanth and effective immunomodulator. With its lackobserved, including male and female infertility, miscarriages in early pregnancy, nervousness and irritability, trophic disorders. The daily requirement for this vitamin (10 mg%) is easily satisfied with a small amount of nuts (up to 5-6 nuts per day) [1, 5, 7, 8, 12, 17, 18, 25, 26, 30, 33, 35].

Walnuts stimulate spermatogenesis; this property has been known since ancient times, and it is widely used in traditional medicine in different countries. This may be explained by the fact that vitamin E deficiency sometimes also leads to a reduction in sperm production in men [10, 34, 40].

In traditional medicine [1, 5, 7, 8, 11], ripe nuts are used for diseases of the gastrointestinal tract: gastritis, enterocolitis, diarrhea. According to the results of clinical studies, it was found that walnut kernels have an optimizing effect on gastric secretion, both with increased and decreased acidity (the optimal dose is considered 50 g per day at a time).

Eating nuts helps lower glucose levels inblood, therefore they are recommended for diabetes and obesity [25].

Walnuts and other parts of this plant contain significant amounts of iodine. Therefore, kernels, as well as tinctures from UNMARE FRUITS, LEAVES and GREEN REFINES can be recommended forreplenishment of iodine deficiency and prevention of the development of relateddiseases, in the complex treatment of patients with hypo- and euthyroid goiter.

In folk medicine, HAZEL LEAVES are brewed like tea and drunk withan increase in the size of the thyroid gland. In modern diet therapy, tea from walnut leaves is used for endemic goiter. Taking into account the diverse vitamin composition, water and alcohol extracts from UNRUPE FRUITS and LEAVES are used for prevention and treatmentavitaminosis, anemia, as a general tonic for exhaustionthe body after illness. It is an effective remedy for dyspepsia.

Due to the regenerating properties, various preparations from LEAVES nonspecifically enhance the regeneration of the insular apparatus of the pancreas glands and therefore can be recommended for non-insulin dependent sugar diabetes. The effectiveness of fruit septum tincture in diabetes mellitus and thyroid diseases has been clinically tested [18, 25].

The extract from the leaves increases blood clotting, it is drunk for bleeding and hemoptysis in tuberculosis. Naphthoquinone juglone has a pronounced bactericidal actionagainst staphylococci,
streptococci, tubercle bacillus, as well as antifungal action. It is isolated from the leaves and introduced into the composition of ointments, suspensions, solutions for the treatment of skin tuberculosis, staphylococcal and streptococcal pyoderma, candidiasis of the skin and mucous membranes, and other dermatomycosis.

Outwardly, infusions and decoctions from LEAVES and FRUIT PARTITIONS,

having anti-inflammatory and antibacterial effects (due to the complex effects of several groups of biologically active compounds: tannins, naphthoquinones, essential oils, etc.), are used for pyoderma, dermatomycosis, purulent wounds, boils, carbuncles and skin ulcers (oil infusion), skin tuberculosis, arthritis and gout.

They rinse the oral cavity with stomatitis, tonsillitis, and are used for douching with colpitis.

HAZELNUT OIL can be used as an antihelminthicfunds. Given that walnuts are rich in protein, they should not be consumedthose people who have hypersensitivity (may experienceallergic reactions). Walnut kernels are not recommended for use infood in large quantities for bowel diseases. Overeating of these fruits can lead to a migraine-like headache due to the possible development of cerebral vasospasm. Products made from unripe nuts (jam, etc.) have a very high content of tannins, therefore, to avoid constipation, it is advisable to consume them in moderation [23, 29].

ANNUAL SUNFLOWER

Helianthus annuus L.

Fresh and dried seeds are used as food and medicinal raw materials; for medicinal purposes - leaves, marginal flowers of sunflower [6]. The composition of biologically active substances in sunflower is diverse [4, 7, 16, 22, 30, 31].

Seeds accumulate fatty oil (up to 45%), it mainly contains glycerides of unsaturated fatty acids; phospholipids; also contains:

- vitamins: E, carotenoids, and vitamin-like substances (choline);
- carbohydrates (24–27%);
- protein substances (13–20%);
- polyphenolic compounds: tannins; phenolic acids (chlorogenic - about 2%);
- organic acids: citric and tartaric;
- phytin (about 2%).

Found in the leaves:

- vitamins: carotenoids (over 100 mg%);
- flavonoids: quercymetrin, etc.;
- coumarins: scopolin;
- sterols: sitosterol;
- saponins: echinocystic acid glycoside;
- organic acids: succinic, fumaric, citric;
- carbohydrates: pectin substances, etc.;
- minerals.

The petals are identified:

- vitamins: carotenoids (cryptoxanthin, taraxanthin, β-carotene);

- vitamin-like compounds: choline,
betaine;
- polyphenolic compounds: flavonoids (glycoside quercimetrin, etc.), anthocyanidins; phenolic acids (chlorogenic, neochlorogenic, coffee);
- coumarins: scopolin;
- polysaccharides: hemicellulose B, etc .;
- organic acids: salicylic and others;
- sterols: sitosterol;
- saponins: echinocystic acid glycoside;
- ornidiol alcohol.

Rice. 4. Annual sunflower.Helianthus annuus L.

Sunflower seeds are used as food fresh, dried or fried (roasted); they are added to the dough when baking some types of bread. Seeds are considered a complete protein food because their proteins contain all the essential amino acids.

Sunflower SEEDS, along with nuts, are one of the best food sources of vitamin E. The intake of a sufficient amount of vitamin E has a positive effect on the condition of the skin and mucous membranes, increases potency, prevents fatigue, muscle weakness, and spontaneous abortions in women. In addition, vitamin E is an effective antioxidant and immunomodulator that helps to strengthen the body's defenses [4, 7, 11,

32, 34].

Sunflower is the main oilseed crop in Russia. SUNFLOWER OIL from plant seeds is widely used as food, it is used in medicine. The oil is rich in unsaturated fatty acid glycerides, which prevent the deposition of cholesterol in the walls of blood vessels. Sunflower oil is included in mixtures for oil-alkaline inhalations for diseases of the nasopharynx, used for oil-mustard wraps for acute bronchitis and pneumonia (they act much softer and longer than mustard plasters).

Oil relieves spasm and activates gallbladder motility andbiliary tract, therefore effective in diseases
biliary system. It has a mild laxative effect.

Oil dressings are used as an emollient for wounds and burns. Refined (refined) sunflower oil is a part of many official ointments.

In traditional medicine from fresh or dried LEAVES andEDGE FLOWERS plants prepare a tincture that improves appetite,strengthening the activity of the stomach and intestines.Thanks to
antispasmodic action, it can be used for intestinal colicand spasms of smooth muscles of the bronchi. Tincture of yellow marginal flowers, in which natural salicylic acid is found, has antipyretic properties. It has long been used as an antimalarial agent.

According to folk medicine, a decoction of dried PETALS (marginal flowers) of sunflower used to be drunk as an antitumor agent, tincture from them - for tumors of the uterus (according to an old Siberian recipe, take 100 g of petals per 3 liters of vodka). This use of sunflower is confirmed by modern experimental data: the polysaccharides of this plant (in particular, hemicellulose B) inhibit the growth of sarcomas by 29%. Therefore, in some countries, at present, preparations from dried sunflower flowers are included in the complex therapy of various types of tumors [2, 4, 7, 9, 11, 13, 20, 24, 30, 32].

Threshed sunflower baskets are used for industrial pectin production. Pectin substances remove heavy salts from the bodymetals, radionuclides, suppress the pathogenic flora of the intestine, theiralso used for enterocolitis. However, if sunflower seeds (seeds) are consumed in excess, they often exacerbate various chronic diseases of the gastrointestinal tract. Choleretic actionsunflower oil is a contraindication for its inclusion in large quantities in the diet of patients with cholelithiasis, because it can provoke the onset of biliary colic [29].

SIBERIAN PINE
(S. KEDROVAYA, SIBERIAN CEDAR)
Pinus sibirica (Rupr.) Mayr

Siberian pine seeds are used as a food product and medicinal raw material (permitted for medical use on the territory of Russia

[6]). For medicinal purposes, seed shells, needles, resin are also used (raw materials are unofficial in the Russian Federation).

Rice. 5. Siberian pine (c. Cedar, Siberian cedar).Pinus sibirica (Rupr.) Mayr

Pine nut kernels contain [4, 10, 15, 21, 36, 38]:

- fatty oil;
- proteins, which contain more than 70% of essential amino acids;
- carbohydrates: pentosans, starch, fiber;
- vitamins: E, carotene, B1, B6;
- phytosterols;
- minerals: phosphorus salts, trace amounts of manganese, copper, iron, zinc, iodine, etc.

The shell also contains fats, protein, a large amount of tannins and minerals.

The needles are very rich in essential oil (it contains camphene monoterpenes,myrcene, limonene, etc.), vitamins (C - up to 250-300 mg%, carotene); it also found

- resinous substances;
- tannins;
- minerals.

Peeled pine nuts are consumed fresh; they are added to add original flavor to some salads. The seed cake is used in the confectionery industry in the manufacture of cakes, pastries, halva and others.

products.

Oil is squeezed out of the nuts, which is close in quality to the best varieties of almond and provencal. The oil has found application not only in cooking, but also in medicine. A unique combination of fats, carbohydrates, proteins well absorbed by the body, a complex of vitamins and microelements, an original taste and high nutritional value of pine nuts have determined their popularity in health and dietary nutrition [4, 7, 10, 15, 21, 33, 36, 38].

As an adjuvant, Cedar pine seeds are used forvitamin deficiencies, colds, overwork and to increase physical and mental performance. They are especially useful for the elderly.people and children, because they contain amino acids essential for the body. Milk and cream made from nuts (for which they are thoroughly ground with a little water) were used earlier as a general tonic for pulmonary tuberculosis, kidney and bladder diseases. They were also recommended for nursing mothers to enhance lactation.

No less popular in folk medicine are tinctures from NUTS WITH SHELLOWS or from SHELLUPA alone. It is believed that such a tincture helps to normalize water-salt metabolism, relieves joint pain andimproves the general condition of the body with rheumatism, gout, arthritis. Treatmentcomplemented by baths with Siberian pine needles infusion.

From the SCALP of pine nuts, rich in tannins, decoctions and tinctures are prepared, which are successfully used asastringentand
hemostatic agent for internal use in gastrointestinalintestinal disorders, hemorrhoids, to stop uterine bleeding and in some blood diseases (mainly in the complex therapy of leukemia).

Decoctions from the shell rinse the oral cavity with inflammation of the mucous membranes, and in the form of lotions and washings they are used for skin diseases (neurodermatitis, lichen, pustular lesions, etc.) and burns. Ascorbic acid-rich infusions and decoctions of CPIs (the so-called "cedar paws" - young boiled twigs) have long been known as the best taiga antiscorbuticmeans. Due to the high content of vitamins, minerals,essential oil and other biologically active compounds, they were used asfortifying agent that improves the condition of patients with anemia, duringtime and during the recovery period after colds.

Essential oil of pine needles is distinguished by high bactericidal properties, therefore, infusions from needles are used for colds asanti-inflammatory and expectorant.

CEDAR RESIN ("gum") has a strong wound healingactivity. It is used by the people to treat abrasions, purulent wounds,trophic ulcers, boils, burns.

It is undesirable to eat more than 20–40 g of peeled pine nuts per day, because with an increase in the dose, a feeling of heaviness may appear inareas of the liver, nausea, constipation [29].

PUMPKIN

Cucurbita pepo L.

Dried pumpkin seeds, which are approved for medical use on the territory of the Russian Federation (anthelmintic agent) [6], and fruit pulp are used as food and medicinal raw materials.

The dried seeds contain [5; 6; 7; 22; 37]:

- up to 52% fatty oil;
- up to 28% protein;
- free amino acids, the dominant of which is cucurbitin (0.1–0.3% depending on the variety).

Fruit pulp contains

- carbohydrates: sugars, polysaccharides;
- proteins;
- vitamins: carotene, C (10–20 mg%), B1, B2, B6, E, PP;
- saponins;
- enzymes;
- phytosterols: cucurbitol;
- organic acids: salicylic and others;
- resinous substances;
- minerals: compounds of phosphorus, iron and other macro and trace elements. Pumpkin seeds are eaten fresh and dried; in home cooking, they can serve as a substitute for almonds.

Rice. 6. Common pumpkin.Cucurbita pepo L.

Pumpkin seeds - an effective antihelminthic agent [1, 6, 7, 10, 11, 16, 18, 22, 25, 30, 37]. Since olden times, an emulsion was prepared from them, which was used to expel tapeworms (including bovine, pork, dwarf tapeworms, wide tapeworms). Currently, the anthelmintic effect has been confirmed experimentally and clinically; it is associated with cucurbitin present in seeds. Anthelminthic drugs from pumpkin seeds are somewhat inferior in activity to drugs from the rhizomes of male fern, but they do not cause intoxication of the body. They are prescribed, first of all, for children, the elderly and weakened people.

However, when consuming a large amount of pumpkin seeds, nausea and vomiting may occur in some cases. Therefore, with their constant use as an anthelmintic agent, it is necessary to monitor the reaction of the body [18]. Purified Pumpkin Seed FAT OIL Approved for Medicinal Use in Benign Hyperplasiaprostate gland (reduces cell proliferation) [ten]. The positive effect in this disease is associated primarily with the presence in the seeds of phytosterols in free and bound forms (β-sitosterol, etc.), which affect the exchange of prostaglandins and prolactin. The effect is complemented by the anti-inflammatory and antioxidant action of tocopherols and selenium.

Pumpkin seed oil is used externally as an anti-inflammatory and reparative agent for cervical erosion, colpitis, hemorrhoids, dermatitis, eczema (neurodermatitis), psoriasis, burns and other diseases.

Pumpkin pulp is rarely eaten fresh; much more often it is fried, stewed, baked or pickled, candied fruits and jam are made. PUMPKIN is a valuable dietary product [1, 3, 7, 11, 16, 18, 25, 37], which promotes the assimilation of difficult to digest ("heavy") food and at the same time has a high nutritional value. In this regard, it is especially useful for patients with impaired liver and kidney function, as well as for the elderly. The fruits of the plant have a regulatory effect on metabolic processes and the digestive system, alkalize the body and therefore especially valuable for gout, atherosclerosis and diabetes mellitus.

Fiber-rich pumpkin pulp has a mild laxative andcholeretic action; it is used for constipation, colitis, hemorrhoids. Dishes frompumpkins relieve nausea and improve the general condition of pregnant women with toxicosis.

Pumpkin enhances the filtration function of the kidneys, increases urine output without irritating the renal tubules, and thus finds application in edema associated with heart failure, arterial hypertension, and kidney disease. When eaten, the pulp of the fruit is activatedelimination of urates from the body, therefore pumpkin can be recommended in the dietwith urolithiasis with a tendency to form urate stones. Pumpkin porridge is included in the diet for acute and chronic urinary tract infections: pyelonephritis, cystitis and urethritis.

As a choleretic, hepatoprotective, anti-inflammatorypumpkin seed oil or fruit pulp dishes are prescribed for diseases

liver. The hepatoprotective effect is due to membrane stabilizing properties; manifests itself in slowing down the damage to hepatocytes. The use of raw pumpkin in food is not recommended for gastritis with low acidity.gastric juice, exacerbations of chronic stomach diseases, severeforms of diabetes mellitus.

Due to the large amount of fiber in the pulp, pumpkin dishes are used with caution in case of intestinal diseases, accompanied byexcessive gas production, and with a tendency to diarrhea [eighteen].

Literature

1. Altymyshev, A.A. Natural healing remedies / A.A. Altymyshev. 2nd ed. - Frunze: Kyrgyzstan, 1990 .-- 352 p.

2. Balitsky, K.P. Medicinal plants and cancer / K.P. Balitsky, A.L. Vorontsov. - Kiev: Naukova Dumka, 1982 .-- 376 p.

3. Barnaulov, O.D. Herbal medicine for patients with cardiovascular diseases / O.D. Barnaulov. - SPb .: ELBI-SPb, 2002 .-- 224 p.

4. Great encyclopedia of medicinal plants. - M .: Publishing house "ANS", 2006. - 960 p.

5. Vekhov, V.N. Cultural plants of the USSR / V.N. Vekhov, I.A. Gubanov, G.F. Lebedev / Ed. T.A. Rabotnov. - M .: Mysl, 1978 .-- 336 p.

6. State register of medicines. Official edition (by accessed September 1, 2004). - M., 2004. - T. I. - 1406 p .; T. II. - 1792 p.

7. Gubanov, I.A. Encyclopedia of the Nature of Russia. Food Plants of Russia / I.A. Gubanov. - M .: ABF, 1996 .-- 556 p.

8. Danikov, N.I. Healing vegetables and herbs: Super simple recipes / N.I. Danikov. - M .: RIPOL classic, 2005 .-- 256 p.

9. Enenko, Yu.A. Herbal medicine in oncology (medicinal plants and cancer): Healer / Yu.A. Enenko, V.S. Grishina, Yu.N. Kolchin, N.V. Grishin. - Lugansk: "Lugan", 1994. - 128 p.

10. Efremov, A.P. Herbalist for men / A.P. Efremov, A.I. Schreter. - M .: Asadal, 1996 .-- 352 p.

11. Ilyina, S. Twelve months. Encyclopedia of Traditional Medicine in 2 volumes / S. Ilyin. - K .: Logos, 1998. - T. 1. - 320 p .; T. 2. - 352 p.

12. Ilyina, S. Phytotherapy in intimate life: doctor's advice / S. Ilyina. - Kiev: Naukova Dumka, 1996 .-- 368 p.

13. Korepanov, S.V. Plants in the prevention and treatment of cancer. Some information on folk medicine / S.V. Korepanov. - Barnaul: Altai printing plant, 1999 .-- 160 p.

14. Korsun, V.F. Plants of health and longevity / V.F. Korsun, A.A. Korsun, E.V. Nikulin. - Minsk: Belaruskaya Navuka, 1999 .-- 463 p.

15. Krylov, G.V. Herbs of life and their seekers / G.V. Krylov. - Tomsk: Red banner, 1992 .-- 392 p.

16. Medicinal properties of agricultural plants / Ed. Ph.D. M.I. Borisov. - Minsk: Urajay, 1974 .-- 336 p.

17. Lesiovskaya, E.E. Pharmacotherapy with the basics of herbal medicine: Instructional

allowance / E.E. Lesiovskaya, L.V. Pastushenkov. 2nd ed. - M .: GEOTAR-MED, 2003 .-- 592 p.

18. Loiko, R. Fruits and vegetables: Recipes for health improvement / R. Loiko, Z. Kavecki. - M .: ASTPRESS KNIGA, 2004 .-- 352 p.

19. Loiko, R.E. Chemical composition of fruits of Juglans regia L. in Belarus / R.E. Loiko, T.S. Shirko, A.I. Korotkevich, P.N. Kukhta // Vegetable resources. - 1990. - Issue. 2. - pp. 160–169.

20. Makhlayuk, V.P. Medicinal plants in folk medicine / V.P. Makhlayuk. - Saratov: Privolzhskoe book publishing house, 1993. - 544 p.

21. Minaeva, V.G. Medicinal plants of Siberia / V.G. Minaeva. 5th ed., revised and add. - Novosibirsk: Science. Sib. otdel., 1991 .-- 431 p.

22. Muravyova, D.A. Pharmacognosy: Textbook / D.A. Muravyova, I.A. Samylina, G.P. Yakovlev. 4th ed., Rev. and add. - M .: Medicine, 2002 .-- 656 p.

23. Traditional medicine or healing by the forces of nature. Handbook about prevention and treatment of diseases, preservation of health and active longevity. - M .: Priboy, 1998 .-- 256 p.

24. Some information about the use of medicinal plants in traditional medicine (according to the report of the employee of the laboratory of pharmacology and traditional medicine of VILR A. B. Nikolaev). - M: VILR, 1973 .-- 62 p.

25. Nikolaychuk, L.V. Sugar-lowering plants / L.V. Nikolaychuk. - Minsk: Urajay, 1989 .-- 191 p.

26. Nosov, A.M. Medicinal plants / A.M. Nosov. - M .: EKSMO-Press, 2001 .-- 350 p.

27. Pastushenkov, L.V. Medicinal Plants: Folk Use medicine and everyday life / L.V. Pastushenkov, A.L. Pastushenkov, V.L. Pastushenkov. - SPb .: DEAN, 1998 .-- 384 p.

28. Fruits of the Earth / Per. with him. and foreword. A.N. Sladkov. - M .: Mir, 1979. - 270 s.

29. Complete encyclopedia of traditional medicine. - M .: ANS, 1999 .-- T. 3. - 560 with.

30. Radzinsky, V.E. Medicinal plants in obstetrics and gynecology: Handbook / V.E. Radzinsky, E.T. Mikhailenko, K.A. Zakharov / Ed. V.E. Radzinsky. 6th ed., Rev. and add. - M .: LLC "Medical Information Agency", 2005. - 320 p.

31. Modern herbal medicine / Ed. V. Petkova. - Sofia: Medicine and physical culture, 1988. - 504 p.

32. Sokolov, S.Ya. Handbook of medicinal plants / S.Ya. Sokolov, I.P. Zamotaev. - M .: Medicine, 1985 .-- 464 p.

33. Solovyov, A. The Nutcracker's feat / A. Solovyov // Around the world. - 2002. - May. - S. 78–83.

34. Spirichev, V. B. Vitamins, vitamin-like and mineral substances: Handbook / V.B. Spirichev. - M .: MCFER, 2004 .-- 240 p.

35. Turischev, S.N. Phytotherapy of respiratory diseases / S.N. Turishchev. - M .: ITRK, 2001 .-- 112 p.

36. Cherepnin, V.L. Food plants of Siberia / V.L. Cherepnin. -

Novosibirsk: Science, Sib. otdel., 1987 .-- 190 p.

37. Chikov, P.S. Vitamin and medicinal plants / P.S. Chikov, Yu.P. Laptev. - M .: Kolos, 1976 .-- 368 p.

38. Shepelev, V.A. Healing properties of nuts / V.A. Shepelev. - Rostov-on-Don: Phoenix, 2002 .-- 128 p.

39. Encyclopedic Dictionary of Medicinal Plants and Products natural origin. Textbook / Ed. G.P. Yakovlev and K.F. Blinova. - SPb .: Special literature, 1999 .-- 407 p.

40. Eating Your Way to Health - Dietotherapy in Traditional Chinese Medicine. - Jingfeng Cai. Foreign Languages Press Beijing, 1987 .-- 141 p.

Healing properties of nuts and seeds / T.L. Kiseleva, A.A. Karpeev, Yu.A. Smirnova, V.P. Safonov, E.V. Tsvetaeva, L.I. Kogan, I. L. Blinkov, M.A. Dronova // Traditional medicine. - 2008. - No. 4 (15). - S. 33-43.

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