



Valerian (lat. Valeriana)

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

Keywords: valerian, beneficial properties, potentially dangerous effects, side effects, beneficial properties, contraindications, diets

Useful properties of valerian

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

Basic substances	Valerian contains (g/100 g) ^[7] :
Water	7.6 g
Squirrels	4.63 g
Carbohydrates	2.24 g
Fats	1.17 g
insoluble fiber	77 g
Soluble fiber	7.3 g
Minerals	
Calcium	829 mg
Phosphorus	328 mg
Iron	272 mg
Manganese	11.47 mg
Zinc	4.8 mg
vitamins	
Vitamin C	44.9 mg

What exactly is used and in what form

For the preparation of medicinal recipes, **valerian rhizome** and roots are used. In folk medicine, the plant is used in the form of decoctions, tinctures, powders, extracts. Valerian is a component of many herbal teas and an indispensable component of gastric, soothing and diuretic teas. Baths with a calming effect are prepared on a decoction of the root. ^[eight]

Medicinal properties

Valerian rhizomes contain volatile oil substances (terpineol, pinene, terpene and its derivatives, camphene); estrol derivatives; isovaleric, acetic, formic, butyric acids; tannins; saponins; hatinin and valerian (compounds that are characterized by the properties of alkaloids); crystalline substance with a pronounced sedative effect; epoxy diesters and mineral salts. The content of essential oil in the root system of valerian is from 0.5 to 2 percent. Among the components of the essential oil are valerianoborneol ester, isovaleric acid, borneol, myrtecogol, limonene, kesyl alcohol (azulene). ^[9]

Valerian preparations are used as a sedative for prolonged and systematic sleep disorders, neuroses of the heart and vascular system, and palpitations. Valerian is used in the systemic treatment of such ailments as asthma, epilepsy, migraine, nervous exhaustion, menopausal hot flashes, thyroid disease ^[8]

The valerian plant has a calming, anti-spasmodic, anti-epileptic and mild laxative effect on the body. During mental stress, valerian stimulates the functions of the cerebral cortex, eliminates disturbances in it. ^[ten]

In official medicine

Medicines based on valerian:

- Chopped valerian rhizomes with roots, in packs of 0.1 kg;
- Valerian tincture, bottled. Single dosage - from 20 to 30 drops;
- Essential valerian tincture. Release form - drops in vials. As an antiemetic, 20-30 drops are used four times a day;
- Thick valerian extract;
- Valokarmide (drops). With cardiovascular neurosis, it is recommended two to three times a day, 20-30 drops;
- Corvalol, in the form of drops. With insomnia, tachycardia, intestinal cramps, convulsive conditions of peripheral vessels and irritability, the recommended appointment: from 15 to 20 drops twice or thrice a day;
- Camphor-valerian drops, which include tincture of valerian and camphor. Used in the treatment of cardiovascular neuroses;
- Lily of the valley-valerian drops with adonizide. Recommended for patients in the complex treatment of ailments during menopause, as well as for the elderly;
- Valocordin;
- Cardiovalen. ^[9]

In folk medicine

Valerian for insomnia: pour one teaspoon of the roots into a glass of barely warm water, insist in a sealed container for about 4 hours. Drink 2-3 times a day for a quarter cup. With constant, frequent sleep disturbances, half a glass is prescribed before a night's sleep ^[9]

With hyperthyroidism, nervous excitement, hysterical reactions, epileptic seizures, convulsions, tachycardia and cardiac neuroses, **valerian tea is useful**. The drug is prepared as follows: a teaspoon of finely chopped roots is boiled in 200 ml of water for about less than a quarter of an hour. Drink a glass if necessary ^[10]

Valerian tincture for alcohol (valerian drops) is also available for preparation at home: pour crushed dry valerian roots with alcohol with a strength of 70 degrees in proportions of 1:5. Insist in a warm place for a week. Drain the resulting liquid, let stand and strain. Take from 15 drops per day.

Folk method of preparing **valerian ethereal tincture**: valerian root, crushed to a coarse-grained powder, insist on alcohol (in proportions 1: 4) for 4 days. Then two parts of ether are added, thoroughly mixed and incubated for another 72 hours.

With painful sensations in the abdomen (as a relaxing agent), with uterine cramps, nervous exhaustion and stress, take **valerian tincture in water**. Grated valerian roots are soaked in non-hot water in a sealed container for at least 5 hours. Raw materials of rhizomes are taken in an amount of 5 to 15 g per 160 ml of water. Drink the tincture in several doses.

Valerian root is used in powder form (in a single dose of 1 to 2 g), but not more than 4 portions of the powder per day, for scarlet fever, typhoid lesions, pneumonia, certain diseases of the uterus, migraine ^[11]

For prophylactic purposes, to prevent nervous breakdowns, men are shown **valerian liquor**: a tablespoon of valerian tincture is diluted with water in proportions of 1: 1 (single dose). The effectiveness of such prophylaxis depends on the duration of administration.

Outdoor use:

With severe stress, fear, convulsions, children are prescribed baths with warm broth. A handful of crushed valerian roots is prepared in a liter of water, boiled for 10 minutes. The resulting liquid is added to bathing water. A bath with valerian is taken before going to bed, for 15 minutes, every 2 days.

In inflammatory processes of the mucous membrane of the eyes due to overdrying, water vapor of valerian root and eyebright is used. They wash their eyes, and apply lotions with steam before going to bed ^[11]

For adults, a bath in the collection of herbs from marigold, chamomile, valerian root, thyme and sage is prescribed for disorders of the nervous system, overwork, increased irritability, sciatica, thrombophlebitis, hypotension. A handful of a combination of the listed herbs is boiled in two liters of water for half an hour and added to a full bath. Take this bath twice a week. ^[3]

in oriental medicine

Tibetan medicine uses valerian to treat chronic fever and fever caused by poisoning with some kind of poison.

As well as traditional Western European medicine, valerian is used in China as a sedative and as a means of improving blood circulation. ^[12]

In Pakistan, valerian root is used in traditional herbs to treat spinal cord injuries and restore function.

In scientific research

The medicinal potential of valerian has long been an object of scientific interest for medical researchers.

British physician and botanist Nicholas Culpeper described one of the valerian-based medicinal recipes: " *Valerian root boiled with licorice, raisins and anise seeds is useful for those who suffer from coughs* ." Culpeper mentioned valerian in connection with attempts to cure the plague. The scientist also described one of the types of valerian - **water valerian** ^[4]

Valerian edible (or tobacco root) in the 1840s described in detail in his diaries by the American traveler and explorer John Charles Fremont ^[13]

Dounat , S. Kispe , K. Diefenbach , A. Maurer , I. Fitzsche , I. Roots devoted their research to a critical assessment of the effect of **valerian extract** on the structure and quality of sleep . ^[fourteen]

A group of Chinese scientists (Heng - Wen Chen , Yan Liu , Li Wong et al.) worked on the topic of **the chemical composition of valerian and its effect on the cardiovascular system** ^[15]

issue of using valerian in the European medicinal tradition and the **detailed clinical pharmacology of plant-based preparations** are covered in a scientific article by S. V. Naletov ^[16]

The composition of volatile substances in the leaves of valerian officinalis was studied by Shkrobotko P., Tkachev A., Yusubov M., Belousov M., Fursa N ^[17]

Weight regulation

Is **valerian used for weight loss** ? There are no official data confirmed by complex scientific studies, but some authors believe that valerian can suppress appetite by acting on the human nervous system, eliminate the feeling of hunger, and therefore it is possible to use this plant as a method of combating excess weight.

In cooking

By the number of recipes and its taste characteristics, valerian can hardly be attributed to the spices that have conquered the world of cooking, but the traditions of European cuisine fully allow the addition of the plant to salads, marinades and drinks. This herb will complement and diversify the nutritional quality of the dish in an original way. **Valerian leaves** taste like ordinary lettuce leaves, i.e. lettuce, differing slightly more concentrated saturation. Contains significant amounts of vitamin C.

Salad with valerian, tomatoes and cheese

For cooking, you will need 50 g of valerian leaves, 200 g of cherry tomatoes, 100 g of any hard cheese, some pine nuts, olive oil and salt. Wash and dry the valerian leaves. Grind, but in small pieces. Cut cherry tomatoes into quarters. Cheese cut into thin slices. Mix the ingredients, dress the salad with oil and salt, sprinkle with a handful of pine nuts ^[18]

Valerian hot chocolate from British ethnobotanist James Wong, author of *How to Eat Better* and food blogger .

This drink relieves stress, tones and improves mood. To implement the recipe, you will need 3 tablespoons of crushed fresh valerian root, 4 incomplete cups of full-fat milk, 3 tablespoons of crushed fresh lemon balm leaves, 3 teaspoons of fresh lavender flowers, one teaspoon of dried passion fruit , zest of one and a half oranges, 50 g of dark chocolate , a pinch of vanillin. Peeled and grated **valerian root** , along with milk, lemon balm, lavender, passion fruit and orange peel, warm in a deep frying pan over low heat for about 10 minutes. Strain. Pour fragrant milk into a saucepan, add grated chocolate and vanillin and heat over a fire until completely dissolved. Drink hot. ^[19]

In cosmetology

Essential parts of valerian are used by cosmetologists in combination with creams, lotions, massage oils. External use of valerian is aimed at reducing skin allergic reactions of various origins.

In perfumery

The essence, extracted from the root of the plant, gives a persistent woody scent with variations in its shades. Therefore, perfumers use **valerian essential oil** when it is required to recreate forest aromas: moss, tree bark, greenery. The fragrance of valerian is combined only with certain components: a wonderful accompaniment to it are notes of lavender, pine or cypress.

Other uses

Valerian is an excellent honey plant. The nectar of the plant is characterized by a high sugar content, which attracts a large number of bees. The indicators of honey productivity of this perennial are quite high.

In the cuisine of the Indians of North America, **edible valerian took root**, the tubers of which were baked or thoroughly fried and were a real delicacy.^[eight]

Dangerous properties of valerian and contraindications

Does **valerian have any side effects**? Yes, if the intake of valerian preparations was carried out for a long time and was uncontrolled. In this case, the following symptoms are possible: dry mouth, headache, stomach upset, distraction, confusion, irritability, strange dreams, daytime sleepiness.

It is necessary to consult a doctor about the compatibility of drugs and possible contraindications to taking valerian if the patient is already taking drugs associated with the treatment of the following diseases:

- any infectious disease (including malaria, tuberculosis, etc.);
- depression;
- crayfish;
- erectile dysfunction;
- heartburn, gastroesophageal reflux;
- high blood pressure;
- psoriasis, rheumatoid arthritis, autoimmune diseases;
- mental disorders.^[21]

In the literature on herbal medicine, there are sometimes reports that long-term use of valerian can cause disturbances in the activity of the digestive tract. Therefore, when prescribing, the attending physician always takes into account the individual characteristics of the patient and his disease. Consider also the fact that valerian increases the ability of blood sedimentation. An important nuance proven by medical practice is the fact that taking valerian as a preventive measure to prevent the expected neuroses is absolutely ineffective. Elimination and relief of the manifestations of neuroses occurs only in the process of their occurrence.^[eleven]

Botanical description

This is a herbaceous perennial plant, representing the subfamily Valerianaceae, the Honeysuckle family.

origin of name

According to folk tradition, valerian is called *aromatic*, *maun*, *odolyan*, *devil's potion*, *earthen incense*. The most common version of the origin connects the word "valerian" with the Latin "valere" - "be healthy".^[one]

There is also an assumption that the plant was named after the district of Valeria - lands in the Roman province of Pannonia located southwest of the Danube. In addition, they explain the etymology of the name "valerian" and the consequence of borrowing from the German language ("baldrian", "bullenjan", "balderjan") the name of the deity of light - Baldur. The term "valerian" is not mentioned in classical texts written in Latin until the 10th century. First used in the scientific work "De diaetis" by Isaac Israel (Jewish thinker, healer and outstanding scientist of the Middle Ages), the name later appears in European herbals.^[2]

Kinds:

The species system of valerian is diverse, many types of valerian used both in official and in folk medicine have medicinal value.

- **Valerian officinalis (high)** - originally a representative of the Mediterranean flora, but the growth area is incredibly wide. It should be noted that several different types of plants with medicinal potential are combined under the designation "valerian officinalis". They are characterized by a similar chemical composition, identical pharmacological properties, the same methods of use and application in the medical sense;
- **Valerian elderberry** - endemic of the Carpathian Mountains;
- **Valerian Volga (brilliant)** - refers to rare species. Grows in the European part of Russia, in Western Siberia, in the Urals;
- **Valerian Grossheim** - grows on the Crimean Peninsula. Also found in the Caucasus;
- **Valerian hill (narrow-leaved)** - a medicinally significant species, with an extensive habitat;
- **Russian Valerian** is a representative of the flora of Western Siberia, the European part of Russia. Occurs on the Left Bank of the Ukrainian forest-steppe;^[3]
- **Japanese valerian (Kesso)** - was bred from the Japanese variety of valerian officinalis, while it is practically not cultivated in Japan. The production of phytoessence from Japanese valerian exceeds 10 times the amount of essence extracted from the species of valerian officinalis;
- **Mexican valerian** grows in Mexico. Contains a large amount of volatile oils, which since the 1980s has made this type the subject of attention of large European companies working in the pharmaceutical industry;
- **Valerian Iberian** is endemic to the Pyrenees. Has no medicinal value;
- **Valerian Indian** - grows in the foothills of the Himalayas. Used to flavor tobacco products^[4]
- **Valerian officinalis** - a plant from several tens of centimeters to a meter in height. The rhizome is vertical, cylindrical, emits a strong fragrance. The root branches into many thin and long roots. Stem single, hollow. The leaf arrangement is opposite, the flowers come in different colors: dark pink, white, reddish, sometimes purple. Valerian blooms in May, the flowering period lasts until early summer. Seed fruit. It grows in alder forests, in areas with wet and swampy soil, in forests.

Growing conditions

light loamy soil, located in a lowland and containing a sufficient amount of humus, are optimal for growing valerian. In the fall, the soil must be loosened to a depth of 0.3 m. In the spring, overturn and cultivate and harrow before sowing. To increase the yield of valerian, it is advisable to feed the land on the site with humus, mineral fertilizers (nitrogen, phosphorus, potassium).

The plant is propagated by sowing the soil with seeds. Sowing periods are guided by environmental conditions, but are not limited in time: you can sow valerian in late autumn, with the beginning of spring or in summer. The distance between the beds is 45 cm. Spring and summer sowing rates are 80 g of stratified seeds per 100 square meters. m. The late autumn standard is different: 100 g of dry seed raw materials for the same sown area. Sprinkle the sown seeds with an earthen cover from 1 to 3 cm high, depending on the density of the soil.

Maintenance of the area where valerian grows includes weeding, plowing between rows, pest control and fertilizer. Loosen the soil immediately after sprouts appear. Top dressing, thinning and spraying with a 0.01% solution of Actellik crops are carried out during the formation of a leaf rosette. In biennial plants, the tops of the stems are cut off. Plants that have been grown for at least three years are suitable for collecting seeds. ^[5]

Valerian as a centuries-old medicinal and horticultural crop is subject to attacks by harmful insects, including valerian aphid, meadow moth. Plants damaged by these insects must be treated with an insecticidal agent. Valerian is also often affected by rust, root rot. Preventive measures to combat these diseases include the treatment of seeds for sowing with a fungicide and the fertilization of the soil with phosphorus and potassium. In the case of the occurrence of rot on the rhizome, the infected bush must be completely eradicated.

The collection of valerian should be carried out taking into account the existence of those species of valerian that do not have medicinal properties, and their roots are not subject to collection. One of these species is **whole-leaved valerian**. An important distinguishing feature of valerian species that medicine does not use is the absence of an unusual and strong aroma characteristic of valerian officinalis. In addition, when sorting the harvested valerian roots, pickers must learn to distinguish them from the rhizomes of the dangerous and poisonous **valerian officinalis**. The roots of this plant are somewhat lighter, creeping rhizomes. Raw gospel, being in the same place with the roots of valerian, tends to absorb the valerian smell. There are several other plants that can easily be confused with valerian. Similar to valerian rhizomes **of hellebore Lobel** (you can designate hellebore by the presence of cord-like adventitious roots of a light color). The appearance of the leaves of the meadowsweet and the flowers and leaves of the hemp stem mislead the collectors of raw materials, who mistake the named plants for valerian. Meadowsweet differs from valerian in cream-colored flowers (with separate petals), collected in panicles. The stem has no rhizomes, but only a single cylindrical root.

Harvesting of valerian rhizomes occurs in the first autumn months or early spring. The rhizomes are dug up with shovels, cleaned of soil masses, cut off the aerial part of the plant and washed in cold water. The prepared raw materials are first dried, and then dried, laid out in one thin layer and periodically shaken. The rhizomes emit a persistent fragrance, spicy in taste, with a combination of sweetness and bitterness. Rhizomes can be stored without loss of properties up to 3 years. ^[6]

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Valerian - useful properties, composition and contraindications

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