



## Burdock (lat. *Arctium*)

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

**Keywords:** burdock, beneficial properties, potentially dangerous effects, side effects, contraindications, diets

## Beneficial features

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

Main substances (g / 100 g):	raw root	Boiled root <sup>[5]</sup>
Water	80.09	75.64
Carbohydrates	17.34	21.15
Alimentary fiber	3.3	1.8
Squirrels	1.53	2.09
Fats	0.15	0.14
Calories ( kcal )	72	88
Minerals (mg/100 g):		
Potassium	308	360
Calcium	41	49
Phosphorus	51	93
Magnesium	38	39
Sodium	5	four
Iron	0.8	0.77
Zinc	0.33	0.38

<b>Vitamins (mg/100 g):</b>		
Vitamin C	3	2.6
Niacin	0.3	0.32
Vitamin E	0.38	0.46
Vitamin B6	0.24	0.279
Riboflavin	0.03	0.058
Vitamin K	1.6	2

### **What exactly is used and in what form**

For medicinal purposes, the roots, leaves and seeds of burdock are used. On the basis of the roots, decoctions and infusions are prepared. The root is used fresh and in the form of a liquid extract. In medicinal recipes, burdock root powder is used. Infused with olive or almond oil, the root of the plant is used as the famous "burdock oil". The root is a part of ointments and tinctures, medicinal tea. Burdock leaves are used in compresses, lotions, to prepare a decoction. Fresh burdock juice is used for various skin diseases. Fresh burdock root is used in homeopathy. <sup>[2]</sup>

### **Medicinal properties**

Burdock root contains 0.17% bardan oil, 45% inulin, 12.5% proteins, antibacterial substances ( polyacetylene components), potassium nitrate, sterols ( sitosterol , stigmasterol ), acids ( palmitic and stearic), tannins. Burdock seeds contain arctin glycoside , leaves contain tannins, mucus and essential oils.

In herbal formulations, burdock is prescribed for chronic rheumatism, skin diseases (eczema, itching, hair loss as a result of seborrhea). <sup>[6]</sup>

Burdock root preparations have diuretic, choleric, diaphoretic and disinfectant properties; stimulate the formation of proteolytic enzymes and accelerate the insulin- forming function of the pancreas; promote the growth of glycogen in the liver, have a beneficial effect on metabolism. A decoction of burdock root is prescribed internally for metabolic diseases (gout, articular rheumatism, kidney and gallstones, diabetes mellitus); with skin diseases (rashes on the skin and suppuration against the background of scrofula, boils, acne); with gastritis and gastric ulcer, with chronic constipation, hemorrhoids, edema, rickets and delayed menstruation. Burdock root powder is taken orally for gout. Burdock is part of the diaphoretic tea. An infusion of burdock leaves is drunk in violation of the functional activity of the stomach and fever, and an infusion of burdock fruit - with constipation. Young leaves have antibacterial properties. Juice from leaves and flowers, as well as an aqueous infusion of flowers, are used in folk medicine to treat wounds and skin cancer. <sup>[7]</sup>

### **In official medicine**

Among the pharmaceutical preparations created on the basis of the plant: burdock oil, dried burdock root for the preparation of medicinal preparations, burdock root extract.

### **In folk medicine**

- As a diuretic, diaphoretic, choleric agent and to enhance metabolism and remove toxins from the body, a decoction is useful: pour half a tablespoon of crushed burdock root into 200 ml of water. Boil over low heat for 10 minutes, let it brew for two hours. Take 100 ml in small sips 2-3 times a day. <sup>[6]</sup>

- In diabetes mellitus, a tablespoon of a mixture of crushed burdock roots, bean husks, blueberry leaves and walnuts (in equal parts) is infused in 250 ml of water, boiled for 5 minutes, and taken after meals during the day, drinking from 5 to 6 glasses per day.
- For gout, gastric ulcer, metabolic disorders, itching of the body, a tablespoon of a mixture of burdock root, wheatgrass rhizomes, string grass, Veronica grass and tricolor violet, pour a glass of water, simmer for a quarter of an hour, take up to 3 glasses a day (first fasting intake).
- For eczema, rheumatism, a decoction is taken orally, which is prepared from a mixture of burdock root and high elecampane (in equal proportions), while using ointment, therapeutic baths and warming compresses on the affected areas of the body. <sup>[eight]</sup>
- For chronic constipation, an infusion of burdock seeds is used: pour 20 g of seeds into 200 ml of boiling water, let it brew for 60 minutes, take 1-2 tablespoons up to 4 times a day.
- For dermatosis, psoriasis, neurodermatitis, urticaria, seborrhea, acne vulgaris, a decoction is recommended: 2 tablespoons of crushed root per 500 ml of water. Take half a glass four times a day, before meals.
- In folk medicine, a decoction of burdock leaves is drunk as tea for malignant tumors, liver diseases, abscesses, wounds, warts.
- For allergies, mix a tablespoon of rose hips, crushed dandelion roots and burdock roots. Pour a tablespoon of this collection with a glass of boiling water and heat in a water bath for a quarter of an hour. Let the broth cool and strain. Drink 0.3 cup three times a day.
- For asthma, prepare a mixture of 4 tablespoons of burdock leaves, 4 tablespoons of aspen leaves and a teaspoon of fir needles. Collection pour 200 ml of cooled boiling water, pour half a teaspoon of soda and soak the infusion for 6 days in a dark, cool place. After that, strain the infusion and drink a tablespoon once a day.
- For rheumatism, a recipe is recommended: mix half a glass of burdock juice and linden honey. Infuse for a week in a cool dark place. Drink a teaspoon three times a day before meals. <sup>[9]</sup>

#### Externally:

- With sciatica, put 6-9 fresh burdock leaves on a clean cloth, press on top with a bowl of very hot water. Soak the leaves under a hot press for about 5 minutes. When brown juice begins to stand out from the burdock, the leaves should be applied to the affected area of the body. Cover the compress tightly with paper and woolen cloth, and leave for 2-3 hours.
- For hair loss, the following procedure is useful: pour 2 tablespoons of burdock roots into 200 ml of boiling water and heat in a water bath for about 10 minutes. Then cool the broth and strain. Add 100 ml of onion juice and 3 tablespoons of vodka. Rub this mixture into the hair roots several times a week for an hour or two before shampooing.
- For rheumatism, arthritis, ulcers, lichen, eczema, a decoction of a mixture of burdock roots, heather herb, nettle roots, marsh wild rosemary herb, tartar herb and lingonberry leaves is added to the bathroom.
- For hair loss and dandruff, wash your hair twice a week with a decoction of burdock root and calendula flowers in a ratio of 2: 1 (a handful of collection per liter of water). Or use a decoction: per liter of water, a mixture of burdock roots, heather herb and nettle (2 tablespoons each) and one tablespoon of hop cones.
- Burdock ointment for the treatment of skin diseases, seborrhea: a collection of fresh burdock root, oak bark, walnut leaves and calendula flowers (2: 1: 1: 1) is combined with a glass of sunflower, almond or olive oil, boiled for a quarter of an hour over low heat, cover with a lid and leave in a warm place overnight. In the morning, strain the oil decoction. The resulting ointment lubricates the affected areas. Burns, chronic rheumatism are treated with this ointment.
- With erysipelas, young leaves of burdock are smeared with sour cream and applied to the affected areas.

- For dandruff, place burdock roots in a saucepan, cover with water and simmer over low heat. Cook until the roots are very soft. Then strain and cool the broth. Lubricate the hair roots with this decoction every day.
- Burdock root tincture is prepared on strong vodka (in proportions 1:10). Root tincture on vodka lubricates areas of the body affected by circular or nested baldness, red acne (inflammation of the sebaceous glands).
- Crushed (pounded) fresh burdock leaves are applied to wounds, hard tumors, gouty nodes.

**Burdock ointment (based on roots)** : 40 g of fresh crushed roots insist for a day in half a glass of vegetable oil, then boil for a quarter of an hour. The ointment heals burns, ulcers, wounds well.

**Recipe for burdock oil: Rinse** 75 g of fresh burdock leaves, chop and pour a glass of vegetable oil, let it brew for a day, then boil for a quarter of an hour and strain. Rub into the scalp 60 minutes before washing. This procedure helps to strengthen the hair. <sup>[2,7,9]</sup>

### **in oriental medicine**

Ancient Chinese medicine used burdock seeds (" *niupangji* ") in the treatment of fever, colds and coughs, arthritis, anorexia, and various gastrointestinal disorders. In China, burdock seeds and all fresh parts of the plant were also taken internally as a diuretic when fluid accumulated in the tissues.

### **In scientific research**

The herbalist (1653) of the British N. Culpeper says about burdock: "The leaves of burdock treat ulcers and inflammations on the skin. The composition of a small amount of burdock root and seeds (nuts) of pine helps with hemoptysis and purulent process in the bronchi and lungs. Pain in injured tendons can be relieved by applying burdock leaves. Burdock leaf juice mixed with wine is used for snake bites. Burdock root, crushed and mixed with a small amount of salt, is used externally for the bites of rabid dogs. Burdock juice combined with honey acts as a diuretic and relieves pain in the bladder. An infusion of burdock seed wine is useful for sciatica. Burns are treated with lotions of crushed burdock leaves and egg white. <sup>[10]</sup>

Numerous recipes based on burdock were collected and actively used by the famous Soviet herbalist from Irkutsk Elena Vasilievna Lohe , who made a huge contribution to the system of research on the medicinal properties of the plant.

- The pharmacological properties of burdock were investigated by J.S. Chan , L.N. Cheng , J.H. Wu et al. <sup>[11]</sup>
- of Karomatov I.J. , Nurmukhamedova R.A., Badriddinova M.N. is devoted to the prospects of phytopreparations based on burdock . <sup>[12]</sup>
- The purpose of scientific research Fedoseyeva L.M., Knaub N.N. and Seligeeva T.G. is a histochemical analysis of the leaves and roots of burdock . <sup>[13]</sup>
- therapeutic effect of the oil extract from the burdock root is analyzed in the work of Bekkuzhin A. G. and Berdgaleeva A. K. <sup>[14]</sup>
- An important role for burdock preparations is predicted by scientists in the future in the treatment of oncological diseases . For example, the antitumor effect of biologically active substances contained in burdock roots is described in the dissertation of Boev R. S. <sup>[15]</sup>

### **In cooking**

Salads from young leaves of burdock are part of the therapeutic and prophylactic diet. Young burdock root baked or fried is used as a substitute for potatoes. The dried root, cut into small pieces and roasted

in the oven, is also an excellent coffee surrogate. From the roots of burdock, a thick, jelly-like jam is brewed, of a beautiful yellow-green hue.

- Salad with burdock leaves

Dip young burdock leaves in boiling water for 1-2 minutes, then dry on a towel or napkin, finely chop, add chopped green onions, salt, grated horseradish and season with cream. For 150 g of burdock leaves, take 50 g of green onions, 30 g of horseradish, 20 g of cream and salt to taste. <sup>[7]</sup>

- Burdock soup

Ingredients: 100 g of burdock root, a quarter of an onion, 2 slices of bacon, a bunch of fresh parsley, two tablespoons of vegetable oil, 0.5 liters of water, 1 bouillon cube, salt, pepper to taste.

Wash and clean the burdock roots, cut into strips and soak in water. Finely chop the onion, chop the bacon, chop the parsley. Heat the oil in a frying pan, fry the bacon and onion, add the chopped burdock root, simmer everything over low heat. Pour in water, throw in the bouillon cube, cook the soup until the burdock root softens. Salt, pepper. Serve with chopped herbs.

- Sandwiches with burdock

To prepare a snack, you will need: 2 leaves of burdock, a tablespoon of low-fat cottage cheese, carrots, onions, 5 dandelion flower buds, 2 tablespoons of kefir, a little grated cheese.

Rinse young burdock leaves, cut into neat, even squares or triangles. Prepare the filling: mix cottage cheese with chopped raw carrots, onions, add grated cheese, kefir, mix.

Put the sandwich mass on the leaves of burdock, decorate with a dandelion flower.

- Burdock and dandelion beer

The original recipe for the drink, which has become traditional and popular, was invented in Britain back in the Middle Ages.

To make such a beer ( Dandelion and Burdock beer ) you will need: 150 g of burdock root, 50 g of dandelion roots, 0.5 kg of sugar, 2 tablespoons of molasses, juice of one lemon, brewer's yeast (one bag), 4.5 liters of water. Rinse and peel the burdock and dandelion roots, cut them into thin slices and boil in half the water required for the recipe for 30 minutes. Remove from heat, add remaining water (cold), sugar, molasses and lemon juice, and stir until sugar is completely dissolved. Strain into a fermentation bowl, cover with a lid. When the liquid has cooled to room temperature, add brewer's yeast and stand for a week. Then pour into a special bottle and stand for another week. After that, the drink is ready. Store herbal beer in the refrigerator. <sup>[17]</sup>

- Burdock Root Chips

To prepare these chips you will need: a few large burdock roots, olive oil, sea salt. Wash the roots, peel and cut into thin strips. Drizzle the roots with a little olive oil, salt to taste. Preheat the oven to 220 0. Put the strips on a roasting pan lined with baking paper. Bake the chips for about 10 minutes until light brown, then flip and bake the other side of the strips. Salt if necessary.

- Carrot cookies with honey infused with burdock root

For the dough you will need: a cup of wheat flour, a teaspoon of baking powder, a quarter teaspoon of salt, 100 g butter, one egg yolk, half a cup of honey infused with burdock root,  $\frac{3}{4}$  cup of grated carrots (take two medium root vegetables), half a cup of oatmeal, half a cup of light raisins,  $\frac{3}{4}$  cups of shelled walnuts.

- For cream: 120 g cream cheese, 100 g butter, 1.5 cups powdered sugar.

To prepare honey infused with burdock root: a tablespoon of dried burdock root, ground into powder, 160 g of honey. Prepare honey in advance by mixing it with burdock root powder. Let honey brew for 5-10 days. Keep honey in a warm and not darkened place, stirring occasionally.

For the dough, sift flour, mix with baking powder, salt. Beat the butter, gradually adding the egg yolk, prepared honey and grated carrots. Combine flour with butter -egg mixture, oatmeal, nuts and raisins. Preheat the oven to 180 0 and with a spoon put the dough in portions on a roasting pan covered with baking paper, forming flat round gingerbread cookies. Bake the cookies for 15 minutes until golden brown, checking for doneness. When cookies are completely cool, decorate with cream (beat cream cheese, butter and powdered sugar, adding a drop of vanilla extract). Leave the cookies in the refrigerator for a while to set the cream. <sup>[16]</sup>

### **In cosmetology**

- Burdock for hair

To strengthen the hair roots, a decoction is used: 2 tablespoons of burdock roots are poured into 200 ml of boiling water, then heated in a water bath for about a quarter of an hour. Strain the cooled broth and rub it into the scalp and hair roots after washing with shampoo.

Hair rinse with burdock: a mixture of calamus rhizomes, burdock roots, medicinal marigold flowers and common hop cones (each herb in a tablespoon) pour a liter of boiling water. Warm in a water bath for a quarter of an hour. Let the broth brew and cool. Strain and rinse hair after washing.

The following recipe is also useful for hair: mix a tablespoon of burdock roots, large plantain leaves, mint herb, St. John's wort and stinging nettle. Take 3 tablespoons of this collection, pour a liter of hot water, heat in a water bath for a quarter of an hour. Cool the broth, strain and use as a hair rinse.

The use of such a decoction strengthens and makes hair healthier: mix the crushed burdock roots and calamus rhizomes in equal parts. 6 tablespoons of this collection is poured with a liter of water and boiled for a quarter of an hour. Then insist in a warm place. Rub the decoction into the scalp up to 3 times a week.

Firming burdock hair mask: mix one part cognac, 4 parts strained onion juice and 6 parts decoction of burdock roots. Rub the whole mass thoroughly. Rub into the scalp, then wrap with a towel to warm. Wash off the mask after 2 hours.

- Burdock for skin

For oily skin, an infusion of a tablespoon of freshly chopped burdock roots and 200 ml of boiling water is recommended. Leave the infusion for half an hour, then strain. Soak a clean cloth or gauze in the infusion and apply to cleansed face for 10 minutes.

A decoction helps with acne: prepare a mixture of burdock roots and St. John's wort herb ( a tablespoon). Collection pour 200 ml of boiling water and heat in a water bath for a quarter of an hour. Cool the broth, strain, and wipe the skin affected by acne with it. <sup>[9]</sup>

- **Other uses**

Burdock burdock is used to get rid of mice. They are scattered near supposed mouse holes. Burdock clings to the skin of a rodent, causes itching, irritation and dares from the habitat.

Burdock oil has found application in industry: in soap making, in the manufacture of drying oil and wrapping paper, in the operation of gyrosopic instruments.

In the fight against pests of agricultural crops (caterpillars of cabbage whites, scoops, moths), an infusion is used: pour half a bucket of chopped burdock leaves to the top with water. Infuse for at least 3 days. Then strain and spray garden and garden crops.

For skin diseases in pets and cattle, a decoction (one part of burdock roots per 10 parts of water) is used to wash animals. <sup>[3]</sup>

### **Dangerous properties of burdock and contraindications**

Some individuals may experience an allergic reaction due to individual intolerance to burdock preparations. Plant treatment of pregnant and lactating mothers is possible only with the permission and under the strict supervision of the attending physician. <sup>[3,9]</sup>

### **Botanical description**

Burdock is a biennial plant that belongs to the Asteraceae (Asteraceae) family.

### **origin of name**

The popular names of burdock are *burdock*, *burdock (burdock)*, *grandfather*, *dog lover* , *zaderka* . The Latin name of the genus - *Arctium* - goes back to borrowing from the Greek language and is translated as " bear " .

### **Kinds**

Modern botany has identified 19 species of burdock, of which the most common are:

1. **Large burdock** - the habitat is very extensive, including Europe, Asia, the African continent, the Far East, India. The species is also known under the name "burdock". A source of medicinal raw materials, a honey plant used in cooking, in industrial production.
2. **Lesser burdock** - grows in Europe and those regions of Western Asia that are characterized by a temperate climate.
3. **Burdock felt (cobweb)** - found in Europe, Siberia, the Central Asian region, China. Refers to edible plants. The oil extracted from the roots is used in cosmetology. It forms hybrids without difficulty if it grows in close proximity with other species. <sup>[one]</sup>

Burdock is a biennial herbaceous plant, from 60 cm to 1 m in height and above. The root of the plant is elongated, fleshy, fusiform, up to 0.5 m long. The stems are erect, furrowed, strongly pubescent - woolly -webbed , branched in the upper part. The leaf arrangement is alternate, the basal leaves are very large, the upper ones are much smaller, ovate or heart-shaped-ovate, green above, gray felt below.

Lilac-purple flowers are collected in spherical baskets. Burdock blooms from July to September. The fruits of the achene ripen in September-October.

Burdock is a widespread weed plant. It grows in wastelands, along roads, in gardens, above river banks, in fields, near residential settlements, in weedy places, in places with high humidity (in floodplains, along the bottoms of beams), near hedges. Sometimes it forms small thickets, more often it grows in small groups or single specimens. <sup>[2]</sup>

### **Growing conditions**

Burdock reproduces productively by seed. Seeds are sown in autumn or spring; areas with soils unsuitable for the cultivation of other plants are suitable for sowing. The plant is completely unpretentious and does not require care. <sup>[3]</sup>

In the first year, only basal leaves are formed in the burdock, and in the second year the plant forms stems, the flowering period begins, and with the completion of fruit ripening, the burdock dies off.

The roots of plants of the first year of cultivation are harvested in the autumn, and the second year - in the spring. The dug roots are freed from the soil, the aerial part and thin roots are cut off. Separated thick roots are thoroughly washed in cold water and cleaned with a knife from the bark. Burdock root is dried in the open air, under sheds, spread out in a thin layer on burlap or paper.

The leaves are harvested in July-August and dried in shady places, in a draft. Seeds are harvested as they mature. The shelf life of raw materials from roots is 5 years, leaves - a year, seeds - up to 3 years. <sup>[four]</sup>

### **Power circuit**

Burdock roots are food for the hop worm larvae. Moths and butterflies also feed on burdock.

### **Video**

What ailments does burdock treat? Detailed recommendations from a phytotherapist . Recipe for ointment based on burdock root. How to cook burdock oil?

How and when to harvest burdock root? Procurement according to the rules.

All about the properties of burdock. Recipe for burdock balm on cognac with honey.

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

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