



## Dandelion (lat. *Taraxacum*)

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

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

## Useful properties of dandelion

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

Basic substances	Fresh dandelion greens contain (per 100 g) <sup>[4]</sup> :
Water	85.6 g
Carbohydrates	2 g
Alimentary fiber	18 g
Squirrels	5 g
Fats	1 g
Calories (kcal)	45 g
<b>Minerals</b>	
Potassium	397 mg
Calcium	187 mg
Magnesium	36 mg
Sodium	76 mg
Phosphorus	66 mg
Iron	3.1 mg
Manganese	0.34 mg
Copper	0.17 mg

Selenium	0.5 mg
Zinc	0.41 mg
<b>vitamins</b>	
Vitamin A	508 mcg
Vitamin E	3.44 mg
Vitamin K	778.4 mcg
Vitamin C	35 mg
Vitamin B 1, Thiamine	0.19 mg
Vitamin B 2, Riboflavin	0.26 mg
Vitamin B 5, Pantothenic Acid	0.08 mg
Vitamin B 6, Pyridoxine	0.25 mg
Vitamin B 9, Folate	27 mcg
Natural folates	27 mcg

**Dandelion flowers** contain carotenoids (bitterness taraxanthin , lutein , flavonxanthiin ), volatile oils, triterpene alcohols ( arnidol , faradiol ), inulin, tannins, mucus, rubber, vitamins A, B1, B2, C, mineral salts.

**Dandelion root** contains about 25% inulin, triterpene compounds ( amirin , taraxerol ), tannins and resins, mineral salts (a lot of potassium), inositol, steroids, mucus, choline, vitamins A, B1, C, D, fats, 3% rubber, a small amount of volatile oils and flavonoids , organic acids <sup>[5]</sup>

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

**Dried dandelion roots** are part of a variety of herbal teas , they are used to prepare healing decoctions and tinctures, and roasted roots are used in the preparation of dandelion coffee.

**Dandelion green leaf** is recommended to be soaked in salted water before use to eliminate the bitter taste.

**Fresh dandelion flowers** are pickled, used to make tinctures and lotions.

**Dandelion milky juice** is used externally as an effective cosmetic remedy.

### Medicinal properties

Since ancient times, dandelion has been used as a means of reviving the human body. It contributes to the good functioning of the digestive tract, activates the excretory function of the stomach, increases appetite, has a positive effect on metabolism, for example, eliminates the manifestations of high blood sugar, and reduces sexual dysfunction. Different parts of the plant are used in the treatment of cough, constipation, bile stasis, to get rid of helminths. Dandelion improves the tone of the human body, its immune capabilities. <sup>[6]</sup>

The use of dandelion covers the fields of both official and alternative medicine, in particular herbal medicine. Written evidence of the use of dandelion for medicinal purposes geographically correlates this useful plant with Asia, Europe and North America. **Dandelion root** was originally regarded as a gastrointestinal remedy to improve digestion and maintain liver function, and the leaves of the plant were used to achieve a diuretic effect. It has been proven that preparations based on dandelion root cleanse the blood of excess cholesterol, have a beneficial effect on the nervous system and help with sleep disorders.

Specially prepared **dandelion juice** has a stimulating effect on the liver, while being a general tonic. Dandelion juice is effective for stones and sand in the gallbladder.

**Dandelion root powder** heals skin lesions well: wounds, deep abrasions, burns, bedsores. A drink from the roots will be appreciated by diabetics: dandelion root powder is useful for high sugar.

Optometrists recommend consuming at least 12 mg of combined lutein and zeaxanthin daily to reduce the risk of developing cataracts and age-related visual impairment. Dandelions contain both of these nutrients.

**Fresh dandelion leaves** are popular in cooking. **Dandelion flowers** have taken their niche in winemaking: they are used to make the famous dandelion wine, dandelion jam. **A decoction of dandelion roots** is prescribed for liver damage, and as a diuretic.

Peter Gale, author of *Dandelion Health Benefits*, saw this plant as almost a panacea. According to him, “ *If you are looking for a miracle drug that, as part of your daily diet (in the form of food or drink), depending on the characteristics of your body, is able to: prevent or cure hepatitis or jaundice, act as a mild diuretic, cleanse your from the body of toxins, dissolve kidney stones, stimulate the gastrointestinal tract, improve skin condition and bowel function, lower blood pressure, relieve you of anemia, lower blood cholesterol, reduce dyspepsia, prevent or cure various forms of cancer, regulate blood sugar levels and help diabetics, and at the same time not have any side effects and selectively act only on what bothers you.... then dandelion is for you* ” [7]

The range of medicinal properties of dandelion is so wide that one can safely secure the status of one of the most famous healers in the world for this plant.

In Costa Rica, dandelions are sold as a diabetes remedy.

Two different types of dandelions are used in Guatemala. A narrow-leaved variety called **diente de leon**, is used as a general health tonic, while another variety, called **amargon**, is used in cooking as a lettuce and medicinally used in the treatment of anemia.

In Brazil, dandelion is a popular remedy for liver problems, scurvy, and urinary tract infections.

### **In official medicine**

Pharmaceutical names from dandelion available to the consumer: Taraxacum ( Radix ) roots, cut, packaged in 100 gram packages; condensed extract from the plant Taraxacum ( Extractum spisum ). Dandelion extract is used in the manufacture of pills.

The healing ability of the active ingredients of dandelion, associated with the restoration of cartilage tissue, has been successfully embodied by specialists in the preparation " Anavita + ". Tablets are dietary supplements, their action has a beneficial effect on the joints, their mobility and structure.

### **In folk medicine**

**Decoction of dandelion roots** : add a tablespoon of finely chopped root to 2 cups of water, let it boil over low heat for 10 minutes, insist 2 hours. They drink 0.5 cups several times a day for liver diseases with insufficient bile secretion, as a diuretic for kidney failure with edema, mild forms of diabetes mellitus, and also for liver damage caused by large doses of antibiotics and synthetic drugs. The decoction does not induce enzymes in the liver, so it can be taken for a long time. When mixed with other plants, it has an antiviral effect, mobilizes the body's defenses, and increases appetite.

**Dandelion flower tea** : a tablespoon of inflorescences is brewed with a glass of boiling water. Drink 2-3 times a day for 0.5 cups.

**Potion from the root of the dandelion** : squeeze 100 gr. liquid from chopped roots. Combine the juice with alcohol, glycerin and the water component (take 15 grams in total). Strained mixture take 1-

2 tablespoons per day. Such a mixture cleanses the blood, acts as a tonic, diuretic, is used in the complex treatment of gout, with jaundice, inflammation of the skin.

**Infusion of dandelion leaves to increase appetite** : Pour one tablespoon of chopped fresh leaves with 2 cups of boiled water, leave warm for 12 hours. Take 3 times a day for half an hour before meals.

**Infusion of dandelion roots for eczema** : pour two tablespoons of dandelion and burdock roots joined in equal parts for 12 hours with cold water, boil, let it brew and consume half a glass 3 times a day.

**Dandelion root salad** is useful for malfunctioning of the thyroid gland, for male sexual dysfunction and disorders of the female reproductive system.

**Dandelion juice is used to** treat rheumatism. Grind one part of dandelion flowers with one part of sugar. Let it brew for a week. Squeeze out the juice and store in the refrigerator. Drink one teaspoon before meals.

**Dandelion to lower cholesterol** : leave one small root in a glass of water for 3 days. Drink in parts, up to 400 ml. in a day.

**With hepatitis** , a mixture of lettuce leaves with the addition of dandelion is useful.

**External use of dandelion** : Wash your face with a decoction of dandelion roots to get rid of freckles. Prepare a decoction as follows: pour 2 tablespoons of crushed roots with boiling water (300 ml), boil for 15 minutes, then cool.

**Dandelion to improve eyesight** . Take dandelion roots, ordinary onion and honey in proportions of 3:2:4. Mix dandelion root juice, onion juice and fresh honey. Infuse for a couple of hours in a dark place. The mass is applied with lotions on the eyelids in case of deterioration of vision and prevention of the development of cataracts.

**Dandelion as a means to combat cellulite** : rub into the skin an infusion of dandelion leaves and nettle, taken in equal proportions.

**Dandelion as a cure for herpes** : mix a tablespoon of ground dandelion roots with 200 ml of water. Boil for 5 minutes. Consume shortly before meals.

**Dandelion for dermatitis** : Apply directly to the damaged skin two or three leaves of the plant in the form of a poultice, several times a day. <sup>[5,8,10]</sup>

### **in oriental medicine**

The Chinese used dandelions over a thousand years ago as a diuretic, hypoglycemic , antispasmodic, anticancer, antibacterial, and antifungal agent. In China, the plant has been used for conditions such as abscesses, appendicitis, boils, caries, dermatitis, fevers, inflammation, liver disease, mastitis, scrofula, abdominal pain, and even snake bites.

In Central Asian countries, juice from young dandelion leaves is used to treat anemia, with general exhaustion of the body, as a means of increasing intestinal motility, with pain in the thoracic region. The juice squeezed from the roots is used to treat warts.

### **In scientific research**

Various **types of dandelion** have been used in official Chinese and Ayurvedic medicine for over 2000 years. Therefore, modern medical research is especially relevant, creating a scientific basis for unlocking the medicinal potential of dandelion.

S. Clymer characterizes the plant as follows: “ *Dandelion is indispensable for the productive activity of the liver and gallbladder. It stimulates the functions of these organs, eliminates the stagnation of bile. It is also good for the spleen. It is important to choose exclusively green and fresh herbs intended for potion or tincture* ” [7]

**The diuretic (diuretic) effect of dandelion leaf extract** is described in scientific articles by B. Clare , R. Conroy and K. Spelman . [fifteen]

Alternative medicine is exploring the possible use of dandelion root extract in the treatment of melanoma [13] Foreign researchers (S. Scutty ) see dandelion as a natural remedy in the fight against skin cancer, pointing to a powerful source of triterpenes and steroids, which are dandelion roots. What supports the statement “ **Dandelion against cancer** ”? Dandelion is rich in antioxidants, such as vitamin C, luteolin , which reduce the amount of free radicals (the main causative agents of cancer), thereby reducing the risk of its occurrence. Dandelion removes toxins from the body, which prevents the further formation of tumors and the development of various types of cancer.

Luteolin actually poisons the main components of cancer cells by binding to them, rendering them ineffective and unable to reproduce. This feature has been demonstrated most prominently in prostate cancer, although other studies are currently underway. [eleven]

In domestic science, the chemical components of the vegetative system of dandelion officinalis were analyzed by Evstafiev S. N., Tiguntseva N. P. Scientists studied the biological activity of the constituent substances of dandelion, including essential oils, vitamins, minerals, carbohydrates, etc.

The healing properties of dandelion are devoted to the monographic study by Brigitte Mars “ *Dandelion Medicine : Remedies and recipes to Detoxify , Nourish , Stimulate* ” (“ **Dandelion in Medicine: Remedies and Recipes for Purification, Vitaminization and Regeneration** ”). The author points to the underestimated potential of the herb, calling it one of the safest and most effective remedies known to modern medicine.

### In culinary and dietetics

The most popular recipe based on dandelions is dandelion **wine** . Such popularity is associated with the work of the world-famous science fiction writer Ray Bradbury . His novel “ *Dandelion Wine* ” glorified not only the writer himself, but also the eponymous wine-making masterpiece. **The recipe for dandelion wine is** quite simple. To make wine from dandelions, you will need: petals of fully bloomed dandelions (in an amount equal to filling a 4.5 liter container). Other ingredients: water - 4.5 liters, sugar - one and a half kilograms, zest and juice of four lemons, 500 grams of raisins, crushed and pounded in a mortar (or 200 ml of concentrated white grape juice), one bag of wine yeast and one bag of used in winemaking nutritional supplement for wine yeast (sachets of 10 gr., respectively).

Boil water and pour over petals. Leave the covered container with the petals for a couple of days, stirring occasionally. After two days, pour the infused dandelions into a large saucepan, add the lemon zest, bring to a boil and stir in the sugar until completely dissolved. Boil for 5 more minutes. Remove from the stove, pour in lemon juice, combine the mass with grated raisins or concentrated grape juice.

Pour the boiled dandelion mass into a carefully sterilized fermentation tank. Cool, add wine yeast, nutritional supplement and cover. Let it ferment for three to four days, then pour into a glass bottle using a sterilized sieve and watering can. Insist for two months. After that, you can safely enjoy the wine, poetically called by Sir Bradbury “ *corked summer in a bottle* ” [12]

**Dandelion coffee:** Wash and clean the roots, dry them and spread them on a baking sheet. Fry the roots at low temperature until they darken and become brittle. Grind the roots in a blender. Brew one

teaspoon in a glass of water and boil for about 3 minutes. Strain, add cream, milk, sugar to taste. Store dandelion coffee in a tightly closed jar.

**Dandelion jam** : you will need enough flowers to fill a 1-liter container, 2 liters of water, 2 tablespoons of lemon juice, 10 gr. fruit pectin powder, 5 cups sugar. Separate the flowers from the stem and sepals, rinse thoroughly. Pour the flower mass with water, boil for 3 minutes. Cool and squeeze. From the resulting liquid, measure 3 cups, add lemon juice and pectin. Bring the mixture to a boil, add sugar, stir. Boil over low heat, stirring occasionally, about 5 minutes. Cool and pour into jars.

**Dandelion for weight loss** : Dandelions, being diuretic in nature, promote frequent urination and thus help to remove excess water from the body without causing any side effects. In addition, dandelions are low in calories, as are most leafy greens. Dandelions are sometimes used as sweeteners, adding to their nutritional value.

### **In cosmetology**

, dandelion flowers are widely popular. They heal skin formations, remove age spots. **It helps get rid of freckles.** Dandelion is an ingredient in acne lotion. Bitter milk juice is used to treat bee stings and blisters. On the basis of dandelion, multifunctional cosmetic masks (anti-aging, nourishing, whitening) are created. Dandelion is an ingredient in a variety of organic massage oils.

### **Other Uses for Dandelion**

In industry, dandelion is valued for its root, which is a natural source of rubber. The rubber industry, built on the cultivation of dandelions, is under development; It is important that dandelion rubber, unlike other types, is not dangerous for allergy sufferers.

### **Unconventional Uses**

A simple dandelion flower has nothing to do with the complex mechanisms of a clock or a barometer, but this plant can accurately tell the time and predict changes in the weather.

Dandelion blossoms open at exactly 6 o'clock and close at 10 o'clock. This feature of the plant was used by the Swedish botanist Carl Linnaeus, when creating the so-called flower clock.

The dandelion also has barometric properties: at the first peals of thunder and an approaching thunderstorm, its flowers close.

If you put dandelion leaves and flowers in a paper bag with unripe fruit, the plant will begin to release ethylene gas and ensure that the fruits ripen quickly.

A dark red dye is produced from the dandelion root.

### **Dangerous properties of dandelion and contraindications**

Medications that may interact with dandelion:

**Antacids (anti-acid) agents** . Dandelion promotes a more intense secretion of stomach acids, so antacids may be useless.

**Drugs that thin the blood** . The concomitant use of such agents (eg, aspirin) and dandelion preparations may be associated with a risk of bleeding.

**Diuretics** . Dandelion is able to act as a diuretic, so the simultaneous use of this plant and drugs with a diuretic effect is not recommended in order to avoid electrolytic imbalance in the body.

**Lithium** , which is used in the treatment of bipolar disorders (psychosis). Studies have shown that dandelion can reduce the effects of lithium.

**Ciprofloxacin** . One species of dandelion, *Chinese dandelion* , interferes with the full absorption of the named antibiotic.

**Preparations for diabetics** . Their combination with dandelion, which lowers blood sugar levels, can lead to a critical indicator and hypoglycemia.

**The milky juice of dandelions** is known to cause itching, irritation, or allergic reactions on the skin. Finally, there is a rare type of fiber in dandelions called inulin, and some people have a predisposed sensitivity or allergy to this element, which can become a serious problem <sup>[14]</sup>

Be careful when adding dandelion greens to your diet, start with small doses and carefully monitor your body's response.

If you strictly adhere to the indicated therapeutic doses for drinking dandelion juice and tea, no side effects threaten a person.

Especially carefully all parts of the dandelion should be used in the diet of children.

### Botanical description

This is a perennial herbaceous plant of the Astrov family, widely distributed in the CIS countries.

### origin of name

Its name in Latin - **Taraxacum** - presumably goes back to the Arabic borrowing " *tarukhshakun* " ("dandelion"). Among the people, it is also called milkweed , *baldness* , *cow flower* , *Jewish hat* , *puff* , *milk trough* , *parachutes* . In Russian speech, the name of the flower is associated with the verbs "to blow " , " to blow " . It is noteworthy that in a number of European languages, representatives of the Romano-Germanic group, "dandelion" is literally translated as " *lion's tooth* ": **Löwenzahn** (German), **dandelion** (English), **diente de león** (Spanish), **dente de leão** (Portuguese), **dente di Leone** (Italian) <sup>[1]</sup>

### Kinds

The dandelion genus includes more than 2000 species, of which about 70 varieties are the most known and studied.

- **Common dandelion** (field, pharmacy, medicinal) is the most famous and common species. It grows in the forest-steppe zone (meadows, glades, near roads and near housing). Distributed in the European part of Russia, in Belarus, in the Caucasus, Ukraine, in Central Asia.
- **-tongued dandelion** - this species is listed in the Red Book of Russia. Growth area - Kola Peninsula. A distinctive feature is the white petals of flowers along the edge of the inflorescence and yellow - in its middle.
- **Dandelion whitish** - grows in the Kamchatka Territory. This Far Eastern species has justified itself as a popular and unpretentious decorative flower.
- **Dandelion autumn** - common on the Crimean Peninsula, the Balkans, in southern European countries. In the past, this species was heavily used in the rubber industry and the coffee industry.
- **Dandelion flat leaf** - found in Japan, China, Korea, in the Russian Federation - in the Primorsky Territory.

The height of the dandelion ranges from 10 to 50 cm. The leaves are formed into a rosette, with cut, coarsely serrated edges. Sun-colored flowers form an inflorescence basket. The root system is pivotal, long, strong roots reach a length of up to 20 cm. The stem is hollow, smooth. The fruit is an achene with a fluffy fly.

This plant can be found almost everywhere: on roadsides, in squares or parks, in fields and meadows, in forests, in wastelands.

### Growing conditions

The best way to propagate a plant is by seed. Seeds should be planted with inter -bed distances of 25 to 30 cm. Dandelion care is simple and involves plowing the soil three times and weeding during the growing season.

The flowering period of dandelion begins in mid-spring and ends in late autumn.

The collection of used parts of the plant includes harvesting leaves and roots. The roots are harvested before the start of the flowering period, or in late autumn. **Dandelion leaf is best** stored at the beginning of flowering. The roots are dug up, cleaned with cool water, dried for several days under fresh air, and dried in a dark, dry room, in a dryer at a temperature of 40 to 50 degrees. Properly harvested **dandelion roots** do not lose their healing properties for more than 4 years. <sup>[3]</sup>

When picking dandelions, it is important to remember that it is strongly not recommended to pick plants near the roadway, roads, or within the city, since dandelions easily absorb and accumulate lead and other carcinogens.

Dried **dandelion roots** are brown or dark brown in color, wrinkled, oblong, often twisted in a spiral. On the cut, white, or grayish-white with a brownish core, odorless. When bent, they should break easily, with a crack, their taste is bitter, with a sweet aftertaste. At the output, 33-35% of the root is obtained from the mass of the prepared raw material. <sup>[9]</sup>

### Power circuit

**Dandelion seeds** serve as food for small birds, pigs and goats willingly eat the plant. Dandelion is also a valuable food for rabbits.

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An extended HTML version of the article is available on the site [edaplust.info](http://edaplust.info).

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

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