



Chamomile (lat. *Matricaria*)

Eliseeva Tatyana, Chief editor of the project EdaPlus.info

Tkacheva Natalia, phytotherapist, nutritionist

Email: eliseeva.t@edaplus.info, tkacheva.n@edaplus.info

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

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

Useful properties of chamomile officinalis

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

Basic substances	One cup (237 g) of chamomile tea contains ^[5] :
Water	236 g
Carbohydrates	0.5 g
Minerals	mg/100 g
Potassium	21.33 mg
Calcium	4.74 mg
Magnesium	2.37 mg
Iron	0.19 mg
Manganese	0.1 mg
Zinc	0.09 mg
Copper	0.04 mg
vitamins	mg/100 g
Vitamin A	0.05 mg
Vitamin B5	0.03 mg
Vitamin B1	0.02 mg
Vitamin B2	0.01 mg

folate	0.002 mg
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What exactly is used and in what form

Chamomile inflorescences have medicinal value. Both internal and external use of infusion from flower baskets is widespread. Assign inhalations over the hot vapors of the infusion. Chamomile tea is used for medicinal purposes. Externally, an infusion or **decoction of chamomile is used** in the form of rinses, lotions, poultices, enemas, washes, bath procedures. In homeopathy, **chamomile tincture** has gained recognition. Alternative and official medicine also use **chamomile essential oil** ^[6]

Medicinal properties

Chamomile flowers contain (as part of a volatile oil) matricin and matrikarin, chamazulene derivatives, sesquiterpene alcohols, bisabolol, bisabolol oxide, ketoalcohol, coumarin derivatives, flavonoids, sitosterol, choline, farnesene and cadinene, beta-carotene, inositol, bitterness, acid (ascorbic, valeric, salicylic), phytosterols, vitamins ^[7]

An infusion of flower baskets is used as an antiseptic, a choleric, sedative, anticonvulsant, astringent, and hemostatic agent. **Chamomile infusion** is prescribed internally for intestinal spasms, inflammation in the liver, gallbladder, kidneys and urinary tract, with scanty menstruation, hysterical reactions, with convulsions and a state of neurosis, with trigeminal neuralgia.

Chamomile essential oil activates the activity of the central nervous system, accelerates reflex functions, dilates the vessels of the brain, increases the frequency of cardio and respiratory rhythms.

Chamomile preparations are prescribed in the complex therapy of gastritis of allergic origin, colitis, with a delay in the menstrual cycle, painful sensations in the uterus, with rheumatism, bronchial asthma, tonsillitis.

Chamomile preparations stimulate secretory processes in the digestive tract, accelerate the outflow of bile, eliminate itching, promote intense sweating, and act as an anti-allergen. ^[eight]

In official medicine

Chamomile is a component of many drugs recognized by official medicine:

Chamomile flowers, in packs;

- **Romazulan**, which contains chamomile oil, cumin and antiseptic. It is prescribed for gastritis, duodenitis, indigestion and bloating (half a teaspoon per 200 ml of boiling water). To prepare a compress, enemas and washes, a liquid is prepared at the rate of 1.5 teaspoons of romazulan per liter of water. The drug is used externally for stomatitis, otitis media, gingivitis, urethritis and cystitis, trophic ulcerative lesions. The tool has antipruritic, deodorizing and antimicrobial effects; ^[6]
- **Alorom** (ointment with chamomile extract) - is prescribed for the treatment of bedsores and myositis, for plexitis, sciatica, arthritis. The product contains chamomile extract, aloe and calendula, medicinal oils. It has a local anti-inflammatory and analgesic effect;
- **Arfazetin** - phytocollection with chamomile inflorescences. It is used in diabetes as a drug that lowers blood sugar levels. Among the components, in addition to chamomile, are blueberries, wild roses, horsetail, St. John's wort, Manchurian aralia. Assign a remedy for the treatment of mild to moderate diabetes;

- **Rotokan** is a drug that contains extracts of chamomile, marigold and yarrow. It has an anti-inflammatory effect, is used for aphthous stomatitis, gingivostomatitis, ulcerative lesions of the gums. Restores damaged mucosa and is characterized by a hemostatic property. ^[9]

In folk medicine

With intestinal cramps, bloating and increased gas formation, painful menstruation, with colds, chamomile tea is drunk as an antiseptic: a tablespoon of basket inflorescences is brewed in 200 ml of boiling water. Outwardly, chamomile decoction is used for rinsing the mouth and throat, when applying lotions, when taking therapeutic baths. ^[7]

For gastritis and ulcerative foci, tea is prepared from chamomile and lemon balm (take herbal material in proportions of 1: 1). Steam a tablespoon of herbal raw materials in a glass of boiling water. Drink hot tea, up to 3 glasses a day, for 2 months.

For gastritis or enteritis, two teaspoons of a mixture of herbs taken in equal amounts (chamomile flowers, yarrow, wormwood, cold mint leaves and sage) are brewed in a glass of boiling water. Drink the infusion hot, strained, twice a day, 100 ml, for half an hour of eating.

When swelling after poor-quality food, a decoction is used: in equal parts, chamomile, juniper berries, cold mint grass, St. John's wort and centaury are boiled for 10 minutes (take a tablespoon of herbal raw materials in a glass of water). The cooled broth is drunk (after taking a laxative) 3 glasses a day. ^[eight]

With ascariasis, an infusion of non-lingual chamomile is prescribed. Infuse a tablespoon of inflorescences-baskets in 1.5 cups of boiling water for 60 minutes in a bowl under the lid. Drink strained 150 ml in the morning and evening. With pinworms, enemas are simultaneously made from 50-100 ml of the same infusion. ^[ten]

For insomnia, as a sleeping pill, take an infusion of inflorescences: a teaspoon of flower baskets in a glass of boiling water. Drink a glass at night one hour before bedtime.

With flatulence, a tea drink is useful, which is prepared from chamomile, valerian root and cumin seeds. Mix chamomile flowers, valerian root and cumin seeds in proportions 6:4:1. Steam one tablespoon of mixed herbs with boiling water and let the infusion stand for about 20 minutes. Strain and take 100 ml in the morning and evening with increased gas formation. ^[eleven]

In chronic hepatitis and cirrhosis of the liver, the following collection is recommended: take two tablespoons of chamomile inflorescences, tansy, burdock root, elecampane, herbal raw materials of St. Pour one tablespoon of the herbal mixture with a glass of boiling water, keep in a water bath for half an hour, then cool at room temperature for a quarter of an hour, strain, add boiled water to increase the broth to a volume of 200 ml. Drink a third cup three times a day, before meals for 2-3 weeks. You can take such a decoction with interruptions, courses, once every 2-3 months. ^[3]

How is **chamomile tea prepared**? For the preparation of tincture, not only inflorescences are used, but also all above-ground parts of the plant. The grass is plucked during the flowering period and crushed, combining and rubbing in equal proportions with alcohol with a strength of 35%. After insisting, the tincture is filtered. The resulting liquid is a strong concentrate and is called the primary, "mother" tincture. The primary tincture is diluted repeatedly and used in courses of homeopathic treatment. ^[12]

On the recommendation of a doctor, **chamomile is prescribed for children** from two months old to be used in diets to improve digestion (in the form of baby chamomile herbal tea): pour one bag of herbal tea with a glass of boiling water and let it brew for 5-7 minutes. Give the child warm 2-3 times a

day, starting with one teaspoon, gradually increasing the volume to the recommended rate. The duration and dosage of 86+ use should be agreed with the pediatrician.

Outdoor use:

For colds or rheumatism, take **baths with a decoction of chamomile** (200 g of chamomile flowers per 8 liters of water).

gruel from chamomile inflorescences by applying poultices to the affected areas.

An infusion of chamomile flowers in vegetable oil is used in a heated form for rubbing with gout and rheumatic diseases, for compresses on the neck with hoarseness and loss of voice.

Chamomile has found **application in gynecology** : a tablespoon of inflorescences-baskets must be infused in a liter of boiling water. After strain and use warm for douching twice a day ^[10]

Chamomile steam is used to treat festering wounds, to wash ulcerative foci, with conjunctivitis, eczema, boils, paronychia, and itching. With ear discharge, the ears are washed with chamomile steam in combination with 5% hydrogen peroxide.

With weeping eczema, skin rashes, wounds and ulcers, **a bath is prescribed** : 4 tablespoons of inflorescences-baskets are boiled in a liter of water for 10 minutes and the resulting broth is added to a full bath.

Pounded **fresh chamomile flowers** are put into the nose to cure a cold. ^[eight]

With angina, rinsing **with chamomile infusion will help** : pour 20 g of chamomile leaves and flowers with a glass of boiling water. Keep the infusion for about 20 minutes, then strain and use as a gargle several times a day.

Bath with a restorative and soothing effect. Prepare a collection of chamomile, oregano, thyme, string, nettle leaves and black currant, taking raw materials in proportions 3: 1: 5: 2: 5: 2. Pour 150 g of herbal mixture with 2-5 liters of boiling water (depending on the desired concentration of the broth), boil for 10 minutes over low heat, strain and add the broth to a bath filled with water (water temperature is not more than 37 degrees). Take a bath for a quarter of an hour, 2-3 times a week for two weeks. It is important to remember that in this case, the area of the heart should be above the water level . ^[3]

in oriental medicine

Avicenna attributed an anti-inflammatory effect to chamomile. In his " **Canon of Medicine** " he characterized the plant as a remedy that softens and eliminates foci of inflammation. Chamomile, according to Avicenna, relieves tension, while strengthening muscles and is the most effective natural remedy for getting rid of fatigue, weakness and exhaustion ^[13]

In scientific research

Being one of the most valuable medicinal plants, chamomile naturally has constantly attracted the interest of researchers in the field of medicine.

The healing **properties of chamomile** have been studied since the time of Hippocrates, Pliny, Dioscorides , Galen and Asclepius. Hippocrates described chamomile as a medicinal plant, while Galen and Asclepius recommended **chamomile tea** . In a herbalist written in Latin in the 16th century, the Italian physician and botanist Mattioli attributed the importance of an antispasmodic to chamomile essential oil.

In 1500, Hieronymus Brunschwig , a physician and pharmacist, first described the process of distilling chamomile essential oil. ^[12]

American botanist James Duke wrote about the role of chamomile in antiallergic therapy. In The Green Pharmacy (1992), Duke emphasizes that chamomile contains seven different antihistamine chemical components, which explains the plant's role in eliminating allergy symptoms (at the same time, there are cases of individual intolerance to chamomile itself).

John Heinerman , in The Encyclopedia of Fruits, Vegetables and Herbs, claims that chamomile tea, one of the few herbal teas in the plant kingdom, promotes liver tissue repair and renewal ^[14]

The widest range of therapeutic properties of chamomile is the object of research by a group of Indian scientists (J. Shrivastava , E. Shankar , S. Gupta). ^[fifteen]

The effect of the use of chamomile extract in the treatment of aphthous stomatitis was studied by A. Tadbira , S. Purshahidib , H. Ebrahimik , Z. Hadzhipurd and others ^[16]

The possibility of using chamomile as an antidepressant and its positive effect on depressed patients were analyzed by foreign representatives of science: J. Schultz, K. Rockwell , A. Newberg . ^[17]

Does **chamomile work against cancer** ? We can say that a significant place is given to chamomile in the future fight against cancer.

In the scientific work of T. Goncharova and S. Lukashuk , the possibilities of using a multicomponent herbal collection (which includes chamomile) in anticancer therapy are substantiated. ^[eighteen]

The biological activity of chamomile substances, mineral elements contained in the essential oil of the plant, was studied by Pervyshina G., Efremov A., Gordienko G., Agafonova E. ^[19]

Weight regulation

Chamomile increases appetite and improves the absorption of nutrients.

In cooking

Chamomile has long been a component of various drinks. The original, somewhat spicy taste and specific “apple” aroma explain the popularity of chamomile on the vegetarian menu.

Chamomile tea. To prepare fragrant chamomile tea, you will need the following ingredients: 2 tablespoons of fresh chamomile inflorescences, 2 cups of boiling water, two apple slices, honey. Rinse the chamomile flowers under running water. Pour boiling water over the teapot. Mash the apple slices with a wooden spoon. Pour chamomile flowers and an apple in a teapot with two cups of boiling water. Infuse tea for 5 minutes. Pour into cups. Add honey to taste ^[20]

Soup with chamomile and cauliflower. To prepare such an original vegetarian dish, you will need: 6 tea bags of chamomile tea, 3 cups of water, 500 g of cauliflower, a quarter of an onion, 2 celery stalks, a tablespoon of olive oil, salt, pepper. In a deep saucepan, prepare a decoction of water and chamomile tea in bags, boiling it for 5 minutes. Remove the sachets from the decoction. Divide the cauliflower into inflorescences and boil in chamomile tea under a closed lid for 15 minutes. Saute onion and celery in oil in a skillet. Puree boiled cauliflower, onion with celery, salt, pepper and chamomile in a blender. Depending on the amount of chamomile tea added, you can make the puree soup thicker or thinner. ^[21]

In cosmetology

Chamomile extract is part of various skincare products . Flower ice made from chamomile decoction has an excellent cosmetic effect. These ice cubes can be used as a tonic by rubbing your face with

them. Chamomile tea will help relieve swelling, eliminate bags and bruises under the eyes. Filled with a small amount of boiling water and chilled chamomile tea bags are applied to the eyelids for a few minutes.

Chamomile infusion is used as a hair rinse: it has a slight toning effect and gives a golden hue ^[6]

Use in perfumery

Chamomile essential oil has justified itself in the perfume industry. The aroma of chamomile brings variety to the so-called floral and woody compositions.

Other uses

Chamomile oil is used in aromatherapy. A few drops of oil in an aroma lamp, on a handkerchief, or a small piece of cloth relieve tension, have a relaxing and calming effect. Breathing during an aromatherapy session should be slow and measured.

Massage treatments also include intensive use of chamomile essential oil. For massage, it is better to combine chamomile oil with olive or lavender ^[12]

Chamomile heals not only people, but also plants. Spraying over beds with young seedlings of chamomile tea protects many horticultural crops from fungal attack and mold disease ^[14]

Dangerous properties of chamomile and contraindications

Does **chamomile have contraindications**? Incorrectly calculated, excessive doses of chamomile essential oil can provoke a headache and a state of general weakness, weakness. When using chamomile for the recommended time, no specific side effects are noted, but large doses cause hoarseness, cough, inflammation of the mucous membrane of the eyes, painful and heavy menstruation, mental disorders (irritability, fear, obsessions and delusions, hallucinations). It is important to remember about the possible individual intolerance of the components of chamomile in the composition of any drug, which may lead to the development of an allergic reaction. ^[ten]

Chamomile during pregnancy is not contraindicated, but its use should be limited and strictly on the advice of a doctor.

A contraindication to treatment with chamomile preparations is also:

- anacid gastritis, which develops as a result of a decrease / absence of hydrochloric acid in the gastric contents;
- ulcerative lesions of the stomach or duodenum that have arisen in connection with this type of gastritis. ^[eleven]

Botanical description

This is an annual herbaceous plant of the *Aster family (Composite)*.

origin of name

The people call chamomile *meadow grass, mother grass, camille, roman grass, romannik, roman flower*. The origin of the name comes down to two versions: the use of the Latin word used in ancient herbalists, the adjective "**romana**" (chamaemelon romana - "*Roman chamomile*"); borrowing from Polish. The Latin name - **Matricaria** (from "matrix" - "*womb*") - is explained by the wide use of the plant in the treatment of gynecological diseases. The term was introduced into scientific use by Carl Linnaeus.

Kinds

There are 25 plant species. The most common ones are:

- **Chamomile officinalis** (*pharmacy, peeled*). Growth area - North America, Eurasia. Chamomile is one of the most cultivated species. A valuable medicinal plant, the essential oil of which contains the substance chamazulene , successfully used in medicine.
- **Chamomile without tongue** (*green, American, odorous*) - originally endemic to North America. The area of growth in the modern world is unusually extensive. A plant with a strong and persistent aroma, successfully used for medicinal purposes ^[1]
- **Chamomile** is a herb up to 40-50 cm high. The root system is taproot, the root is slightly branched. The stems are ribbed, have many branches, the leaves are sessile, bipinnately dissected , with filiform segments. Inflorescences - numerous baskets. In the middle, the flowers are tubular, bright yellow, along the edges - reed, white. The fruit is an oblong achene that ripens in early summer. The flowering period of chamomile begins in May and lasts until August, sometimes until early autumn.

Chamomile grows on roadsides, meadows, clearings, on light sandy soils, between crops. The plant is cultivated as medicinal ^[2,4]

Growing conditions

The history of chamomile cultivation dates back centuries. The growing season is not long - about 2 months, and the life cycle of the plant fits into the interval from 3 to 4 months. Chamomile seed material germinates at a positive temperature of 3 degrees. With a temperature regime of 20 degrees, full shoots appear in about a week. For sowing, choose fertile soils of medium mechanical composition. Chamomile takes root well on the site after growing pure fallow, winter crops going through pure fallow, tilled crops on it. If chamomile is sown in the soil from under a winter crop, the stubble is first peeled, and with the onset of autumn, the plowing is plowed to a depth of 0.2 meters and organic fertilizers are applied.

How to propagate chamomile seed. Sowing is done in the fall a month or a couple of days before the onset of frost. More successful winter crops. Standards for autumn sowing range from 20 to 25 g of seeds per 1 hectare (sprinkled with a layer of soil up to 1 cm). The winter norm is 10 g more. The distance between the rows is 0.4 meters. After sowing, the soil is wrapped to retain moisture and prevent the seeds from being blown away by the wind. For the preservation of small seedlings, the initial designation of row spacing is carried out manually, later a cultivator is used for plowing, and the rows are weeded ^[2]

Adult bushes are planted in early autumn; when transplanting, be sure to keep clods of earth on the roots.

The plant needs moderate watering and is photophilous. Chamomile gives excellent yields in open areas, lit by a lot of direct sunlight. Chamomile tolerates wintering well in conditions of large snow drifts. ^[3]

Inflorescences-baskets of chamomile are harvested in summer, if the weather is without precipitation. Flower baskets are harvested without a stem, while the length of the peduncle residues should not exceed 3 cm. Dry the raw materials in the shade, in places with good ventilation, spreading the inflorescences in a thin layer on cloth or paper, shaking from time to time. Collection is carried out in several stages, as new flowers open. The procurement of raw materials coincides precisely with the period of flowering of chamomile, when the tubular flowers in the basket inflorescence have opened

by ½, and the extreme ones have not yet descended downwards (that is, when the reed flowers are placed horizontally along the edge). Failure to comply with this rule leads to the fact that the inflorescences crumble during drying. Accelerates the process of collecting a special device, a stroke. Outwardly similar to medicinal chamomile, odorless chamomile and common daisy can be collected by mistake. Along with medicinal chamomile, chamomile baskets are also harvested.

On an industrial scale, chamomile raw materials are stored in thick paper bags. At home, it is best to store chamomile in a securely closed porcelain container. ^[four]

Power circuit

Chamomile is part of the green fodder in pastures and is eaten by cattle and small cattle along with other herbs. However, due to the presence of tannins in parts of the plant and the specifics of the chemical composition, after the inclusion of chamomile in the feed of a goat or cow, milk acquires a special, rather unpleasant odor.

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An extended HTML version of the article is available on the site edaplus.info.

Chamomile - useful properties, composition and contraindications

Eliseeva Tatyana, Chief editor of the project EdaPlus.info

Tkacheva Natalia, phytotherapist, nutritionist

Email: eliseeva.t@edaplust.info, tkacheva.n@edaplust.info

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