

Melissa (lat. Melissa officinalis)

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

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

Beneficial features

Chemical composition and presence of nutrients

trace elements	mg/kg dry weight [four]
Iron	178
Manganese	171
Zinc	54.9
Copper	7.86
Nickel	3.45
Chromium	1.05
cobalt, lead and cadmium	less than 0.1

What exactly is used and in what form

Leaves and apical shoots of lemon balm are used in the preparation of infusions, decoctions, tinctures, water vapors, extracts. Raw materials are used both in fresh and dried form. Externally, lemon balm is used to prepare baths, rinses, poultices, lotions, compresses. Melissa essential oil is widely used for the manufacture of medicinal products and in aromatherapy.

Medicinal properties

Lemon balm leaves contain volatile oils (terpenes citral, citronelal, geraniol, linolol), tannins, bitterness, triterpenes (represented by ursulic and oleanic acids), as well as organic acids, including caffeic and chlorogenic.

Melissa is a good sedative, antispasmodic, laxative, antiemetic; enhances the secretory function of the stomach and stimulates the motility of the biliary tract. ^[6]

Melissa leaf extract has a powerful sedative effect. Melissa stimulates the activity of the digestive system, and is credited with antiviral and anti-inflammatory effects. Melissa is used as a bacteriostatic, as an effective remedy for nervous overexcitation, with vegetovascular dystonia, sleep disorders, with a broken heart rhythm, with pressure surges due to emotional overstrain; with malfunctions in digestion, autonomic neurosis, gastritis and colitis caused by an emotional factor. [7]

In official medicine

For sale in pharmacies, melissa tincture and " *Melissa officinalis herb* " are produced. Also, along with other natural ingredients, lemon balm is part of such sedative drugs as *Novo- Passit*, *Persen*.

In folk medicine

- With tachycardia, gastrointestinal disorders, insomnia, neurasthenia, vegetovascular dystonia, stress conditions, an infusion is recommended: a tablespoon of lemon balm leaves is infused for 10 minutes in 400 ml of boiling water. Drink half a glass up to 3 three times a day. The effect of the plant on the body is explained by the fact that the volatile oil reduces the sensitivity of the central nervous system. The alcoholic tincture of lemon balm works more effectively in such cases. The bacteriostatic and antiviral properties of lemon balm are due to the high content of tannins. [6]
- As a sedative, an infusion is recommended: 3 teaspoons of lemon balm leaves to infuse for a quarter of an hour in 200 ml of boiling water, drink in small sips, warmed up, before going to bed. [7]
- With nausea, toxicosis in pregnant women (if there are no medical contraindications), sleep problems, neuroses, dizziness, anemia, "lazy" intestines, skin rashes and painful menstruation, it is recommended to take an infusion: 2 tablespoons of shoots-tops of lemon balm and its leaves insist 2 hours in 400 ml of boiling water. Strained infusion is drunk three times a day, 100 ml shortly before meals.
- Melissa oil can help with diseases of the uterus and menstrual irregularities. Infuse 2 tablespoons of fresh lemon balm leaves for at least 5 days in 200 ml of vegetable oil, strain and store in a tightly closed refrigerator. The oil is taken 1-2 times a day, 15 drops.
- With atherosclerosis and high blood pressure, a collection is useful: lemon balm grass (4 tablespoons), rue grass and creeping thyme (3 tablespoons each) are infused in boiling water for about 2 hours. For 200 ml of water, take a tablespoon of herbal collection. The infusion must be drunk during the day.
- For nausea and vomiting in pregnant women (and with the permission of a doctor), a collection of lemon balm (4 tablespoons of chopped grass), peppermint leaves and chamomile flowers (3 tablespoons each) is advised. 4 tablespoons of a mixture of these herbs insist half an hour on a liter of boiling water. Drink 200 ml of infusion daily.
- With a rapid heartbeat against the background of progressive neurosis, a collection is prescribed: lemon balm leaves, yarrow grass, Tutsanand valerian root (a teaspoon in total). Infusion of herbs is kept for 3 hours in 400 ml of boiling water. Drink half a cup once a day. [eight]

- For amenorrhea, mix one part of lemon balm leaves, rosemary, cherry or cherry stalks and 5 parts of pepper grass. Pour a tablespoon of this collection into 200 ml of water, boil and boil for 5 minutes over low heat. Cool the broth, strain. Take 100 ml, cold, daily in the morning and evening.
- In case of alcoholism, an infusion of lemon balm is prescribed: a tablespoon of dry, crushed leaves of lemon balm is steamed in 400 ml of boiling water. Infuse for half an hour in warmth, then filter. The infusion should be drunk during the day, in small sips, you can add lemon. Relieves the symptoms of prolonged alcohol intoxication by the systematic intake of an infusion from the collection of herbs in equal proportions: lemon balm, thyme, peppermint.
- In chronic alcoholism, a collection is prepared: dry, crushed lemon balm leaves, peppermint grass, thyme, St. juniper (1 part each). 3 tablespoons of the herbal mixture is brewed in 300 ml of boiling water, infused for half an hour, filtered. Drink infusion of 2 tablespoons 8 to 10 times a day. Reception should be carried out within 2 months. Then, after a break, continue the course of treatment.

How to prepare tincture of lemon balm yourself?

• Tincture

Grind 25 g of dry lemon balm leaves, pour 0.2 liters of vodka and keep in a dark place at room temperature for 14 days, shaking the infusion from time to time. Strain after holding. It can be taken both internally and externally - for rubbing and massage procedures.

• Extract from fresh lemon balm

Fill a glass bottle with fresh (washed and dried) lemon balm leaves. Pour the herbal mass with vegetable oil so that the leaves are completely covered. When bubbles appear, the bottle must be shaken so that the air rises to the top. Cover the bottle with a lid and leave in a place without access to light. After a month, strain the resulting oil infusion. The resulting liquid is used as an extract from lemon balm. To increase the concentration of essential oil, you need to repeat the process on the basis of an already prepared oil extract and a new portion of fresh lemon balm. ^[5]

Externally:

- In case of physical exhaustion, poor metabolism, a bath is prescribed as a general tonic: mix lemon balm herb, oregano, wormwood, yarrow, mint, calamus root and pine buds (take 20 g of each component). Brew herbal collection in a liter of water, let it brew, strain and add to a full bathroom. Take a bath for no more than a quarter of an hour, at a water temperature of 38.
- For burns, poorly healing wounds, crushed fresh leaves (or dry, steamed in boiling water) of lemon balm are applied in a thin layer of clean gauze to damaged skin.
- For bedsores, it is recommended to wash with a chilled decoction (boil 3-4 tablespoons of herbal raw materials in 0.5 liters of water).
- With hemorrhoids, constipation, a microclyster from fresh juice of lemon balm leaves and boiled water is useful. For 1 glass of warm water, take a teaspoon of lemon balm juice. [9]
- For neuralgia, bruises, rheumatism, poultices are advised: 2 tablespoons of crushed lemon balm leaves are laid out in a gauze "pocket", dipped in boiling water, and then, tolerably hot, applied to the inflamed area, wrapped over with a warm scarf or scarf.
- For rinsing the mouth (in the presence of wounds, sores, inflammation, sore gums), use a warm infusion: 2 tablespoons of lemon balm herb are steamed with 200 ml of boiling water, insisted for at least 60 minutes. [eight]
- With sinusitis, steam inhalations with infusion of lemon balm help, which are done every hour (inhalation duration is 5 minutes). Cotton wool soaked in a hot infusion of lemon balm is

injected into the nose, from time to time warming the cotton wool in a warm infusion. This method eliminates the pain of sinusitis, acts as an antiseptic, accelerates the healing of inflamed tissues, inhibits the growth of microbes. Also useful for sinusitis are turundas in the nose, soaked in 25% tincture of lemon balm on vodka. [5]

Does lemon balm help with neurosis? Traditional medicine claims that a bath is useful for vegetative neurosis: prepare a decoction (75 g of lemon balm herb and peppermint leaves and 30 g of chamomile inflorescences boil in 3 liters of water for 5 minutes), mix it with bath water. ^[7]

in oriental medicine

Avicenna was one of the first representatives of medical science, who pointed out the importance of lemon balm in the treatment of depression and melancholy.

In scientific research

The study of the medicinal properties of lemon balm dates back centuries. The healing value of the plant was mentioned by Dioscorides , Pliny, Paracelsus.

The 17th-century English writer and horticulturist John Evelyn wrote of lemon balm: "Melissa has a beneficial effect on brain activity, it strengthens memory and relieves melancholy." Melissa, infused with wine, "... normalizes cardiac activity and restores psychological, emotional balance". [ten]

Representatives of modern science are improving the system of medical knowledge about this useful plant.

The properties of the essential oil of lemon balm, which grows in the northern regions of India, were studied by R.S. Verma, R. K. Paladia, A. Chohan. [eleven]

The composition of the essential oil of lemon balm is covered in the scientific work of K. Seidler-Lozikovskaya, R. Zavirskaya-Wojtasiak, E. Voytovich and J. Bosyanovsky. [12]

Melissa officinalis is the subject of a major scientific study by Iranian scientists (H. Moradahi , E. Sarksyan , H. Bibak , B. Naseri and others) [13]

In the article by Alekseeva A.V. neurotropic preparations based on the herb melissa officinalis are analyzed, the possibilities of using melissa infusion in the practice of pediatricians are substantiated.
[fourteen]

The use of lemon balm preparations in the treatment of school-age children diagnosed with non-ulcer dyspepsia was analyzed in the work of Alekseeva A.V. and Mazur L.I. [fifteen]

Pharmacognostic research on the standardization of new drugs based on the herb Melissa officinalis is the topic of the dissertation of Boltabekova Z.V. ^[16]

The potential of using funds based on raw materials from lemon balm in pediatrics is revealed in the study of Alekseeva A.V., Mazur L.I., Kurkina V.A. [17]

In the Bulletin of Ethnopharmacology (2006), the Portuguese researcher A. Ferreira provided data on the possibility of using lemon balm in the treatment of Alzheimer's disease (with an already developing disease and for its prevention). [eighteen]

In cooking

The characteristic and pleasant lemon smell of lemon balm made it a familiar and popular component, without which the preparation of many culinary masterpieces is indispensable: pastries, desserts, original sauces and marinades, drinks.

Melissa sauce

To prepare the sauce, you will need: 2 cups of fresh lemon balm leaves, half a cup of olive oil, 3-4 cloves of garlic. Grind all ingredients in a blender to a paste. Serve with chicken or grilled fish, or as a sauce for pasta.

Melissa cookies

You will need: 2 tablespoons finely chopped lemon balm leaves, 1 teaspoon lemon juice, a cup of softened butter, 2/3 cups sugar, 1 egg, 2 and 1/3 cups flour, a teaspoon of salt, fresh lemon balm leaves for decorating the finished cookies. Grind the crushed lemon balm leaves with lemon juice. Beat butter with sugar. In the oil mixture, while stirring, gradually add the grated lemon balm, egg, flour and salt. Knead the dough, shape into a ball, cover with cling film and refrigerate for at least 2 hours until firm. Preheat the oven to 180 degrees, roll out the dough, cut out thin cookies using molds and bake until golden brown for 8-10 minutes.

Melissa tea

To make tea you will need: a quarter cup of fresh lemon balm leaves (and the same amount of fresh mint leaves), a teaspoon of dried or fresh lavender flowers, 3 small orange peels, 2 cups of water. Pour boiling water over all the ingredients, steam the tea in a large teapot and leave for at least 10 minutes. Strain and serve chilled.

• Candied melissa leaves

Beat the egg with a little water until white. Dip each lemon balm leaf into the whipped mass, and then roll in granulated sugar. Spread the leaves on a roasting pan lined with baking paper and dry in the oven at 90 degrees for 20-30 minutes. The treat should be slightly golden, but not brown.

Melissa liqueur

1.5 cups of sugar, a quarter cup of water, 2 cups of tightly packed young stems and leaves of lemon balm, 1 liter of vodka or brandy. Pour sugar into water, bring to a boil and keep on low heat until the sugar is completely dissolved. Put stems and leaves of lemon balm in deep glassware, pour warm syrup over lemon balm, add alcohol (vodka or brandy). Mix all ingredients thoroughly, cover, and keep in a dry, dark place for at least a month. Shake periodically. At the end of the aging period, strain and bottle. Melissa liqueur is served with seafood or poultry, added to meat sauces. The drink goes well with desserts, fruits.

Melissa honey

To get such a spicy and fragrant honey, you will need: 1.5 cups of honey, a quarter cup of crushed fresh lemon balm leaves, tightly packed in a cup, 2 tablespoons of lemon juice, one strip of lemon peel, 10 allspice seeds, 10 cloves. Heat the honey in a water bath, pour the ingredients into a dry glass bowl and pour over everything on top of not very hot melted honey. Mix well, cover and keep at room

temperature for 2 days. Then reheat honey with spices and strain into a separate jar. Store this honey in the refrigerator and eat within 3 weeks.

• Melissa wine

Ingredients:

- 1. lemon balm leaves (in an amount equal to a filled two-liter container);
- 2. 2 large oranges (you will need juice and peel);
- 3. 400 g light raisins;
- 4. 1 lemon (juice and peel);
- 5. 1 kg of sugar;
- 6. 1 teaspoon wine yeast nutritional supplement
- 7. 1 teaspoon of tartaric acid;
- 8. 1 teaspoon pectin enzyme;
- 9. packaging of wine yeast;
- 10. disulfite tablets (as a preservative and antioxidant in the wine making process).

Separate the lemon balm leaves from the stems, rinse in cold water, dry, put in a clean container and pour 2 liters of boiling water. Add one tablet of potassium disulphite, cover with a tight-fitting lid and infuse for 2 days.

Drain the resulting liquid into a sterilized wine ladle, add juice and peel from lemon and oranges, washed and crushed raisins, tartaric acid, wine yeast, nutritional supplement and pectin enzyme. Leave to ferment for 4 days under a tight-fitting lid, stirring twice a day.

After fermentation, strain into a bottle, add sugar, mix and keep for at least 3 months. The taste of wine improves with an aging period of six months. Lemon balm wine can be served both as an aperitif and with main courses.

In cosmetology

Due to the complex of its properties, including antibacterial ones, lemon balm can be effectively used in the manufacture of home cosmetics. Melissa leaves are suitable for making facial tonics, hair rinses, lotions, ointments, lip balms, facial cleansing with a steam bath.

• Melissa face tonic

You will need: 225 g of lemon balm distillate, 0.5 teaspoon of glycerin or liquid honey. Mix everything thoroughly and use a cotton pad to wipe your face. Store tonic in the refrigerator.

• Melissa lip balm

Melt 28 g of beeswax in a ladle, add 1 cup of lemon balm oil extract. Stir slowly and thoroughly until smooth, pour into small jars. Apply to lips as needed.

Other uses

From the leaves of lemon balm, you can make many useful things in everyday life.

Aromatic wax with lemon balm

Heat up 10 g of beeswax to the consistency of soft plasticine, combine the wax with lemon balm essential oil (10 g), knead the mass well with your hands. Keep the wax with lemon balm in a closed bottle, use it as a natural air fragrance if necessary. ^[5]

Pillow for sleep with Melissa

Melissa for insomnia is considered one of the most effective remedies. It is noteworthy that this fragrant plant returns sleep in the truest sense: with the help of an ordinary sleeping pillow. To make an unusual pillow, take dried lemon balm leaves, catnip, chamomile, hops and lavender in equal parts. Mix all herbs gently. Add 6 cloves and a teaspoon of crushed cinnamon sticks to the collection. Fill the sachet with a cup of the herbal mixture, and place the carefully sealed sachet into your sleeping pillow. Before use, you must make sure that there is no allergy to any of the components of the herbal collection.

Melissa has long been used as a natural repellent. Pounded lemon balm leaves were rubbed on the skin to repel insects.

In the UK, since the time of Queen Victoria, lemon balm has been used to wipe furniture, the surface of which, after polishing with lemon balm leaves, is shiny and smooth.

It is useful to treat a room where a sick person is located with lemon balm essential oil: dropping a few drops into an aroma lamp or spraying water to which essential oil has been added. This procedure kills germs, disinfects the air. ^[5]

Dangerous properties of lemon balm and contraindications

Possessing a sedative effect, lemon balm herb should be used with caution when driving.

Being a sedative, lemon balm can enhance the effect of tranquilizers and other sedatives, so taking them and lemon balm at the same time is highly undesirable. Contraindicated simultaneous use of the drug " **Valium** " and lemon balm herb. Melissa during pregnancy is allowed if there are no contraindications in a particular case and the period, method and doses of taking preparations from lemon balm are recommended by the doctor and agreed with him.

The components of lemon balm help to reduce the production of thyroid hormones, so the herb is contraindicated in hypotreosis, characterized by reduced production of thyroid hormones.

Botanical description

This is a perennial herb representing the Lamiaceae (Lamiaceae) family.

origin of name

this popular essential oil plant is called *lemon mint*, *lemongrass*, *bee*, *honey*, *swarm*. The official name of the genus in Latin - " **Melissa** " - is a borrowing from the Greek language and is translated as " **bee** ".

Kinds

In botany, there are 5 types of lemon balm:

- 1. **Melissa officinalis** is a common representative of the flora, which grows both in the wild and is cultivated in many countries of the globe. A plant with invaluable medicinal value, a wonderful honey plant. There is a wide variety of bred lemon balm cultivars, subspecies and varieties;
- 2. **Melissa axillaris** a species that is found in China, Indochina, the Himalayas, Java and Sumatra;
- 3. **Melissa flava** is the habitat of this species Tibet, Nepal, Bhutan, eastern India;
- 4. **Melissa yunnanensis** grows in Tibet, Yunnan;
- 5. Melissa bicornis . [one]

Melissa officinalis is a perennial herb, from 30-50 cm to 1.2-1.5 m high. The rhizome is branched, the stem of the plant is straight, tetrahedral, with numerous branches, pubescent with glandular hairs. The leaf arrangement is opposite. The leaves of the lower tier are cordate-ovate, on long petioles; leaves of the middle tier - serrated and oblong, smaller than the lower ones, on short petioles; upper leaves without petiole, pubescent on both sides, bluish-green below, dark green above. Small white or pinkish flowers are collected in a false whorl. The fruits are nuts. The flowering period of lemon balm is July - September.

In the natural environment, the plant can be found among shrubs, on forest edges, near weedy places. Along with this, lemon balm is cultivated by man at a variety of objects: from the botanical garden to beekeeping farms and scientific stations. ^[2]

Growing conditions

Melissa grows well on hills, which are characterized by sufficient illumination and inaccessibility to northern winds. Cultivation is successful on loose soils generously flavored with humus. Loamy, sandy soils are suitable. Melissa does not tolerate heavy, acidified and clayey soil.

Melissa propagation methods: *seed* and *vegetative* (bush division, etc.). Seeds are sown in soil loosened to a depth of 0.3 m. Sprouted crops must be thinned out. The recommended row spacing is 0.6 m, and between individual bushes it should be about 0.3 m.

Melissa is also propagated by dividing bushes that are at least 2 or 3 years old, or by cuttings. The latter method is very convenient in the areas of the first year, since they are abundantly covered with creeping stems of lemon balm. But such a transplant is recommended to be done as rarely as possible, so that by the end of the warm summer period the plant has time to take root well and does not suffer from the cold in winter.

Lemon balm crops must be carefully cleaned of weeds and loosened between rows. During the growing season, organic and mineral fertilizers (phosphorus, potassium) are applied. The term of fruitful operation of the site for lemon balm is approximately 5-6 years, subject to proper care of the plants. [3]

Harvest leaves and apical shoots of lemon balm begin shortly before the flowering of the plant or at its very beginning. The collection of raw materials is best done in a calm and sunny time. If lemon balm is collected in two stages, the interval between the first and second collection should be at least a month. Dry the grass in the shade in the open air, in a ventilated attic or in a dryer. Ready raw materials are stored in well-ventilated and dry rooms. The shelf life of lemon balm is one year. [2]

Growing at home

How to grow lemon balm at home? In the summer, it is most practical to grow lemon balm on the balcony, where there is a lot of sunlight and no drafts. Seeds germinate at a positive temperature (about 10 degrees), an adult plant feels best at 20-25 degrees. In spring and summer, it is more convenient to keep lemon balm on the balcony, and bring it into the room with the beginning of autumn.

For planting indoors, a grown young bush with developed shoots is needed. The diameter of the pot must be at least 0.2 m. If the pot is larger, it must be filled one quarter with crushed bricks or medium-sized stones. Requirements for the height of the pot: the main part of the melissa root system reaches a depth of up to 0.2 m, and if the pot is much higher, the excess earth masses will turn sour during watering, which negatively affects the plant. Top dressing of lemon balm with a mixture of fertilizers is recommended to be done once a month, it is also necessary to intensively fertilize the soil in a pot in the spring, and in the fall the use of fertilizers should be suspended.

Watering daily in the summer, in the cold season - once every 3 days. It is necessary to water in such a way that the water protrudes onto the pallet. This water must be drained, since lemon balm does not tolerate stagnant water (as well as overdried soil).

In winter, it is recommended to pluck individual leaves and even small stems from the bush.

Seeds begin to ripen on the lower inflorescences, they are harvested by hand, shaking into a box or bag. The collection of seed material is repeated as the fruits ripen on the whorls. [four]

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Melissa - useful properties, composition and contraindications

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