



## Lemon balm

### Overview

Lemon balm (*Melissa officinalis*), a member of the mint family, is considered a calming herb. It was used as far back as the Middle Ages to reduce stress and anxiety, promote sleep, improve appetite, and ease pain and discomfort from indigestion (including gas and bloating, as well as colic). Even before the Middle Ages, lemon balm was steeped in wine to lift the spirits, help heal wounds, and treat venomous insect bites and stings. Today, lemon balm is often combined with other calming, soothing herbs, such as valerian, chamomile, and hops, to help promote relaxation. It is also used in creams to treat cold sores (oral herpes).

### Plant Description

Native to Europe, lemon balm is grown all over the world. It is grown not only in herb gardens or to attract bees, but also in crops for medicine, cosmetics, and furniture polish manufacturing. The plant grows up to 2 feet high, sometimes higher if not maintained. In the spring and summer, clusters of small, light yellow flowers grow where the leaves meet the stem. The leaves are very deeply wrinkled and range from dark green to yellowish green in color, depending on the soil and climate. If you rub your fingers on these leaves, your fingers will smell tart and sweet, like lemons. The leaves are similar in shape to mint leaves, and come from the same plant family.

### Medicinal Uses and Indications

#### Insomnia and anxiety

Several studies show that lemon balm combined with other calming herbs (such as valerian, hops, and chamomile) helps reduce anxiety and promote sleep. Few studies have examined lemon balm by itself, except for topical use. For example, in one study of people with minor sleep problems, 81% of those who took an herbal combination of valerian and lemon balm reported sleeping much better than those who took placebo. But it's not clear from this and other studies whether lemon balm or valerian (or the combination) is responsible for the result.

The same is true of several studies for anxiety, which used a combination of herbs to reduce symptoms.

In another double blind, placebo controlled study, 18 healthy volunteers received 2 separate single doses of a standardized lemon balm extract (300 mg and 600 mg) or placebo for 7 days. The 600 mg dose of lemon balm increased mood and significantly increased calmness and alertness.

#### Herpes

Some studies suggest that topical ointments containing lemon balm may help heal cold sores caused by the herpes simplex virus (HSV). In one study of 116 people with HSV, those who applied lemon balm cream to their lip sores experienced significant improvement in redness and swelling after only 2 days. Other symptoms, such as pain and scabbing, did not improve. Both the patients and their doctors reported that the lemon balm ointment was highly effective. Another large study involving three German hospitals and one dermatology clinic showed that, when lemon balm was used to treat the primary infection of HSV I, not a single recurrence was noted. The cream has also been found to reduce the healing time of both genital and oral herpes. Several animal studies also support the value of topical lemon balm for herpes lesions. And preliminary studies show that lemon balm exhibited a high, concentration-dependent activity against HIV infection.

### Other uses

Some evidence suggests that lemon balm, in combination with other herbs, may help treat indigestion. Others reveal that lemon balm oil has a high degree of antibacterial activity. In one study, lemon balm showed adequate activity against *Listeria monocytogenes* and *Staphylococcus aureus*. And a few studies have found that lemon balm may help improve cognitive function and decrease agitation in people with Alzheimer's disease.

## What's It Made Of?

Lemon balm supplements are made from the leaves of the plant. Essential oils made from lemon balm leaves contain plant chemicals called terpenes, which play at least some role in the herb's relaxing and antiviral effects. Lemon balm also contains substances called tannins, which may be responsible for many of the herb's antiviral effects. Lemon balm also contains eugenol, which calms muscle spasms, numbs tissues, and kills bacteria.

## Available Forms

Lemon balm is available as a dried leaf that can be bought in bulk. It is also sold as tea, and in capsules, extracts, tinctures, and oil. Some creams used in Europe, which contain high levels of lemon balm, are not available in the United States. On the other hand, teas can be applied to the skin with cotton balls. Lemon balm is also available in homeopathic remedies and as aromatherapy (essential oil).

## How to Take It

### Pediatric

Lemon balm may be used topically in children to treat cold sores. Speak to your health care provider for appropriate dosage for the child's age.

### Adult

For difficulty sleeping, or to reduce indigestion, flatulence, or bloating, consult a knowledgeable health care provider for the specific dose to best fit your needs. Possible doses may be as follows:

- Capsules: Take 300 - 500 mg dried lemon balm, 3 times daily or as needed.
- Tea: 1.5 - 4.5 grams (1/4 - 1 teaspoonful) of dried lemon balm herb in hot water. Steep and drink up to 4 times daily.

- Tincture: 60 drops of lemon balm daily
- Topical: Apply topical cream to affected area, 3 times daily or as directed.

For cold sores or herpes sores, steep 2 - 4 teaspoonfuls of crushed leaf in 1 cup boiling water for 10 - 15 minutes. Cool. Apply tea with cotton balls to the sores throughout the day.

## Precautions

The use of herbs is a time honored approach to strengthening the body and treating disease. Herbs, however, contain components that can trigger side effects and interact with other herbs, supplements, or medications. For these reasons, you should take herbs with care, under the supervision of a health care provider qualified in the field of botanical medicine.

Pregnant and breastfeeding women should not take lemon balm.

## Possible Interactions

Lemon balm may potentially interact with the following medications:

**Sedatives, thyroid medications** -- Lemon balm may interact with sedatives and thyroid medications. If you are taking sedatives (for insomnia or anxiety) or medications to regulate your thyroid, ask your doctor before taking lemon balm.

**HIV medications** -- It is not clear whether lemon balm interacts with antiretroviral agents. At this time, avoid use of lemon balm if you're taking medication for HIV.

## Supporting Research

Awad R, Levac D, Cybulska P, Merali Z, Trudeau VL, Arnason JT. Effects of traditionally used anxiolytic botanicals on enzymes of the gamma-aminobutyric acid (GABA) system. *Can J Physiol Pharmacol*. 2007 Sep;85(9):933-42.

Ballard CG, O'Brien JT, Reichelt K, Perry EK. Aromatherapy as a safe and effective treatment for the management of agitation in severe dementia: the results of a double-blind, placebo-controlled trial with Melissa. *J Clin Psychiatry*. 2002;63(7):553-8.

Berdonces JL. Attention deficit and infantile hyperactivity. [Spanish]. *Rev Enferm*. 2001;24(1):11-14.

Blumenthal M, Goldberg A, Brinckmann J. *Herbal Medicine: Expanded Commission E Monographs*. Newton, MA: Integrative Medicine Communications; 2000:230-232.

de Sousa AC, Alviano DS, Blank AF, Alves PB, Alviano CS, Gattass CR. Melissa officinalis L. essential oil: antitumoral and antioxidant activities. *J Pharm Pharmacol*. 2004;56(5):677-81.

Dos Santos-Neto LL, de Vilhena Toledo MA, Medeiros-Souza P, de Souza GA. The use of herbal medicine in Alzheimer's disease-a systematic review. *Evid Based Complement Alternat Med*. 2006 Dec;3(4):441-5.

Ernst E. *The Desktop Guide to Complementary and Alternative Medicine: An Evidence-Based Approach*. Mosby, Edinburgh; 2001:169.

Gaby AR. Natural remedies for Herpes simplex. *Altern Med Rev*. 2006;11(2):93-101.

Geuenich S, Goffinet C, Venzke S, Nolkemper S, Baumann I, Plinkert P, Reichling J, Keppler OT. Aqueous extracts from peppermint, sage and lemon balm leaves display potent anti-HIV-1 activity by increasing the virion density. *Retrovirology*. 2008;5:27.

Gruenwald J, Brendler T, Jaenicke C. *PDR for Herbal Medicines, 4th ed*. Montvalie, NJ: Thomson Healthcare; 2007:514-515.

Gutierrez J, Rodriguez G, Barry-Ryan C, Bourke P. Efficacy of plant essential oils against foodborne pathogens and spoilage bacteria associated with ready to eat vegetables: antimicrobial and sensory screening. *J Food Proct*. 2008;71(9):1846-54.

Hncianu M, Aprotosoae AC, Gille E, Poiat A, Tuchilu C, Spac A, Stnescu U. Chemical composition and in vitro antimicrobial activity of essential oil *Melissa officinalis* L. from Romania. *Rev Med Chir Soc Med Nat Iasi*. 2008;112(3):843-7.

Kennedy DO, Little W, Haskell CF, Scholey AB. Anxiolytic effects of a combination of *Melissa officinalis* and *Valeriana officinalis* during laboratory induced stress. *Phytother Res*. 2006;20(2):96-102.

Kennedy DO, Scholey AB, Tildesley NT, Perry EK, Wesnes KA. Attenuation of laboratory-induced stress in humans after acute administration of *Melissa officinalis* (Lemon Balm). *Psychosom Med*. 2004 Jul-Aug;66(4):607-13.

Kennedy DO, Wake G, Savelev S, et al., Modulation of mood and cognitive performance following acute administration of single doses of *Melissa officinalis* (Lemon balm) with human CNS nicotinic and muscarinic receptor-binding properties. *Neuropsychopharmacology*. 2003;28(10):1871-81.

LaValle JB, Krinsky DL, Hawkins EB, et al. *Natural Therapeutics Pocket Guide*. Hudson, OH:LexiComp; 2000: 469.

Madisch A, Melderis H, Mayr G, Sassin I, Hotz J. A plant extract and its modified preparation in functional dyspepsia. Results of a double-blind placebo controlled comparative study. [German]. *Z Gastroenterol*. 2001;39(7):511-517.

Mantle D, Pickering AT, Perry AK. Medicinal plant extracts for the treatment of dementia: a review of their pharmacology, efficacy and tolerability. *CNS Drugs*. 2000;13:201-213.

Mazzanti G, Battinelli L, Pompeo C, Serrilli AM, Rossi R, Sauzullo I, et al. Inhibitory activity of *Melissa officinalis* L. extract on Herpes simplex virus type 2 replication. *Nat Prod Res*. 2008;22(16):1433-40.

Muller SF, Klement S. A combination of valerian and lemon balm is effective in the treatment of restlessness and dyssomnia in children. *Phytomedicine*. 2006;13(6):383-7.

Nolkemper S, Reichling J, Stintzing FC, Carle R, Schnitzler P. Antiviral Effect of Aqueous Extracts from Species of the Lamiaceae Family against Herpes simplex Virus Type 1 and Type 2 in vitro. *Planta Med*. 2006;72(15):1378-82.

Patora J, Klimek B. Flavonoids from lemon balm (*Melissa officinalis* L., Lamiaceae). *Acta Pol Pharm*. 2002;59(2):139-43.

Rakel: *Integrative Medicine, 2nd ed*. Philadelphia, PA. Saunders Elsevier. 2007.

Rotblatt M, Ziment I. *Evidence-Based Herbal Medicine*. Philadelphia, PA: Hanley & Belfus, Inc; 2002:249-251.

Schnitzler P, Schuhmacher A, Astani A, Reichling J. Melissa officinalis oil affects infectivity of enveloped herpes viruses. *Phytomedicine*. 2008;15(9):734-40.

Triantaphyllou K, Blekas G, Boskou D. Antioxidative properties of water extracts obtained from herbs of the species Lamiaceae. *Int J Food Sci Nutr*. 2001;52(4):313-317.

## Alternative Names

Balm mint; Blue balm; Garden balm; Honey plant; Melissa officinalis; Sweet balm



## Version Info

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