



Marshmallow

Althaea officinalis

Common names

Althaea, mallards

Family

Malvaceae (mallow)

Part used

Root

Background and traditional uses

Native to most of Europe, marshmallow is a herbaceous perennial that grows to over one metre tall. It prefers soil with a high saline content, so is often found in salt marshes, at the edges of tidal rivers and by the sea, as well as in damp meadows and ditches. Marshmallow's oval shaped leaves, between five to seven centimetres long and about three centimetres wide, are soft and velvety on both sides due to dense, soft hair coverage. The roots are thick, long and tapering and are white and fibrous within. In all its parts, marshmallow contains an abundance of mucilage with a very emollient texture.¹

Its botanical name *Althaea* is derived from the Greek word '*altho*' meaning 'to heal/cure' and the origin of its family name *Malvaceae* is in the Greek word '*malake*' meaning 'soft'. The herb was revered by the ancient Greek physicians, including Pliny who wrote, 'whosoever shall take a spoonful of the mallows shall that day be free from all diseases that may come to him'.¹ Both the roots and leaves have been used medicinally and as an edible vegetable in many parts of the world. Marshmallow has cool, moist and sweet characteristics, a soft and mucilaginous texture and a slightly sweet fragrance.¹

Actions

Primary:^{2,3}

- Demulcent
- Antitussive
- Emollient
- Expectorant

Secondary:³

- Anti-inflammatory
- Vulnerary
- Immune modulator

Applications and indications

- Traditionally, marshmallow root has been described as a demulcent applied to soothe dry, irritable coughs, irritations of the oral and pharyngeal mucosa and as a topical emollient for wounds and dry skin.²
- It is often used in liquid mixtures prescribed for coughs and gastrointestinal difficulties not only for its demulcent action, but because its mild, sweet flavour helps to mask the taste of bitter and pungent herbs.²
- Modern herbal authorities including the British Herbal Pharmacopoeia and Complete German Commission E monographs approves marshmallow to be used for asthma, cystitis, dysentery and irritations of the gastric mucosa; as a demulcent to relieve irritation of the oral and pharyngeal mucosa associated with dry coughs; as a demulcent to relieve mild inflammation of the gastrointestinal mucosa associated with gastritis, enteritis and peptic and duodenal ulcers; in place of slippery elm bark to bind handmade tablets, pills, lozenges and pessaries.^{2,4}

Active constituents and pharmacodynamics

Marshmallow root preparations contain 5-11.6% mucilage polysaccharides (including galacturonorhamnans, arabinans, glucaris, and arabinogalactans), flavonoids, glycosides, sugars, amines, fats, coumarins, phenolic acid and sterols. The roots are also a rich source of carbohydrates (between 25-35%) and a significant source of calcium oxalate, explaining its use as a nourishing vegetable in many cultures.⁵

The demulcent effects of marshmallow are due to its high content of **polysaccharide hydrocolloids**, which form a viscous, protective coating on the oral and pharyngeal mucosa, soothing local irritation and inflammation.²

In vitro, aqueous extracts of the marshmallow root have been shown to stimulate phagocytosis and the release of oxygen radicals and leukotrienes from human neutrophils. The release of cytokines, interleukin-6 and tumour necrosis factor from human monocytes has also been noted, suggesting that marshmallow root possesses anti-inflammatory and immunostimulant activity.⁶

Furthermore, aqueous extracts and isolated **polysaccharides** from marshmallow root have been shown to effectively stimulate the physiology of epithelial cells *in vitro*, supporting its traditional use for the treatment and regeneration of irritated mucous membranes.⁷

Other *in vitro* studies have shown that methanolic and hexane extracts of marshmallow root exhibit antimicrobial, antibacterial and antifungal properties.^{8,9}

Summary of clinical evidence

Upper respiratory tract infections

Although no clinically viable, placebo-controlled human studies have been conducted on marshmallow root, preliminary research suggests that 20 drops of marshmallow root extract, equivalent to 40mg of dried herb taken three times daily for four weeks, may improve coughs associated with the use of angiotensin-converting enzyme (ACE) inhibitors when compared to baseline.¹⁰



An *in vivo* study on cats confirmed the antitussive activity of polysaccharides isolated from several plants. It noted that the most expressive antitussive activity was seen in polysaccharides isolated from marshmallow root.¹¹

Leishmania lesions

Preliminary clinical research suggests that topically applying a herbal extract containing a combination of marshmallow and hollyhock to affected areas for five days can help promote curing of leishmania lesions.¹²

Dosage summary

Liquid tincture (1:5): 20-40mL weekly³

Dried herb equivalent: 1.5g daily³

Safety information

- Marshmallow root is considered a very safe herb, even in high doses. However, its safety in pregnancy and lactation has not been established.⁸
- While there are no known drug interactions with marshmallow, there is potential for it to interact with other medications when taken concurrently, particularly with those of similar or opposing effects.¹⁴
- Marshmallow may delay the absorption of other medicines when taken simultaneously.¹⁴

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