

# Expert Herbal Reality Resource

## Aloe Vera

### Names

**Botanical Name** *Aloe vera* (L) Burm.f.

**Family:** *Asphodelaceae*

**Common names:** Barbados aloes (Eng), kumari (Sanskrit)

**Alternate botanical names:**  
*A. barbadensis* Mill.

Note: Barbados aloe is the only species of Aloe not on Appendix II of the CITES list of endangered plants. This means aloe species are not necessarily now threatened with extinction but that may become so unless trade is closely controlled. The list includes the South African Cape aloes *Aloe ferox*, that is often used as an alternative aloe source.



### Description

Aloe plants grow wild throughout the dry areas of India but its native country is not clear. It naturally grows in areas of North Africa, Arabia and Egypt but is now cultivated across the globe for both medicinal and ornamental purposes. The plant is part of the succulent family and can grow up to a metre in height and width with no distinct stem. The leaves are characteristically fleshy and hard with serrated edges appearing as ‘white teeth’ at intervals along its length. Its flowers grow on a spike from the centre of the plant, reaching up to a metre in height, and the flowers are small, yellow and tubular.

Aloe gel is a colourless mucilaginous gel obtained from the interior of the leaves. The mucilaginous parenchymous tissue is excised from fresh leaves. These are “filleted”, peeling off the external green parts of the leaves which contain stimulating laxative constituents called anthraquinones.

### Constituents

- **Polysaccharides:** acetylated glucomannans (‘acemannan’).
- (in the root and rind): anthraquinone laxatives including aloin A and B, aloinosides, aloe-emodin, chrysophanol

### Traditional use

Aloe has a long history as a medicine and skin care aid. The root of Cape and Barbados aloes were a standard stimulating laxative to compare with senna and cascara, and for over 6,000 years aloe has been used for a wide range of ailments. The ancient Egyptians used both aloe gel and whole plant extracts to heal battle wounds and cure infections. The early Greeks used it for relieving blisters, burns and leg ulcers as well as bowel and stomach disorders. Legend has it that Aristotle persuaded Alexander the Great to conquer the Isle of Socroto to

secure enough aloe vera to heal his soldiers' wounds. The Roman physician Dioscorides mentioned aloe in his materia medica of 50-70 A.D.

In England aloe was already used in the 10th century.

## Traditional actions

Traditional Ayurvedic characteristics are

**Rasa** (taste) Bitter, sweet.

**Virya** (energy) Cold.

**Vipaka** (post-digestive effect) Sweet.

**Guna** (quality) Heavy, unctuous.

**Dosha effect:** balances *vata*, *pitta* and *kapha*

**Dhatu** (tissue) All tissues.

**Srotas** (channel) Digestive, excretory, circulatory, female reproductive.

Traditional Ayurvedic actions are

**Vranaropana** Wound healing.

**Bhedaniya** Purgative (powder).

**Rasayana** Rejuvenative for the skin, intestines and female reproductive system.

**Kumarirogaghna** Alleviates menstrual diseases.

**Artavajanana** Promotes menses.

**Raktapitta** Alleviates bleeding.

**Dipana** Enkindles the digestive metabolism.

**Amapacana** Encourages the cleansing of toxins.

**Visahara** Destroys poisons.

**Plihayakrddvrdhahara** Reduces inflammations of the spleen and liver.

**Granthi** Clears tumours.

## What practitioners say

**Skin:** The gel contains polysaccharides that nourish the skin and it is specifically indicated in hot, dry and irritated skin conditions such as psoriasis, skin ulcers, eczema, seborrheic dermatitis, mouth ulcers and is one of the best herbs for healing burns, scars, wounds from urticarial and acne and stretch marks. The whole aloe plant has also been used topically and the aloin anthraquinones are said to add local healing and anti-inflammatory activity.

**Digestion:** Dry and powdered extract of the leaf is strongly laxative, and some aloe gel and juice preparations may include traces of these constituents. More important is its bitter principle: this works via the liver to encourage the release of bile which itself can have a laxative action. The combination of bitter principle and polysaccharide gel



probably accounts for the confirmed benefits in regulating blood sugar and in reducing blood lipid and LDL levels, making aloe gel a useful component of the diet in prediabetics, metabolic syndrome (insulin resistance) and other conditions associated with being overweight. As it is a cooling and demulcent herb that directly clears heat and heals mucous membranes it is a specific for hyperacidity, peptic ulcers, ulcerative colitis and bleeding from the intestines. It has an ability to regulate bacteria levels in the intestines which indicates it in Candida and as a remedy generally for improving gastric and intestinal function.

**Eyes:** When applied externally, aloe vera is very soothing for eye inflammation and eyelid swelling.

**Women's health:** The gel and juice is a wonderful tonic for the female reproductive system. Its cooling and unctuous properties make it very effective for treating the hot and dry symptoms of the menopause.

## Evidence

In a double-blind, randomized, placebo-controlled trial of the efficacy and safety of aloe vera gel for the treatment of mildly to moderately active ulcerative colitis, 30 out of 44 subjects who were allocated 100 ml of aloe gel twice a day for 4 weeks had clinical benefits more often than placebo; aloe also reduced histological disease activity.<sup>i</sup>



There is promising evidence that aloe vera can alleviate pain and improve the symptoms of oral lichen planus.<sup>ii</sup> In a randomized, double-blind, clinical trial 40 patients with erosive or atrophic variants of oral lichen planus in the mouth were randomly divided into two equal groups. When clinical signs and symptoms were observed after 8 weeks of therapy, it was determined that aloe vera gel was more effective than triamcinolone acetonide in the treatment of oral lichen planus.<sup>iii</sup> The two treatments were comparable in another study,<sup>iv</sup> and aloe was more effective than placebo in another randomised clinical trial of the same condition.<sup>v</sup> Another RCT demonstrated benefits over placebo for lichen planus in the vaginal area.<sup>vi</sup>

A randomized, comparative, double-blind, 8-week study was designed. Eighty patients randomly received aloe vera or 0.1% triamcinolone acetonide cream. The aloe was more effective in reducing the clinical symptoms of psoriasis.<sup>vii</sup> An earlier study showed benefit over placebo.<sup>viii</sup>

A systematic review and meta-analysis was conducted on five randomized controlled trials (RCTs) involving 415 participants with prediabetes and early non-treated diabetes. Compared with the controls, aloe vera supplementation significantly reduced the concentrations of fasting blood glucose, glycosylated haemoglobin A1c (HbA1c), triglyceride, total cholesterol, and low density lipoprotein-cholesterol. Aloe vera was superior to placebo in increasing serum high density lipoprotein (HDL)-cholesterol. The conclusions were limited by the mixed methodological quality of the trials.<sup>ix</sup> Similar reviews showed similar reductions in blood glucose levels and HbA1c.<sup>x,xi</sup>

## Safety

Good quality aloe juice is safe to take. However it is possible that lower quality products may still contain some of the anthraquinone laxatives found in the rind and root of aloes. Such products may be less safe, especially in pregnancy. Occasional hypersensitivity reactions have been reported.

## Dosage

3-6 tablespoons of Aloe vera juice (45-90ml) per day before food (adults): 2 tablespoons (30ml) per day (children).

The gel externally as required.

## References

- i Langmead L, Feakins RM, Goldthorpe S, et al (2004) Randomized, double-blind, placebo-controlled trial of oral aloe vera gel for active ulcerative colitis *Aliment Pharmacol Ther.* 19(7): 739-47.
- ii Ali S, Wahbi W. (2017) The efficacy of aloe vera in management of oral lichen planus: a systematic review and meta-analysis. *Oral Dis.* 23(7): 913-918.
- iii Reddy RL, Reddy RS, Ramesh T, et al. (2012) Randomized trial of aloe vera gel vs triamcinolone acetonide ointment in the treatment of oral lichen planus. *Quintessence Int.* 43(9): 793-800.
- iv Mansourian A, Momen-Heravi F, Saheb-Jamee M, et al. (2011) Comparison of aloe vera mouthwash with triamcinolone acetonide 0.1% on oral lichen planus: a randomized double-blinded clinical trial. *Am J Med Sci.* 342(6): 447-451.
- v Choonhakarn C, Busaracome P, Sripanidkulchai B, Sarakarn P. (2008) The efficacy of aloe vera gel in the treatment of oral lichen planus: a randomized controlled trial. *Br J Dermatol.* 158(3): 573-577.
- vi Rajar UD, Majeed R, Parveen N, et al. (2008) Efficacy of aloe vera gel in the treatment of vulval lichen planus. *J Coll Physicians Surg Pak.* 18(10):612-614.
- vii Choonhakarn C, Busaracome P, Sripanidkulchai B, Sarakarn P. (2010) A prospective, randomized clinical trial comparing topical aloe vera with 0.1% triamcinolone acetonide in mild to moderate plaque psoriasis. *J Eur Acad Dermatol Venereol.* 24(2): 168-172.
- viii Syed TA, Ahmad SA, Holt AH, et al. (1996) Management of psoriasis with Aloe vera extract in a hydrophilic cream: a placebo-controlled, double-blind study. *Trop Med Int Health.* 1(4): 505-509.
- ix Zhang Y, Liu W, Liu D, et al. (2016) Efficacy of Aloe Vera Supplementation on Prediabetes and Early Non-Treated Diabetic Patients: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Nutrients.* 8(7): 388.
- x Dick WR, Fletcher EA, Shah SA. (2016) Reduction of Fasting Blood Glucose and Hemoglobin A1c Using Oral Aloe Vera: A Meta-Analysis. *J Altern Complement Med.* 22(6): 450-457.
- xi Suksomboon N, Poolsup N, Punthanitisarn S. (2016) Effect of Aloe vera on glycaemic control in prediabetes and type 2 diabetes: a systematic review and meta-analysis. *J Clin Pharm Ther.* 41(2): 180-188.