

A REVIEW OF ALOEVERA'S BENEFITS

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ABSTRACT

Derived from the Arabic word alloeh meaning "bright, bitter", aloe is known in botany as *Aloe barbadensis* miller and belongs to the aloe family Liliaceae (Lily family). Known by many names in different cultures, it is a succulent-like plant that grows in the arid regions of Africa, Asia, Europe and America, parts of the Indian subcontinent and the states of Rajasthan, Gujarat and Tamil Nadu. Aloe vera has a long history in traditional medicine, including Chinese medicine, Ayurveda and Arabic medicine, and has a variety of therapeutic uses, including skin conditions, stomach pain, headache, fever and eye pain. It is valued for its anti-inflammatory, antibacterial and healing properties. With over 75 health benefits, aloe vera is an indispensable part of modern medicine, cosmetics and the food industry due to its role in

healing, digestion, disease prevention and treatment of chronic conditions such as diabetes and pain.

INTRODUCTION

The name aloe vera comes from the Arabic word alloeh, meaning bright, bitter. The botanical name of aloe vera is *Aloe Barbadensis* miller. It belongs to the Asphodelaceae (Liliaceae) family and the popular names of the plant include Aloe, Aloe capensis, Aloe spicata, Aloe vera, Barbados loe, Cape aloe, Chirukattali (India), Aloe barbadensis, Ghai Kunwar (India), Ghikumar (India), Indian Aloe, Kumari (Sanskrit), Laloi (Haiti), Lohoi (Vietnam), Luhui (China), Nohwa (Korea), Rokai (Japanese), Sabilla (Cuba), Socotrine Aloe, Subr (Arabic),

Zanzibar Aloe

It is a group of tree-like, perennial, xeric, succulents. It grows in arid regions of Africa, Asia, Europe and America. In India, it is found in Rajasthan, Andhra Pradesh, Gujarat, Maharashtra and Tamil Nadu. Aloe vera is also popular in traditional Chinese and Ayurvedic medicine. In Ayurvedic medicine, aloe vera is used internally as a laxative, anthelmintic, hemorrhoidal, and uterine stimulant. It is often used topically with licorice root to treat eczema or psoriasis. In Arabic medicine, the fresh gel is applied to the forehead as a headache treatment or applied to the body for fevers and colds and for the treatment of conjunctivitis and eye inflammation. and as an antibiotic. Aloe Vera Has 75

Potential Benefits

Aloe vera (aloe vera) is a succulent plant that has been used medicinally by different cultures for thousands of years for its many pain-relieving properties. Known for the unique, thick, juice-like substance in its leaves, aloe vera has attracted the attention of the scientific and medical communities for its variety of activities and health benefits. Applications range from skin care and wound healing to digestive support and immunity. Anti-inflammatory, antibacterial, and healing properties. Recent studies have also shown that it can treat many conditions such as skin, gastrointestinal problems, diabetes, and inflammatory diseases. In addition, aloe vera's role in modern medicine has led to its widespread use in the fields of medicine, cosmetics, and food, including the development of cosmetics and mouthwashes.



BOTANY OF ALOE VERA

Aloe Vera Botany The cactus, resembling the fleshy aloe vera, is a member of the lily family. The plants are stemless or have very short stems (stems up to 25 cm long), usually with about

20 buds in a flat and thick rosette. The extraction area can reach 40 - 50 cm long and 6 - 7 cm wide. The extraction can be thick and strong, can retain water.

PLANTS

The lower part of the leaf is curved, with pale edges and covered with 2 mm long spiny teeth spaced every 10 to 20 mm. A leaf weighs 1.5 to 2 kg. The fleshy leaves of the aloe vera are a welcome change from the ugly nature of its natural habitat. The roots of the aloe vera are usually short and spread over the ground. It belongs to the family Asphodelaceae (liliaceae) and can be a tree or tree-like, hardy, xerophytic, succulent, pea-green plant. It grows in arid regions of Africa, Asia, Europe and America. In India, it is found in the states of Rajasthan, Andhra Pradesh, Gujarat, Maharashtra and Tamil Nadu. LEAVES.



Aloe vera leaves are lance-shaped and have serrated edges. Content to be removed:

1. Flesh is thick.
2. Green or gray-green.
3. The surface is coated with wax.
4. Value them for their hydration, which means they can keep their shape due to humidity.

The transparent material contains water (gel) and floats on the side of the racket and is fixed to the side of the foot. When young, aloe vera buds are light green to white. The swellings will disappear as the aloe vera grows. However, some variations do not reveal their location and this is due to genetic factors.



Taxonomy Kingdom - Plantae

Order - Asparagus Family - Phytophthora

Subdivision - Angiosperms Class - Monocotyledons Genus - Aloe

Species - Barbadensis Mill.^[15]

The species was first described by Carl Linnaeus in 1753 as *Aloe perfoliata* var.^[16] on 6 April 1768, by Nicolas Lawrence Boorman Laurens Burman and on the following day by Burman under the name *Aloe barbadensis* by the owner of Philip Mill. Synonyms *Aloe*, *Musabbar*, *Kumari*. *Aloe ferox* Miller (or Cape Aloe).^[18] *Aloe vera* is made from fresh juice collected at the entrance, from the roots of a special variety of *aloe vera*. *Aloe perryi* or *Aloe Barbadensis* Mil and *Aloe ferox*. Family Russian family Liliaceae.

GEOGRAPHICAL SOURCES

Geographical Origin *Aloe vera* is native to East and Southern Africa, but has also entered the West Indies and other countries, and grows in countries bordering the Mediterranean. In India, it is found in Rajasthan, Andhra Pradesh, Gujarat, Maharashtra, United Kingdom, Himachal Pradesh and Tamil Nadu; in Aruba, Bonaire Island, Haiti, India, South Africa, United States and Venezuela mixed. The shape is elongated.

MORPHOLOGY

Subject Color: - Leaves are green to gray-green Flowers: - yellow tubular, 25-35 cm, thin, loose with stamens. Root: - The length of the root fiber can reach 30-40 cm.^[21]

ACTIVE COMPOUNDS WITH IT'S PROPERTIES

| Class | Compounds | Properties |
|--|--|---|
| Anthraquinones/anthrones | Aloe-emodin, aloetic-acid, anthranol, barbaloin, isobarbaloin, emodin, ester of cinnamic acid. | Aloin and emodin acts as analgesics, antibacterials and antivirals. |
| Carbohydrates | Pure mannan, acetylated mannan, acetylated glucomannan, glucogalactomannan, galactan, galactogalacturan, arabinogalactan, galactoglucoarabinomannan, pectic substance, xylan, cellulose | A glycoprotein with antiallergic properties, called alprogen and novel anti-inflammatory compound. |
| Chromones | 8-C-glucosyl-(2-O-cinnamoyl)-7-O-methylaloedol A, 8-C-glucosyl-(S)-aloesol, 8-C-glucosyl-7-O-methylaloedol A, 8-C-glucosyl-7-O-methylaloedol, 8-C-glucosyl-noreugenin, isoaloesin D, isorabaichromone neoaloesin A | Thenovel anti-inflammatory compounds. |
| Enzymes | Alkaline phosphatase, amylase, bradykinase, carboxypeptidase, catalase, cyclooxygenase, cyclooxygenase, lipase, oxidase, phosphoenolpyruvate, carboxylase, superoxide dismutase | Bradykinase helps to reduce excessive inflammation when applied to the skin topically, while others help in the breakdown of sugars and fats. |
| Inorganic compounds | Calcium, chlorine, chromium, copper, iron, magnesium, manganese, potassium, phosphorous, sodium, Zinc | They are essential for the proper functioning of various enzymes systems in different metabolic pathways and few are antioxidants |
| Miscellaneous including organic compounds and lipids | Arachidonic acid, γ -linolenic acid, steroids (campesterol, cholesterol, sitosterol), triglycerides, triterpenoid, gibberellin, lignins, potassium sorbate, salicylic acid, uric acid | |
| Proteins | Lectins, lectin-like substance | It also contains salicylic acid that possesses anti-inflammatory and antibacterial properties. Lignin, an inert substance, when included in topical preparations, enhances penetrative effect of the other ingredients into skin. Saponins that are the soapy substances from about 3% of the gel and have cleansing and antiseptic properties. |

THERAPEUTIC USES**Wound Healing**

One of the most used properties of aloe vera gel is its wound healing properties. It accelerates many internal and external healing processes such as peptic ulcers, dermis and subcutaneous

tissues. excellent results have been reported. Post-operative peritoneal adhesions are a common cause of problems such as intestinal obstruction, infertility, abdominal and pelvic pain, and there is no better solution than aloe vera treatment. The gel was effective in reducing adhesion formation and preventing peritoneal damage; this may be due to the viscosity of the gel rather than its chemical properties.

Antiseptic effect

Aloe vera contains 6 antiseptic substances: lupeol, salicylic acid, urea nitrogen, cinnamic acid, phenol and sulfur. They have a protective barrier against diseases, infections and infections.

SUN-BURNS

Aloe vera is very effective in reducing the damage caused by sunburn. It is applied directly to the skin. Fresh juice or sun-dried aloe vera gel can be used to treat sunburn.

MOISTURIZING AGENT

Aloe vera can be used to soothe and moisturize the skin. There are many products on the market that contain aloe vera and can be used after bathing to leave the skin super soft. Aloe vera gel, cream or lotion that you apply to your face creates a protective film that helps protect your skin from dust and other natural agents that can irritate your skin.

ITCHING AND OTHER SKIN PROBLEM

Aloe vera is very effective in treating skin conditions. It can also be used to treat scalp infections, stings, sprains, sunburn, eczema, muscle aches, arthritis, scrapes, cold sores, burns, abrasions, psoriasis and bruises

SKIN AGING

Aloe vera can support the synthesis of elastin and collagen. These proteins are important for preventing skin aging.

ANTIDIABETIC EFFECTS

Over the past two decades, numerous reports have emerged on the therapeutic properties of aloe vera in the treatment of diabetes. Agarwal was the first to report on diabetic patients and many reports on diabetic patients have been published since then. Rajasekaran et al. and Kim et al. The antidiabetic properties of aloe vera have been described using animal models of streptozotocin-induced diabetes and non-insulin dependent diabetes mellitus.

ANTIBACTERIAL / ANTIFUNGAL / ANTIFUNGAL EFFECTS

Streptococcus pyogenes and *Streptococcus faecalis* are two bacteria inhibited by aloe vera gel. It has bactericidal activity against *Pseudomonas aeruginosa*, while acetylmannan prevents the adhesion of *Pseudomonas aeruginosa* to human lung epithelial cells in monolayer culture. Aloe vera gel preparations have been reported to inhibit the growth of *Candida albicans*.

In terms of antiviral activity, acetomannan reduced herpes simplex virus in both culture media. Antimicrobial Properties Aloe vera can inhibit the growth of certain bacteria such as *Str. enteritis*, *Shigella flexneri*, *Klebsiella* species, especially against Gram- positive bacteria that cause food poisoning or illness in humans and animals.

ANTIOXIDANT / ANTIDOTE

Aloe vera has a strong antioxidant activity. Studies have shown that aloe vera gel contains glutathione peroxidase, superoxide dismutase, and phenolic antioxidants, which may be responsible for its antioxidant effect. Aloe vera can improve blood quality, making the blood more effective at transporting oxygen and nutrients to the body's cells. Aloe vera contains 6 protective substances: lupeol, salicylic acid, urea nitrogen, cinnamic acid, phenol and sulfur. All of them have inhibitory effects on fungi, bacteria and viruses.

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