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# HERBCLIP

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FILE: *Aloe vera (Aloe barbadensis)*

DATE: November 9, 1998

HC 060981

RE: **Review of Aloe Gel**

Atherton, P. Aloe Vera Revisited. *British Journal of Phytotherapy*, Vol. 4 (4), 176-183.

*Aloe vera* is a drought-resistant succulent found in warm, fertile regions. Historic evidence of its medicinal uses dates back to Mesopotamia around 2100 BC. Out of over 300 species, four possess medicinal properties. *Aloe barbadensis*, the variety producing the most potent therapeutic effects, is the subject of this article. The author, a general practitioner, reviewed the literature for *A. barbadensis*' plant chemistry and pharmacological effects and describes his experiences in treating patients with aloe.

Aloe gel is composed of 99 percent water and small amounts of over 75 other constituents. Aloe contains many vitamins, including A, C, and E, as well as the B group. Enzymes that help break down fats and sugars can be found in aloe, along with an enzyme that inactivates bradykinin (producing anti-inflammatory and analgesic effects). Aloe contains a number of different minerals, including magnesium lactate, which blocks the formation of histamine. Histamine is released into skin and mucous membranes during an allergic reaction, producing itching and pain. The blocking of histamine prevents itching. Aloe vera kills most wound pathogens, *Candida albicans*, and some fungi and viruses.

Some of the sugars present in aloe act as immunomodulators, which can both enhance and retard the immune response as needed. One of these sugars has shown antiretroviral activity and is currently approved by the FDA for the treatment of feline leukemia. It is being tested as a possible co-treatment for AIDS. These sugars also stimulate the immune system through other avenues. Anthraquinones from aloe (inner leaf; the source of aloe laxatives) appear to aid digestion in small amounts and have a purgatory effect in larger amounts. They also have antimicrobial and analgesic effects and reduce the formation of melanin, preventing hyperpigmentation when applied topically. Aloe also contains salicylic acid (the main constituent of aspirin) which possesses anti-inflammatory, antibacterial, and keratolytic properties. Keratolysis is useful in debriding wounds of dead tissue. Other constituents of aloe include lignin, saponins, plant sterols, and 20 (out of 22) amino acids required by the human body.

Cosmetic effects of aloe include moisturization, a reduction in pigment formation, and an increase in collagen and elastin formation. *In vitro* studies have shown that fibroblasts (germ cells found in the skin) treated with aloe replicate three to four times more than untreated controls. This effect may reduce wrinkling, as well as aid in tissue regeneration in wound healing. Aloe also affords some protection against damage from ultraviolet rays.

The author asserts that a variety of conditions improve with the use of aloe vera. Skin conditions, such as eczema, psoriasis, acne, chronic itching and skin ulcers benefit from the use of aloe. He also reports improvement in asthma, sinus congestion, arthritis, and gastrointestinal disorders including gastritis, diverticulosis, and inflammatory bowel syndrome.

—*Leela Devi, MSN, RN*

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