

Antiinflammatory and antioxidant effects of *Aloe vera*.

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ABSTRACT

Aloe vera belongs to the family Liliaceae, a perennial herb having many phytochemical showing pre-clinical therapeutic efficacies for a wide range of human diseases. To date more than 75 active ingredients including aloesin, aloemodin, acemannan, aloeride, methylchromones, flavonoids, saponin, amino acid, vitamins, and minerals have been identified from the inner gel of leaves. It has anti-inflammatory, antioxidant, anticancer, antidiabetic, immune boosting and hypoglycemic properties. During the inflammatory process, bradykinin produces pain associated with vasodilation. Aloemodin inactivates bradykinin and produces anti-inflammatory effect. *Aloe vera* inhibits histidine decarboxylase and prevents the formation of histamine from amino acid histidine. Histamine is released in many allergic reactions. Thus the prevention of formation of histamine may explain the antipyretic effect of *Aloe vera*. The soothing and cooling qualities help the pores of the skin to open and receive the moisture and nutrients of the plants to show immediate effect. Oxidative stress in cells and tissues results from the increased generation of reactive oxygen species and decreasing the activity of antioxidant defense potential. *Aloe Vera* decreases pathogenesis of oxidative stress by increasing the activity of antioxidants such as superoxide dismutase, catalase, glutathione peroxidase and glutathione-S-transferase. The present study deals with the anti-inflammatory and antioxidative effects of *Aloe vera*.