



Marshmallow Root compared with Aloe Vera

By The Nude Horse (Equine Epidemiologist)

Aloe Vera versus Marshmallow Root

Aloe Vera and Marshmallow Root are both demulcent, as they contain saccharide polymers. The major effect of saccharide polymers is mucilant. Mucilage can soothe and protect irritated or inflamed internal tissue. When they are used on the skin they are called emollients. Demulcents are used whenever a membrane is raw, hot, irritated, inflamed or over excited. They are cooling, soothing, healing and relaxing. In this way both Aloe and Marshmallow serve as a biochemical “bandage” and are protectively helpful in restraining aggravating irritants from reaching the sensitive stomach ulcer. Mucilage benefits include:

Lower bowel transit time by absorbing water in the colon and creating stool a bulking & softening effect

Absorb toxins in the colon

Protect against gastric acidity

Regulate intestinal flora and protect against ingested toxins or bacteria

Relaxes and soothes via the endodermal lining of the gut, and is relaxant & antispasmodic to the lungs and the urinary tract through the spinal reflex.

Demulcent action internally, soothes and protects inflamed or irritated nerve endings in mucous membranes or epithelia.

Vulnery action meaning a plant used for healing wounds

Of note: Marshmallow mucilage is not altered in the digestive tract until it reaches the colon, where it may be partially or completely digested via bacterial action.

Marshmallow root extract and aloe vera release immune-regulatory cytokines. Cytokines play a major role in both acute and chronic inflammatory processes.

Marshmallow has hypoglycaemic effects: Marshmallow at doses of 10mg/kg, reduces plasma glucose levels to 81%. Aloe vera has conflicting results at trial regarding hypoglycaemic effects.

Marshmallow is generally considered a much safer choice. It has no reported side effects; it appears to be safe for pregnant people and animals including those that are lactating.



Valid concerns regarding Aloe Vera

Aloe has a high potential to serve as an absorption enhancer in the bioavailability of orally taken medication resulting in an uncontrolled increase in the availability of medications taken simultaneously with Aloe Vera. The stomach villi open, so the potential exists for blood plasma toxicity to occur via the increased accessibility of bacterial to the blood stream. [2].

There are many areas of contradictions in most of the advertised therapeutic benefits of Aloe Vera. A few of the notable contradictions include: its use as an emmenagogue and **abortifacient** (Saha et al., 1961; Singh et al., 1979; Nath et al., 1992) vis a vis its use for the prevention of miscarriage (Bhattharai, 1992) and its anti-oxytotic activity (Andrade et al., 1996); the use of Aloe Vera gel in the treatment of peptic ulcers (Blitz et al., 1963) vis a vis the **ineffectiveness** of both the exudates and gel components of Aloe Vera in the treatment of **gastric and duodenal ulcers** experimentally induced in rats (Parmar et al., 1986); and its acclaimed use in lowering blood glucose level in diabetics (Ghannam et al., 1986; Ajabnoor, 1990; Yongchaiyudha et al., 1996), contradicted by Koo (1994) who reported not only the ineffectiveness of the Aloe Vera gel in lowering blood glucose levels of alloxan-treated rats, but that it actually seemed to have caused an increase.

<http://www.ajol.info/index.php/ajbr/article/view/35746/59546>

Diarhhea

Aloe contains a laxative anthraquinone, when taken in large amounts can result in diarrhea. Severe diarrhea can cause cramps, pain and dehydration. It is strongly advised to abstain from aloe vera products if suffering from gastrointestinal problems as the laxative effect can lead to a severity of the problem (1)

Dehydration

Excessive intake of aloe vera can lead to dehydration and an imbalance of electrolyte levels in the body.[3]

Drop in Potassium levels

Excessive consumption of aloe vera can lower potassium levels leading to irregular heartbeats and weakness [4]. It can also make the body produce excessive amounts of adrenaline which can be harmful to ones with a heart condition.

Reduces blood sugar levels

Drinking aloe vera juice may also lower blood sugar levels by reducing insulin resistance [5]. So be cautious about consuming aloe vera if you suspect hypoglycaemia or are administering medications.

Causes miscarriage and birth defects

Avoid aloe vera administration to pregnant or lactating mares. It has irritant and purgative qualities that can stimulate uterine contractions that can lead to miscarriage and birth defects. It is also not considered safe for young people or animals. (6)

Leads to allergic reactions

Drinking aloe vera juice has been known to result in allergic reactions like itchy or swollen skin, rashes, irritation in the throat and chest pain [7].

Recommended reading

Chemical analysis of marshmallow root

<http://www.sigmaaldrich.com/life-science/nutrition-research/learning-center/plant-profiler/althaea-officinalis.html>

Chemical analysis of aloe vera

https://www.researchgate.net/publication/222184830_Compositional_features_of_polysaccharides_from_Aloe_vera_Aloe_barbadensis_Miller

Reference material:

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[2] Banu, A., Sathyanarayana, B., & Chattannavar, G. (2012). Efficacy of fresh Aloe vera gel against multi-drug resistant bacteria in infected leg ulcers. *The Australasian Medical Journal*, 5(6), 305–309.

[3] Fox, L. T., du Plessis, J., Gerber, M., van Zyl, S., Boneschans, B., & Hamman, J. H. (2014). *In Vivo* skin hydration and anti-erythema

effects of *Aloe vera*, *Aloe ferox* and *Aloe marlothii* gel materials after single and multiple applications. *Pharmacognosy Magazine*, 10(Suppl 2), S392–S403.

[4] Saka, W., Akhigbe, R., Popoola, O., & Oyekunle, O. (2012). Changes in Serum Electrolytes, Urea, and Creatinine. *Journal of Young Pharmacists : JYP*, 4(2), 78–81.

[5] Okyar A, Can A, Akev N, Baktir G, Sütlüpinar N. Effect of Aloe vera leaves on blood glucose level in type I and type II diabetic. *Phytother Res*.2001 Mar;15(2):157-61. PubMed PMID: 11268118.

[6] Rodriguez-Fragoso, L., Reyes-Esparza, J., Burchiel, S., Herrera-Ruiz, D., & Torres, E. (2008). Risks and Benefits of Commonly used Herbal Medicines in México. *Toxicology and Applied Pharmacology*, 227(1), 125–135.

[7] Ahlawat, K. S., & Khatkar, B. S. (2011). Processing, food applications and safety of aloe vera products: a review. *Journal of Food Science and Technology*(5), 525–533.

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<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3857397/>

<http://www.sigmaaldrich.com/life-science/nutrition-research/learning-center/plant-profiler/althaea-officinalis.html>

<http://www.thehealthsite.com/diseases-conditions/side-effects-of-aloe-vera-t915/>
