



PHYTOMEDICINE IS SPECIAL REFERENCE TO ALOE VERA

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Abstract:

Aloe vera is a miraculous plant that offers so many amazing health advantages that almost every part of the human body is affected by its restorative powers. It functions as a powerful antioxidant, a natural infection fighter, and a treatment for a variety of digestive issues, including heartburn, rheumatic pain, diabetes, arthritis, cancer, and AIDS. It also has laxative and beautifying effects. booster, and research has indicated that it helps diabetics' blood sugar levels drop. Researchers have demonstrated the remarkable therapeutic qualities of aloe. Because of the gel-like pulp that may be made by peeling the leaves of the plant, its medicinal potential has been known for millennia. Its juice is cooling and acts as an anabolic. a "pitta" fighter, a repository of Plant-based compounds, and a protector against fever, skin conditions, burns, boil eruptions ulcers, and other ailments. Among the thousands of commercially accessible products, aloe is found in pills, lotions, liquids ointments, jellies, beverages, sprays, and creams. Right now The aloe industry is booming, but consumers are misinformed, which has negative effects. Some of the reasons for this include inadequate knowledge of the plant's medicinal and health benefits, poor marketing, a lack of processing facilities close to farmers, and exaggerated but false advertisements for cosmetic and health products.

Keywords: phytochemicals, aloe vera, antioxidant, laxative, anticancer, and antidiabetic.

Introduction:

Aloe Vera is the common name for a specific species found in the Aloe genus, which belongs in the family Xanthorrhoeaceae¹. It is among There are at least 400 different species of aloe, and consumer products are where it is most frequently employed. Burma Aloe Vera (L) f. Aloe Vera is usually referred to as Aloe Barbadensis (Mill) or Miller. Aloes are xerophytes that are perennial leaf succulents with structural and physiological modifications for desert survival. They are extensively distributed in the Arabian Peninsula, several Indian Ocean islands, and sub-Saharan Africa. The majority of aloes have broad, fleshy leaves that are expanded to hold aqueous tissue. Thick layers of wax protect the cuticle of leaves. Wax has a unique pattern of micro papillae and/or ridges on its surface.

Aloes are found in a wide spans several tens of feet to a few inches in size. The inflorescence, or flowers, are essentially similar among species, albeit they differ in shape and color. (Yellow, Orange, Red, or White).

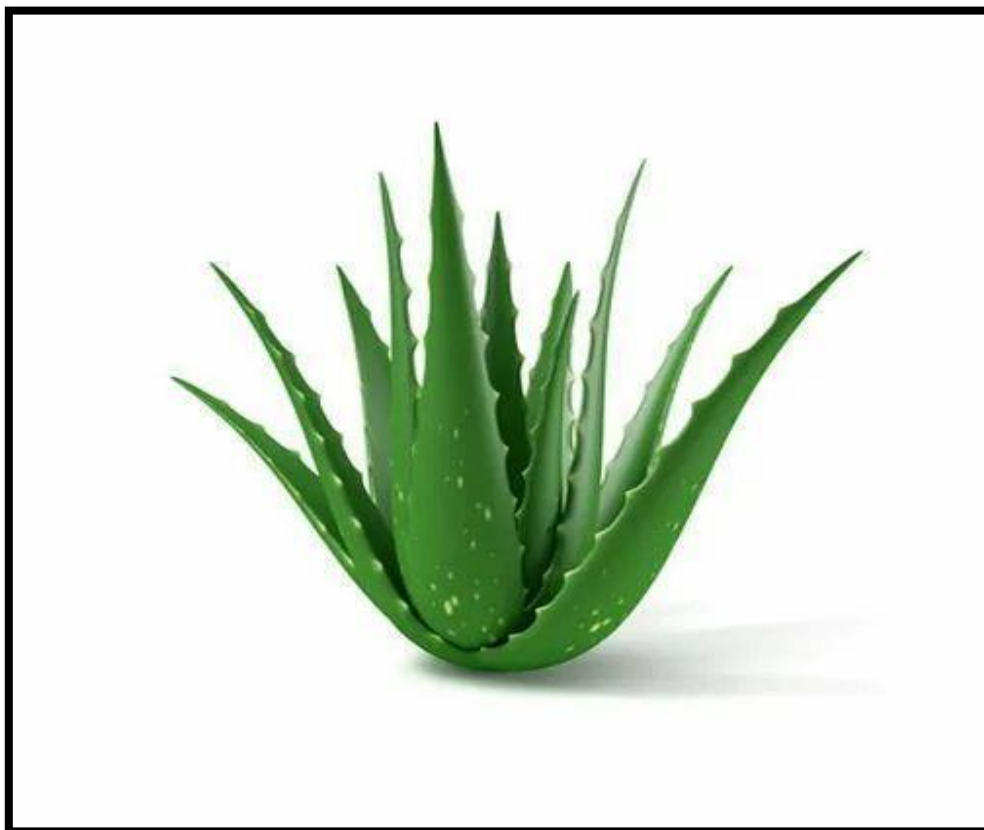


Fig Aloe vera

According to science, aloe vera is classified as:

Table Scientific classification

family	asphodelaceae
Kingdom	plantae
Clade	tracheophytes
Biological source	Aloe barbadensis miller
Genus	Aloe
Clade	Angiosperms
Sub family	Asphodeloideae
Clade	Monocots

species	Aloe vera
Order	Asparagales

Aloe vera plant parts include:

The two primary sections leaf of aloe are the colorless inner parenchyma that contains the aloe gel and the outside green rind with the vascular bundles

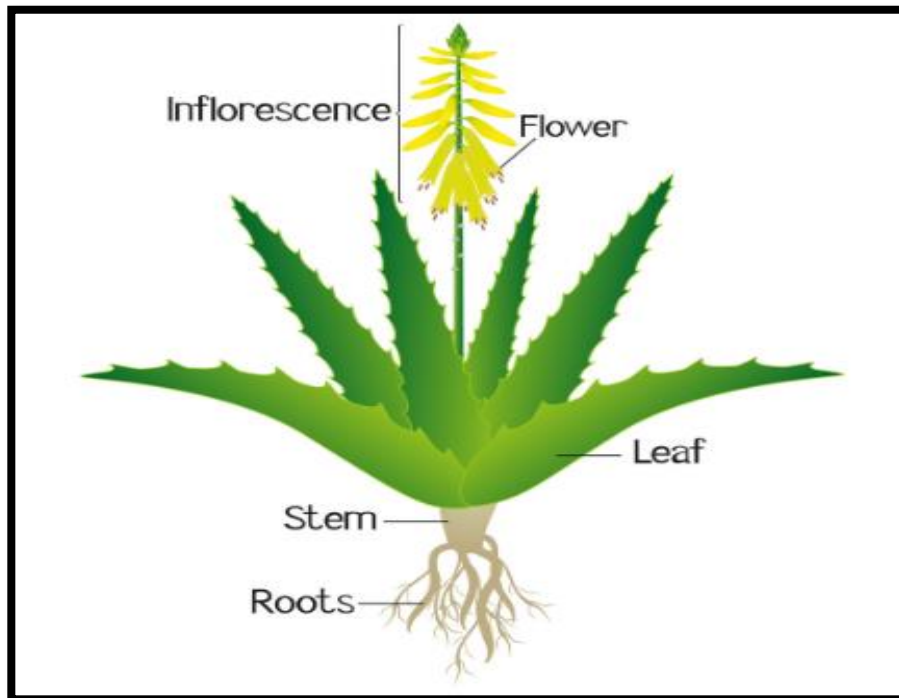


Fig part of Aloe vera plant

Etymology:

The term "aloe" in Arabic, which means "bitter, lustrous material," or the Hebraic word Ahalim which is the plural form of ahal, are the sources of the name Aloe. Vera is the source of the particular epithet vera, meaning in Latin "true". For millennia, aloe vera has been utilized medicinally in a number of countries, including Egypt, India, Mexico, Greece, China, and Japan. Cleopatra and Nefertiti, the queens of Egypt, incorporated it into their daily beauty regimens. It was utilized to treat military injuries by Christopher Columbus and the Great Alexander. John Good Yew translated De Materia Medica, written by Dioscorides in 1655 A.D., which is when aloe vera was first mentioned in English. Aloe vera was being used as a laxative in the United States by the early 1800s, but a significant change happened during the mid-1930s, it was effectively used to address severe and long-lasting radiation dermatitis.

Types of aloe vera plant:

The aloe vera are many types.

- Candelabra aloe
- Short leaved aloe

- Cape aloe
- Soap aloe
- Aloe perryi
- Tiger tooth aloe
- Spiral aloe
- Aloe nyeriensis
- Mountaion aloe
- Aloe ruspoliana aloe
- Aloe succotrina
- Aloe harlana
- Aloe jucunda
- Hedgehog aloe
- Coral aloe
- Alolampelos striatula
- Aloe squarrosa

Uses for aloe vera:

Commercial products are made from two components of aloe vera's yellow latex and clear gel. Usually, aloe gel is utilized to create topical skin medicines. ailments including psoriasis, dry skin, injuries, cuts, frostbite, and rashes, and sores .To relieve constipation, latex aloe can be taken on its own or combined with other components to make a product that can be consumed. Aloe latex can be purchased as "aloe dried juice" or as a dried form known as resin.

Evidence supporting How well aloe vera works as a burn or wound treatment is inconsistent. There is proof that applying topically applied aloe products could assistance for the signs and symptoms of several skin disorders, including rashes, acne, or the psoriasis, however may trigger an allergic response that occurs in certain individuals. Commercially, Yoghurts contain aloe vera gel as an ingredient, drinks, and various desserts; nevertheless, consuming aloe latex or entire leaf extract in large or sustained amounts can be harmful. Utilization of Small doses of topical aloe vera are probably safe.

Topical treatment and possible adverse effects:

Aloe vera can be made into a soap, gel, lotion, or cosmetic item to apply topically on the Skin. Those who are allergic to aloe vera may experience cutaneous reactions such as contact dermatitis accompanied by little redness, irritation, breathing difficulties, or facial, lip,

dietary supplement:

Up until 2002, the typical component of OTC (over-the-counter) laxative products in the states was Aloin, a chemical detected in certain Aloe species' semi-liquid latex. It was prohibited by the Food and Drug Administration due to producers' failure to provide the required safety data. Aloe vera has the potential to be poisonous, and when applied topically or consumed at certain doses, adverse effects may develop. When aloin is eliminated through processing, aloe vera may be less poisonous, but excessive use might have negative effects such diarrhea, hepatitis, and abdominal pain. long-term consumption of aloe (one gram daily day) may result in negative side effects such as weight loss, kidney or heart problems, and hematuria.

Despite being marketed as a means of improving digestive health, aloe vera juice lacks scientific evidence and regulatory certification. Toxicology is correlated with the extracts and dosages that are frequently used for these uses.

Aloe vera used medicinally:

Aloe vera is useful in preventing illness and preserving the major organs' normal function.

- Aloe vera releases pepsin, which relieves ulcers, colic discomfort, and irritation of the digestive tract. It also helps with digestion. Heartburn is also healed by it. This has been passed down from European folk medical traditions and has been validated by recent clinical research conducted in Japan.
- Immunity-boosting aloe vera, combats illness, and serves as a universal tonic. Due to its ability to generate white blood cells, research indicates that It works well against illnesses like cancer and HIV, in particular leukemia. Therefore, it can reduce the adverse effects of chemotherapy and radiation.
- Because it improves circulation, the cells receive more oxygen. As a result, it might be quite helpful in improving the lasemmia patients' condition.
- Aloe vera is the best colon cleanser since it detoxifies the body. It works as a blood purifier because it keeps people from becoming constipated.
- It helps with liver and renal issues, such as jaundice.
- Aloe vera also manages diabetes and lowers blood sugar.

Aloe Vera for Skin Health:

aloe Vera is good for the skin together with its effects on internal organs.

- Antioxidants, things abound in it, counteract free radicals. Therefore, Aloe vera protects against wrinkles and changes brought on by aging.
- It improves circulation, which nourishes the skin.
- Aloe vera does wonders for skin conditions including psoriasis and dermatitis. Cuts, wounds, blisters, burns (including sunburns), and even small second-degree burns can all be healed with it.
- Aloe vera makes the skin clearer and eliminates dark spots, blemishes, acne, and skin allergies.
- It benefits the scalp and hair as well.

Regarding the use and viability of aloe vera, different theories have been put up by scientists. However, with the introduction of more intense scientific investigation over the past 20 years, proof of its many medical benefits has been thoroughly established. A few of these The following medical disorders can be treated using aloe vera, according to research on the plant's therapeutic uses and health benefits.

Aloe vera has historically been used as a moisturizer for dry skin. Aloe may be able to successfully lessen dry skin, according to studies.

Lichen Planus: Research indicates that this inflammatory chronic condition Aloe has the potential to treat that impacts the oral mucosa.

Skin Burns/Ulcers: Research has indicated that aloe vera may help mild to severe burns and ulcers heal. Research conducted since the 1930s has demonstrated that the clear Aloe Gel's remarkable capacity to treat burns, ulcers, and wounds by applying a protective covering the damaged areas and accelerating the rate of recovery.

Radiation Dermatitis: Aloe vera tropical was extensively utilised in skin care products after accounts from the 1930s regarding its protective properties for skin exposed to radiation. Aloe vera gel is currently advised in certain cases for cutaneous irritation caused by extended exposure to radiation.

Constipation: Traditionally, oral consumption of dried latex derived from the aloe leaf's inside has been prescribed as a laxative. While there aren't many research to assess this impact on human aloe, aloin and other aloe components' laxative qualities are well supported by scientific proof.

Reactions adverse to aloe vera:

Certain people do have negative side effects when using aloe vera. Among them include:

- Dehydration resulting from repeated stools
- Irregular pulse
- Reduced potassium levels
- Stomach cramps Furthermore, avoid using aloe vera internally if you have
- Issues with the kidneys
- Diabetes
- Allergies to tulips, onions, or garlic
- Blood cells that trigger an infection-related immune response

Aloe vera's pharmacological characteristics include:

anti-inflammatory and anti-itch qualities, as well as benefits on pain management and wound healing. Despite the fact that outcomes of well monitored research Although results have been inconsistent, topical aloe extract appears to lessen psoriatic plaque-related erythema, desquamation, and infiltration.

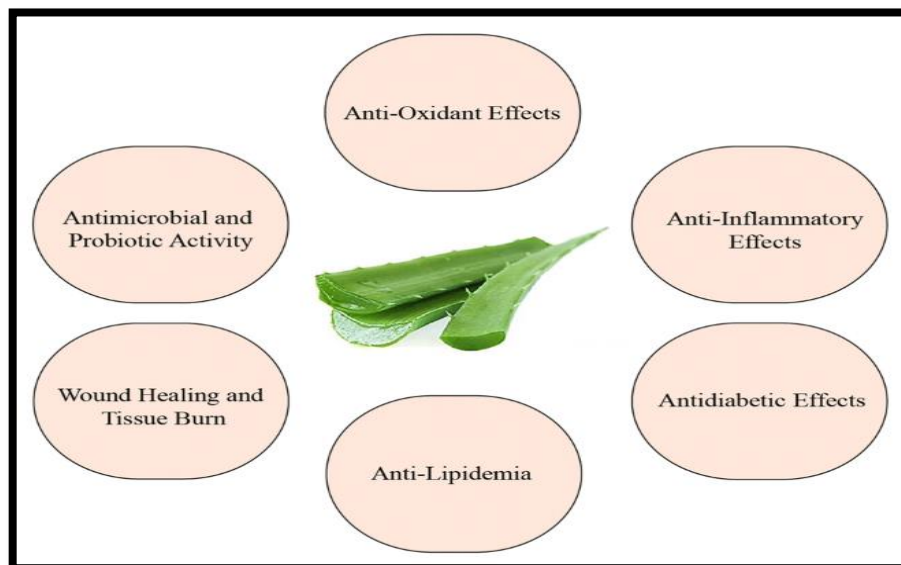


Fig Aloe vera's pharmacological characteristics include.

Property of burn and wound healing:

The most well-known use of aloe vera is for treating burns in addition to other ailments. Applying Apply aloe vera on a cut speeds up the healing process and improves the wound's tensile strength by promoting cell growth. It accomplishes this by quickening the blood flow to the area that was injured. The best wound dressing that has ever been found is aloe. The following is the process that explains this acceleration: Aloe vera gel promotes wound contraction and scar tissue rupture by increasing the amount and quality of collagen cross-linking in the wound.

Anti-inflammatory action:

The body's natural Inflammation is a response to an injury, which is characterized by edema, discomfort, redness, and heat and slows down the healing process. procedure. The anti-inflammatory characteristics of aloe vera gel not only alleviate suffering and agony, but also hasten the healing process.

Impacts against diabetes:

It is commonly known that aloe vera gel lowers blood sugar. However, depending on how differently the mucilaginous layer and anthraquinones separate, the outcomes could differ. It's not just decreases triglycerides, free fatty acids, phospholipids, liver transaminases, and cholesterol in plasma and tissue to blood glucose.

Effects against mutagenesis:

Aloe vera's glycoprotein and polysaccharide (acemannan) components have anti-tumor properties. In a study on adult drosophila, Stanic⁴⁶ observed that co-treating with Aloe vera effectively reduced the genotoxicity of the directacting mutagen. The polymer A portion of Aloe gel demonstrated anti-genotoxic and chemopreventive properties by inhibiting the creation of adducts of benzo[α]pyrene with DNA.

Conclusion:

Although aloe vera's applications and health advantages are widely debated, it is a member of the Asphodelaceae family, which also includes onions and asparagus. The genus Aloe is present. Although many of the genus's members are common houseplants that grow all over the world, they are found naturally in Africa. Aloe Vera, the most well-known species in the genus, is widely recognised for its healing qualities. One plant is aloe vera. with several common medical uses, but its most popular application is as a topical gel. Burns and small cuts are treated with aloe vera gel. Benefits of aloe vera include pain alleviation, inflammation reduction, and decreased risk of infection. Research has also indicated that consistent usage Using a gel based on aloe vera will actually hasten the healing of small cuts and even burns. For hundreds of years, it has been utilized in this manner. It is possible to snap open the thick leaves and apply the moistened tips immediately to a burn or scrape. The moisture from the aloe leaves is harvested in industrialized areas and turned into the well-known gel that most people are familiar with. It has gained greater popularity than ever in recent years and has been used into sunscreens, shampoos, lip balms, cosmetics, and skin lotions. Among the many advantages of aloe vera are its potent hydrating properties and Many vitamins and minerals included in the extract are thought to support healthy skin.

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