

## Medicinal Plants Used for the Treatment of Skin Ailments

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### ABSTRACT

Skin diseases are numerous and a frequently occurring health problem affecting all ages from the neonates to the elderly and cause harm in number of ways. Maintaining healthy skin is important for a healthy body. Many people may develop skin diseases that affect the skin, including cancer, herpes and cellulitis. Some wild plants and their parts are frequently used to treat these diseases. The use of plants is as old as the mankind. Natural treatment is cheap and claimed to be safe. It is also suitable raw material for production of new synthetic agents. Natural drugs from the plants are gaining popularity because of several advantages such as often having fewer side-effects, better patient tolerance, being relatively less expensive and acceptable due to a long history of use. Besides herbal medicines provide rational means for the treatment of many diseases that are obstinate and incurable in other systems of medicine. For these reasons several plants have been investigated for treatment of skin diseases ranging from itching to skin cancer.

**Keywords:** skin, medicinal, plants, diseases, natural, tolerance, herbal, cure, ailments, drugs

### INTRODUCTION

People not only disturbed mentally and physically due to skin disease but also spend lot of money for their cure when these are at chronic stage. If these diseases are cured at initial stage then we can save lot of money. So the herbal drugs, which are cheap with less side effects, will be helpful to cure diseases of all the people including countries of the third world. In the present study we identified some of medicinal plants used by people to cure skin diseases. [1,2]



*Ocimum sanctum*

This could help in creating mass awareness regarding the need for conservation of such plants. Many plant species have been used for treatment of specific human ailments such as allergies, burns, cuts and

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wounds, inflammation, leprosy, leucoderma, scabies, smallpox and sexually transmitted diseases. Some of the plant species, including *Artemisia nilagirica* (CI) Pamp., *Calotropis gigantea* (L.) R. Br., *Cannabis sativa* L., *Cassia alata* L., *C. fistula* L., *Centella asiatica* L., *Cyclea pellata* Hk., *Datura metal* L., *Drymaria cordata* (L.) Willd. ex Roam & Schult., *Jatropha aureus* L., *Litsea cubeba* Pers., *Mimosa pudica* L., *Plantago major* L. and *Plumeria acutifolia* Ait, are used among a range of ethnic groups for disease treatment. Moreover, medicinal plants are also applicable raw materials for the synthesis of novel therapeutic agents. [3,4]



*Aloe vera*

Several plants, such as *Aloe vera* (L.) Burm.f., *Azadirachta indica* A.Juss., *Calendula officinalis* L., *Cannabis sativa* L., *Portulaca amilis* Speg., and others, have been investigated for the treatment of skin diseases ranging from itching to skin cancer and have been reported to be effective in various skin diseases.



***Cannabis sativa***

Many therapeutically active natural herbal resources like Aloe, Neem, Liquorice, Tulsi, Amla, Papaya, Ginger and Eucalyptus are potent and safe in the treatment of dermatological infections. The commonly used species are *Iboza multiflora*, *Psorospermum febrifugum*, *Albizia coriaria*, *Hoslundia opposita*, *Justicia betonica*, and *Euphorbia tirucalli*. Herbs (55%) are the main growth habit followed by trees (25%), shrubs (17%) and vines (and grasses) (3%). Leaves (54%) and flowers (11%) are the most commonly used plant parts while topical administration to affected parts is the major method of administration.[5,6]



***Azadirachta indica***

Skin diseases are one such common disorder, effecting people worldwide, particularly in rural areas of developing countries due to poor sanitation and inattentiveness to dietary food supplements . It is found in all ages with an incidence of 34% of all occupational diseases. Common skins ailments include eczema, leucoderma, ringworm, itching, wound, scabies, swelling and many others without distinct symptoms and are caused by a variety of microorganisms and uncomfortable environment. Micro-organisms responsible for skin infections can

be bacterial, fungal, parasitic or viral in nature. Many allopathic drugs prescribed for skin diseases have adverse effects. Consequently, there is an increased interest and confidence in alternative therapies, like phytomedicine, in the treatment of skin ailments. Currently, many natural products from plants have been used by various cultures all over the world to treat skin diseases or their symptoms caused by micro-organisms . Although efforts are on to document ethnobotanical information for the treatment of skin ailments in different parts of India.[7,8]

### Discussion

Skin ailments present a major health burden in the rural community. Maintaining healthy skin is important for a healthy body. The uses of wood as a major fuel for cooking in the village; this rural community is more prone to burn accident and even due to hot climate more susceptible to fungal infections too.



***Santalum album***

The lay people in this area depend on the medicinal plant for their primary health care. Herbal medicine is gaining significant popularity because of numerous advantages such as often having negligible side-effects, better patient tolerance, easily available at urban and rural places, being relatively affordable and acceptable due to a long history of use.[9,10] Besides herbal medicines provide rational means for the treatment of many diseases that are obstinate and incurable in other systems of medicine. For these reasons, several plants have been investigated for the treatment of skin diseases ranging from itching to skin cancer. The most frequently mentioned plants being used were, *Azadirachta indica* A. Juss., *Tridax procumbens* , *Argemone mexicana* L, *Ocimum sanctum* L., *Santalum album* L., *Pongamia pinnata* L. and *Lantana camara* L.

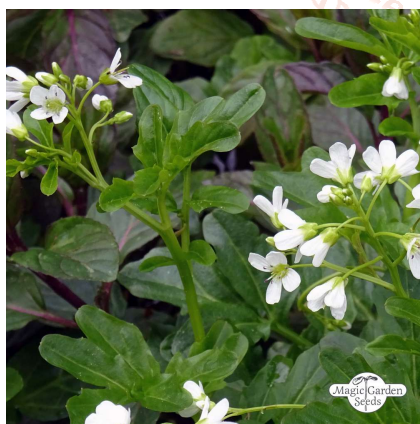
Skin ailments are a major health burden in a rural community. Maintaining disease-free skin is important for a healthy body. In specific regions, these people traditional medicines are endemic and have made due more than many years. This traditional information aggregated throughout the years is enhanced and scattered orally starting with one age then onto the next. The rural community has

faith in traditional medicine, therefore, their preference to traditional medicine over allopathic medicine and herbal medicine is an integral part of their primary healthcare.[11,12]



***Crocus sativus***

Most of the plant species useful for the treatment of skin diseases appear to be restricted to the forest, so activities such as deforestation, Overgrazing, habitat destruction, urbanization, etc., may pose a serious threat to these species. Conservation of these plants species is the need of great importance. *Urtica dioica* for corn and eczema, *Terminalia chebula* in Wart, *Cassia fistula* in skin leishmaniosis, *Crocus sativus* in freckles, *Nasturtium officinale* in Psoriasis, *Trachyspermum ammi* and *Falcaria vulgaris* in vitiligo, *Matricaria chamomilla* in acne and scald skins. In general, most herbal remedies impact on burn patients and the most used plant is *Matricaria chamomilla*. [13,14]



***Nasturtium officinale***

From neonates to elderly , the commonly affecting health problem is skin diseases , these skin diseases aren't just simple , they cause harm to the skin in numerous ways and in many cases these skin diseases are the symptoms for many complicated underlying health issues i.e ., cancer, herpes and cellulitis. hence, there is need to know in deeper about skin diseases as well as their treatment using herbs , as herbs have more pros compared to other drugs and Plants are often used for treating various diseases. These plants have been used since the start of mankind. They are

cheap and safe. They are also useful raw materials for production of new synthetic agents.

*Aloe Vera* is used in treatment of Skin diseases including eczema, irritation, burns, wounds , bruises, abrasions, psoriasis, cuts, scraps, cold sores, sun buns, inflammation, hair loss, rejuvenating, complexion improvement, cosmetic uses, microbial skin diseases.[15]

Since *A. vera* contains antifungal and antibacterial elements, its gel is applied directly on the eczematous skin, so the skin becomes softer and wounds heal rapidly. Many people reported decrease in eczema symptoms such as skin dryness,scaling and improved skin quality and also due to its antibacterial activity it prevent secondary infection.

*Avena sativa* is used in treatment of Skin diseases including eczema, wounds, irritation, inflammation, erythema, burns, itching, sunburn.



***Avena sativa* (Oats)**

*Curcuma longa* is used in treatment of Skin diseases including eczema, wounds, burns, cuts, chicken pox, shingles, allergy, scabies, sores, inflammation, microbial skin diseases, complexion improvement.

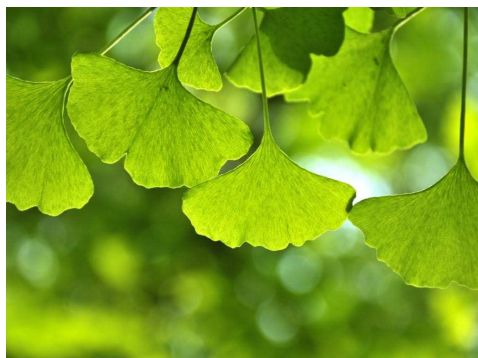


***Curcuma longa* (Turmeric)**

*Matricaria chamomilla* is used in treatment of Skin diseases including eczema, wounds, itching, irritation, inflammation, allergic conditions, dermatitis, erythema, bacterial skin diseases, nappy rash, frostbite, cosmetics uses.

The flowering plant *Mahonia aquifolium* is derived from the mahonia shrub. Oregon grape is another name for it. This herb has been used to treat inflammatory disorders like psoriasis in the past. Berberine, found in *Mahonia aquifolium*, may help to reduce some of the irritation caused by psoriasis. The plant also contains antiproliferative properties, which means it can halt the growth of cells.

*Ginkgo biloba* extracts have been demonstrated to be useful in the treatment of a variety of diseases, including allergies, varicose veins, premenstrual syndrome, headaches, vertigo, and more. *Ginkgo biloba* extracts have also been utilised to treat vitiligo in recent years. The medicine is manufactured as a tablet with various dosages that must be taken orally once to three times daily for more than three months to be effective.[16]



***Ginkgo biloba***

Green Tea polyphenols are compounds from green tea leaves that have been utilised in medicine since antiquity. Because of their high content of Epigallocatechin – 3 – gallate (EGCG), they have anti-inflammatory, anti-oxidant, and immunomodulatory properties. The medication can be used both systemically and topically. Recent research suggests that Green Tea polyphenols may be effective in the treatment of vitiligo by reducing oxidative stress in the melanocyte-unit.

Capsaicin is an active ingredient found in chili peppers, which belong to the genus *Capsicum*. The medication has been offered as a therapeutic strategy for vitiligo treatments due to its anti-inflammatory and antioxidant effects. An experimental investigation recently confirmed that incubating keratinocytes taken from a vitiliginous patient's perilesional skin with capsaicin prevented the cellular damage by ROS.

The ethanol extracts of *Azadirachta indica*, *G. glabra*, *Andrographis paniculata*, *Ocimum sanctum*, and green tea were found to have the capacity to inhibit acne in a study on an anti-acne formulation made from herbal extracts. The anti-acne compound was found to be effective against *Propionibacterium* acnes and *Staphylococcus* epidermis in the recent investigation. Aqueous extracts of *Azadirachta indica* leaves have also been shown to be chemopreventive

against skin cancer in mice. In compared to the control group, skin cancers have been observed to increase the expression of proliferating cell nuclear antigen.

Acne rosacea, seborrhoeic dermatitis, eczema, dermatitis, psoriasis, and lichen planus can all be treated using *Cannabis sativus* seed oil. This plant's leaves powder can be used to treat wounds and sores. Externally, *Cannabis sativus* extract can help reduce itching skin irritation. The seed oil protects the skin by strengthening it and making it more resistant to bacterial, fungal, and viral infections.

Turmeric is a herb or spice that has been utilised in natural medicine for hundreds of years. Turmeric is mentioned in ancient Ayurvedic treatments, and it is recognised to provide a variety of health benefits. Turmeric contains curcumin, a powerful antioxidant that aids in the prevention of malignant development. Make a thick paste with turmeric and water and apply it to the affected region for around 20 minutes. Turmeric use has also been shown to boost immunity against all diseases.

Lemon balm (*Melissa officinalis*) is a mint family member with a lemon fragrance. The chopped leaves can be steam-distilled to produce an essential oil. Treatment of herpes simplex and small wounds are two examples of topical applications. [14,15]



***Melissa officinalis* (Lemon balm)**

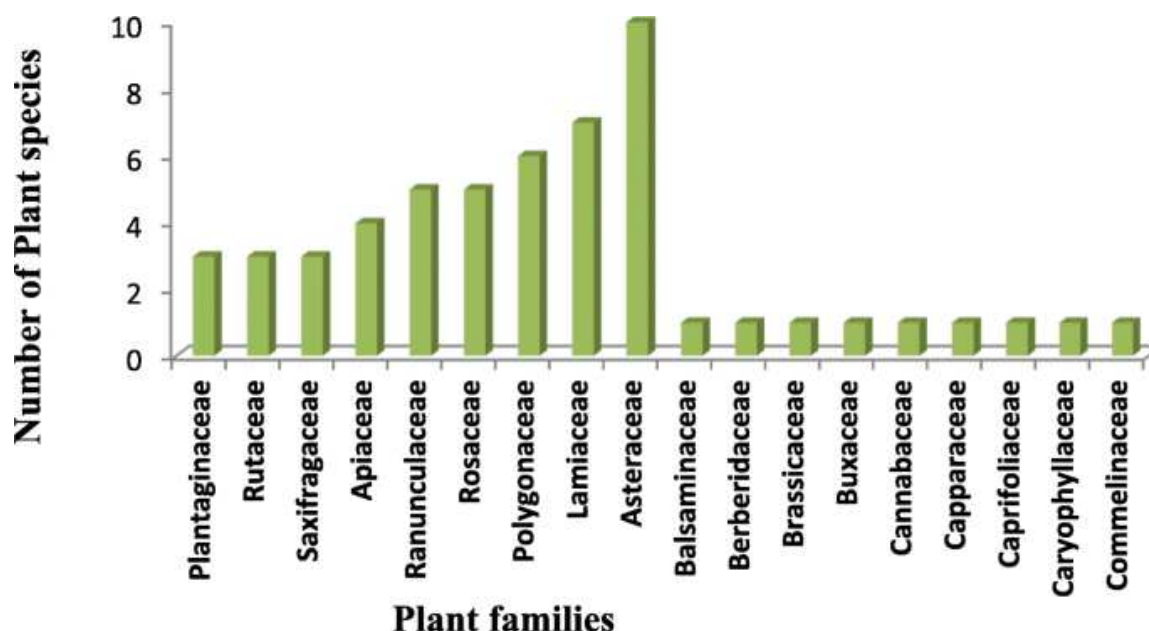
## Results

Herbals can possibly cure various types of skin maladies. More than 80% of individuals in India rely on upon customary human services and utilize distinctive plant based items for curing skin related issues.

**Table showing medicinal plant used to treat skin ailments**

<b>Botanical Name of the Plant</b>	<b>Plant part used and mode of use</b>
<i>Abutilon indicum</i> (L.) Sweet	Fresh leaves made into a paste with water and the paste is applied externally on the skin thrice a day to treat the ringworm infection.
<i>Acalypha indica</i> L.	Paste of leaves with water is applied externally two times a day for a period of one week to treat skin diseases.
<i>Aegle marmelos</i> (L.) Correa	Leaves are made into paste with a few drops of water; the paste is applied externally on the affected skin twice a day for a period of two to three days to get relief from itches.
<i>Aerva lanata</i> (L.) Juss.ex Schultes	Juice prepared from whole plant with water is taken orally three times a day for a period of two days to reduce eczema.
<i>Andrographis paniculata</i> (Burm.f.) Wall.ex Nees	Fresh leaves made into a paste with water and the paste is externally applied twice a day to treat leprosy, scabies, eczema and the ringworm infection.
<i>Aristolochia indica</i> L.	Paste prepared from vegetative parts of the plant in water is applied externally once in a day for a week to treat dandruff.
<i>Asparagus racemosus</i> Willd	Powder prepared from root/ tuber is taken orally with goat

Contrasted and the routine allopathic medications, they have moderately minimal effort and can be of incredible advantage to the number of inhabitants in India when all is said in done and needy individuals specifically. Herbals are a rich wellspring of dynamic fixings and can be more secure and savvy treatment for skin sicknesses extending from rashes to loathsome skin disease . More than half of plant species valuable for treatment of skin sicknesses seem, by all accounts, to be limited to woods, so exercises, for example, deforestation, environment devastation, urbanization and so forth may represent a genuine danger to these species. Preservation of these plants with the assistance of nearby cooperation and completing of broad exploration in this appreciation to widen the possibilities of home grown medications in skin ailment treatment is the need of great importance. [16]



**Graph showing that maximum of asteraceae family plants are used against skin ailments**

Unlike other chronic diseases, skin disorders are unique in the sense; they carry a high level of morbidity than mortality. Abatements and recerbations are regular with dermatological conditions. Medications which are powerful, time tried, practical and without uncommon reactions is need of great importance. In that way, a rundown of

single herbs and solutions which are prominent in conventional Siddha drugs are being looked into and recorded. Later in-vitro study results led all through the World gives more confirmation in regards to the adequacy of the single herbs which has been being used from time immemorial .

## Conclusions

Herbal drugs have found to possess great potential in the treatment of various kinds of skin diseases. The active ingredients of various chemical nature enable them to cure such diseases. The cost effectiveness, availability and greater curative potential and lesser side effects of herbal drugs over allopathic medications make them more popular among common people nowadays. As skin disorders have personal and social relevance, the area should be considered relevantly and discovery of plant based medicine is necessary. Results indicate that scientific studies carried out on medicinal plants having traditional claims of effectiveness warrants fruitful results. Further studies might aim at the isolation and identification of active substances from the active plant extracts which could also disclose compounds with better therapeutic value. Therefore, ayurvedic knowledge supported by modern science is necessary to isolate, characterise, and standardise the active constituents from herbal source. This combination of traditional and modern knowledge can produce novel drugs for skin diseases. A brief search of the literature reveals many therapies used for dermatological disease however there are fortunately fewer reports of their side effects. It is important for dermatologists to become aware of these adverse events and interactions in order to better educate their patients and possibly prevent potential and unexpected adverse reactions[17]

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