

Ayurvedic Remedies for Psoriasis

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ABSTRACT

A chronic inflammatory skin condition, psoriasis affects millions of individuals globally. Natural remedies for psoriasis have drawn attention because of its capacity to lower inflammation and alter the immune system. Psoriasis can potentially be treated using natural compounds derived from traditional Indian medicinal plants. There may be overt signs, including increased plaques, which can seem different depending on the skin type. This condition may result in inflammation of the knees, scalp, lower back, elbows, or other body parts. Many synthetic medicinal drugs have been linked to psoriasis as an undesirable consequence. Herbal medications may be effective in treating psoriasis due to their safety and availability. Skin hyperplasia includes vascular hyperplasia, epidermal keratinocytes, and penetration of neutrophils, leucocytes, and extra types of T lymphocytes in affected areas. The disease has a complex pathogenesis that involves both cellular and genetic components. Because of this, there are numerous therapeutic modalities that target diverse targets, ranging from immune system regulation to symptomatic treatment. Although the exact etiology of the illness is unknown, drugs are known to induce it. Seasonal variations, illnesses, and smoking are examples of environmental factors that are also to blame. Because of the detrimental impacts on life quality and risky side effects of conventional treatment, people are looking for natural alternatives. Many herbs have been used in traditional psoriasis treatment techniques, however there may be safer alternatives. The purpose of this review is to choose these plants for further investigation in order to find the chemical components that combat psoriasis and ascertain their mechanism of action.

Keywords: Ayurvedic Remedies, Psoriasis

INTRODUCTION

Psoriasis is an autoimmune skin disease that is inflammatory and proliferative, resulting from T-cell activation. It is identified by distinctly peach-pink or drab-red hard silvery scale patches that are abrasive to the skin. Hyperkeratosis, dilated microvessels, abnormal keratinization, epidermal proliferation, and inflammatory cell infiltration are further symptoms. A chronic inflammatory dermatosis, psoriasis affects approximately 2% of people. It typically manifests for the first time between the ages of 15 and 30. Brownish-red papules and plaques that are well-defined and covered in tiny, silvery white scales are the lesions' defining feature. Auspitz signs are tiny bleeding spots that occur when the scales are gently scraped off. Extensor surfaces of the extremities, particularly the knees and elbows, the scalp, upper back, and sacral area are frequently affected. An unusual pitting of the nails is observed in around 25% of patients. About 5% of people get psoriatic arthritis

that resembles rheumatoid arthritis, although there is no rheumatoid component.

History of Disease: Greek, Roman, and Arabic literatures, as well as Egyptian literature, contain the first known works about skin illnesses. Skin disorders primarily fell under general medicine in the 16th-century BC Ebers Papyrus. Though cosmetics were a priority at the time, the researchers' main focus was on ways to stop itching. The names given to different skin conditions weren't always appropriate, which frequently caused misunderstanding later on. Although leprosy was frequently referenced in the Bible, more research revealed that the disease was typically psoriasis; additionally, examinations of ancient Egyptian mummies revealed no evidence of leprosy (McCaw 1944). According to Gruber et al. (2004), the Bible mentions a condition called "zaraath" that appears to be either psoriasis or leprosy. Although it was initially believed that Moses and his sister Miriam may have had leprosy, additional research revealed that the cutaneous lesions they

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displayed were more likely to be caused by psoriasis or a fungal infection (liddell 2006). However, seborrheic dermatitis was actually what Galen referred to as psoriasis (Baker 2008). The Greeks used the term “psora” to refer to two conditions:

simply psora, which is represented by squamous-crusted lesions, and ulcerated psora, which is characterized by pustular lesions that cause ulceration and is thought to be contagious (Willan 1809).



Types of Psoriasis and Symptoms

- 1. Plaque psoriasis:** Plaque psoriasis, also known as psoriasis vulgaris, is the most common form of the condition, affecting 80–90% of individuals with psoriasis. It is characterized by raised, inflamed skin covered with silvery-white, scaly patches. These affected areas are commonly referred to as plaques.
- 2. Inverse psoriasis:** Inverse psoriasis presents as smooth, inflamed skin patches and typically develops in body folds, such as the armpits, the groin area between the thighs, beneath the breasts (inframammary fold), and under an overweight abdomen (pannus). This condition is often worsened by friction and sweating, making it more susceptible to fungal infections.
- 3. Guttate psoriasis:** Guttate psoriasis presents as multiple small, teardrop-shaped lesions that spread across large areas of the body, including the trunk, limbs, and scalp. This type of psoriasis is often linked to streptococcal throat infections.
- 4. Pustular psoriasis:** Pustular psoriasis is characterized by raised bumps filled with sterile pus (pustules). The skin beneath and around these pustules appears red and sensitive. This condition may be localized, primarily affecting the hands and feet, or it can be widespread, with patches appearing randomly across the body.



Plaque psoriasis



Inverse psoriasis



Guttate psoriasis



Pustular psoriasis

Skin irritation and red, flaky patches are the primary symptoms. Although they can occur on the scalp and other parts of the body, patches are most frequently found on the elbows, knees, and midsection of the body. The skin may be dry, itchy, and covered in thick, flaky, silvery skin that is pink and crimson in hue. Genital sores, joint stiffness, thickening and darkening of the nails, and excessive scalp dandruff are further symptoms. Because the illness is so severe, treatment generally lasts a lifetime.

Diagnosis: It is usually easy to diagnose, particularly if plaques appear on the ears, scalp, knees, belly button, elbow, and nails. The doctor may perform a biopsy, which involves taking a small sample of skin and examining it, to make sure the patient does not have a skin infection. Psoriasis cannot be confirmed or ruled out with other tests.

CAUSES AND RISK FACTORS

Psoriasis is thought to have a genetic component, while the exact origin is unknown. It is believed that psoriasis is exacerbated by a number of reasons. Stress, heavy drinking, and smoking are a few of these. Psoriasis sufferers may experience low self-esteem and sadness. Therefore, quality of life has a significant role in determining how severe the illness is. Some medications, such as beta blockers and lithium salt, have been shown to cause or worsen the illness.

- **Gene:** The cause of psoriasis has yet to be established, although researchers suspect a strong genetic component is involved. Experts have observed that some genes are commonly associated with the condition and that an autoimmune element also mediates its

development. The term "autoimmunity" refers to the immune system attacking the body's tissues when it mistakes them for foreign entities.

- **Skin Trauma: Vaccines,** sunburns, scratches, and other skin injuries can cause new psoriasis lesions to develop in both expected and unexpected parts of your skin. We refer to this as the Koebner phenomenon. A psoriasis lesion might also result from ongoing irritation. For instance, in settings where you typically wear skin-rubbing accessories or tight apparel.
- **Viral And Bacterial Infections:** Some illnesses, such as HIV and strep, can make you more susceptible to some forms of psoriasis. Those with weakened immune systems may also experience a more severe case of the illness. Severe psoriasis is also more likely to develop in kids and teens who frequently get illnesses like strep throat or upper respiratory infections.

The following infections can also cause psoriasis:

- Influenza
- sinus infections
- bronchitis

- **Medications:** Certain drugs might exacerbate pre-existing symptoms or cause psoriasis to develop. As an example:

- Lesions from psoriasis may worsen if lithium is taken.
- Flare-ups of psoriasis may occur two to three weeks after beginning antimalarial therapy.
- For certain people, beta-blockers can exacerbate psoriasis.

-In some cases, psoriasis may worsen due to quinidine and indomethacin (Tivorbex).

- **Obesity:** Obesity has been found to be a common risk factor for the onset of psoriasis. It could exacerbate pre-existing symptoms as well. Psoriasis lesions might be impacted by weight management. If you are overweight or obese, losing weight may help to alleviate or cure your psoriasis symptoms.
- **Other risk factors and triggers:** Some patients discover that additional factors, such the following, cause their psoriasis symptoms:

-**Temperature:** Psoriasis can be brought on by extremely high or low temperatures, as well as by dryness and humidity. Despite the fact that sunlight is frequently advised for psoriasis, exposure to extreme heat or direct sunlight might exacerbate symptoms.

- **Alcohol use:** Excessive alcohol intake is linked to flare-ups.

- **Stress:** For some people, especially those with compromised immune systems, long-term emotional and physical stress might promote the onset of psoriasis.

- **Smoking:** Using tobacco has also been linked to a higher risk of psoriasis and a reduction in the severity of some psoriasis treatments.

Complications

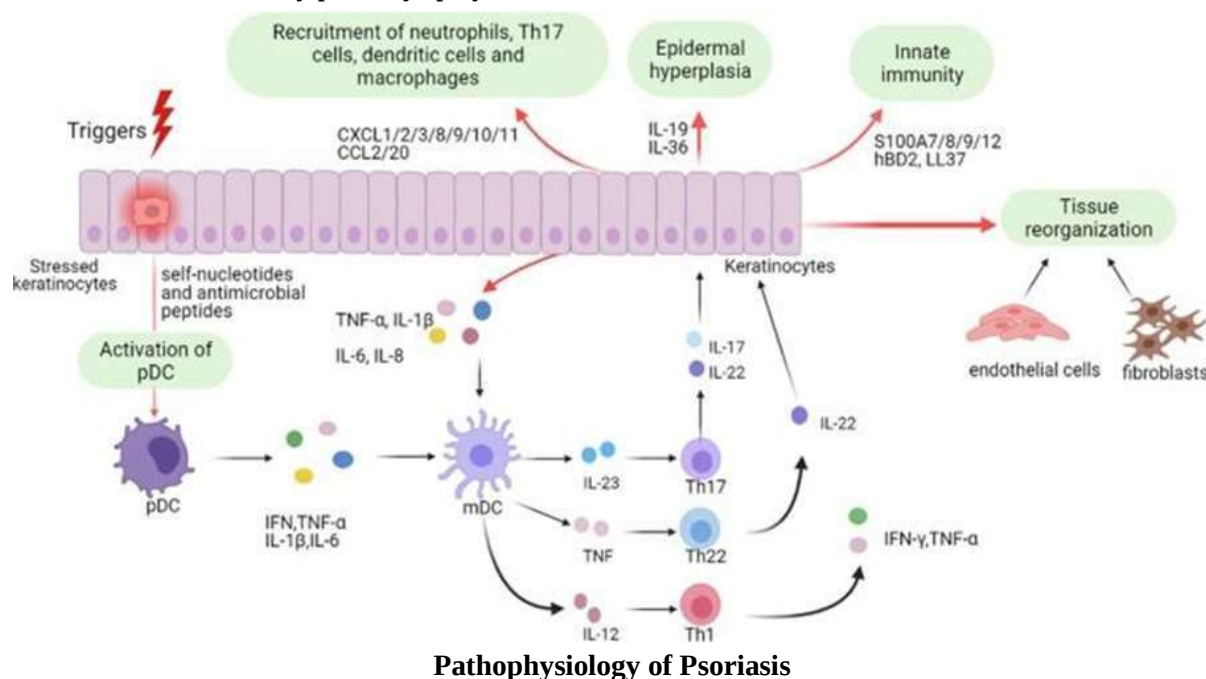
Patients with psoriasis are far more likely to get the other conditions listed. Psoriatic arthritis symptoms include joint pain, stiffness, and edema. Where plaques have healed, the skin color changes (hypopigmentation following inflammation or hyperpigmentation). Eye disorders such as blepharitis, conjunctivitis, and uveitis. Diabetes mellitus type 2 Unusual weight gain The primary cause of cardiovascular disease is elevated blood pressure. Other autoimmune conditions like sclerosis, IBD, primarily Crohn's disease, and celiac disease Mental health issues include depression and low self-esteem.

Pathophysiology of Psoriasis

Myeloid dendritic cells are activated early in the pathophysiology of psoriasis by cytokines produced by keratinocytes, natural killer T cells, plasmacytoid dendritic cells, and macrophages. Psoriatic lesions are characterized by well-defined, erythematous, and flaky plaques that are caused by the interaction of T lymphocytes, keratinocytes, and dendritic cells (DCs). According to research, psoriasis damages the keratinocyte-type cells that comprise the epidermis' outermost layer. Because of interactions between keratinocytes and adaptive immune cells, The inflammation caused by psoriatic plaque reaches the dermis of the skin in addition to the epidermis. The pathophysiology of psoriasis can be separated into two stages: the maintenance phase, which exhibits continuous clinical growth, and the beginning phase, which can be brought on by medications, infections, or the Koebner phenomenon. In the initial stages of illness, dendritic cells play a crucial role. These cells are specialized antigen-presenting cells. However, the exact cause of psoriasis remains unclear. One suggested mechanism involves the release of antimicrobial peptides (AMPs), which are produced by keratinocytes in response to injury and are often overexpressed in psoriatic skin. The three main AMPs linked to psoriasis are S100 proteins, LL37, and defensins. When plasmacytoid dendritic cells are activated by DNA-LL37, they release interferon-alpha (IFN- α), which then stimulates myeloid dendritic cells. Activated myeloid dendritic cells produce IL-23 and IL-12, leading to the differentiation of naive T cells into TH1 cells under the influence of IL-12. IL-23 supports the growth and maintenance of TH17 and TH22 cells. TH1 cells release TNF- γ and interferon-gamma (IFN- γ), TH22 cells produce IL-22, and TH17 cells secrete IL-17, IL-22, and TNF- γ . Psoriatic inflammation is triggered by various T cells that initiate the adaptive immune response. In the epidermis, TH17 cytokines, especially IL-17, IL-22, and IL-21, drive keratinocyte proliferation. Psoriatic inflammation stimulates the release of TNF- γ , IL-17, and IFN- α , alongside the activation of keratinocytes by LL37 and DNA, which enhances the production of type I IFNs- α . These processes, along with the synthesis of cytokines, chemokines, and antimicrobial peptides (AMP), contribute to the inflammatory cascade. The IL-23 signaling pathway, involving the Tyk2-Jak2 and STAT3 pathways, triggers the expression of key

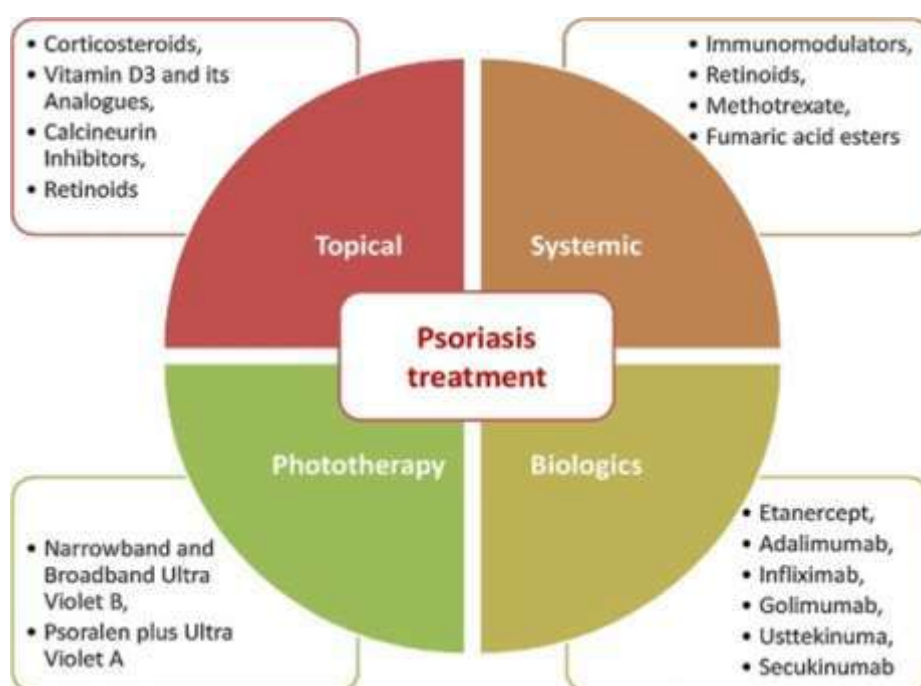
inflammatory mediators. These cytokines facilitate immune cell infiltration into affected skin, promote keratinocyte growth, and enhance endothelial cell interactions, fostering angiogenesis. To treat plaque psoriasis, therapies targeting the JAK/STAT signaling pathways, TNF- γ , IL-23, and IL-17 are effective. However, other inflammatory pathways play a role in

treating psoriatic variants. Mild psoriasis is managed with topical treatments such as corticosteroids, keratolytics, calcineurin inhibitors, targeted phototherapy, and vitamin D analogs. For moderate to severe psoriasis, UV-B/PUVA phototherapy, oral medications, and biologics are commonly used.



Allopathic Remedies for Psoriasis

1. **The biologics:** Etanercept, Infliximab, Adalimumab
2. **Steroids:** Triamcinolone
3. **Retinoids:** Acitretin
4. **Immunosuppressants:** cyclosporine
5. **Miscellaneous:** Methotrexate, Hydroxyurea



Ayurvedic Plants Used in Treatment of Psoriasis

Herbal remedies are generally considered to have fewer side effects compared to synthetic medications. They are easily accessible and simple to use, making them a popular choice. In recent years, herbal treatments have become essential for managing inflammatory and skin conditions. Research suggests that changes in diet and lifestyle may help alleviate psoriasis symptoms. Studies indicate that vegetarian diets, low-calorie diets, and intermittent fasting have contributed to symptom relief. Additionally, fish oil supplements, which contain omega-3 fatty acids and vitamin E, have shown beneficial effects in some treatments. Cannabis is also recommended for psoriasis management due to its cannabinoids, which possess anti-inflammatory properties and help regulate the immune system. Based on various studies, the following discussion explores some herbal alternatives for natural psoriasis treatment and the possible reasons behind their effectiveness in reducing psoriatic symptoms.

Aloe vera: Aloe vera is a widely used plant in both cosmetic products and first aid treatments for burns and other thermal injuries. It contains various bioactive compounds, including salicylic acid, mucopolysaccharides, anthraquinones, steroids, and saponins. In a double-blind, placebo-controlled study conducted by Syed and colleagues in 1996, 60 patients with mild to moderate plaque psoriasis, who had been dealing with the condition for an average of 8.5 years, participated in the trial. The patients applied either an Aloe vera extract cream or a placebo vehicle to their psoriatic plaques three times daily without occlusion for four weeks. Results showed that nearly all individuals in the Aloe vera group experienced significantly higher rates of plaque clearance. The effectiveness of Aloe vera in treating psoriasis may be attributed to its key active compounds, anthraquinone and acemannan, which possess antibacterial properties against *Streptococcus* and *Staphylococcus* species. Additionally, the presence of salicylic acid, a keratolytic agent, contributes to the exfoliation of psoriatic plaques, further explaining its therapeutic benefits.

Capsicum annuum/ Capsicum frutescens : The plant species *Capsicum annuum* is believed to have originated in the Caribbean, northern regions of South

America, and southern parts of North America. In the warmer areas of the Americas, cultivated varieties of native bird peppers are still commonly used. Previously, some woody variants of this species were classified as *C. frutescens*, but the distinguishing traits of these variants are not consistently found in *C. frutescens* and can also be observed in other species, including *C. annuum*. In cases of psoriasis, itchy skin has been linked to several substances, including neuropeptide Y, nerve growth factor (NGF), protein gene product 9.5 (PGP9.5), CGRP, and SP. Research has shown that itchy skin exhibits higher levels of NGF-immunoreactive keratinocytes, PGP 9.5-reactive nerve fibers, and NGF, all of which are associated with the severity of itching. Additionally, excessive production of TrkA, a high-affinity receptor for NGF, in epidermal and dermal nerve fibers corresponds to increased itch intensity (Henrich et al., 2015). In psoriatic skin experiencing itching, both keratinocytes and nerve fibers show elevated levels of SP and its receptor. Furthermore, studies indicate that capsaicin significantly alleviates itching in psoriasis patients, implying that this neuropeptide plays a role in the development of psoriasis-related itching.

Basil: The activated form of NF- κ B has been associated with various inflammatory diseases, including AIDS, psoriasis, osteoporosis, and septic shock (Cyclin, 2003). Previous research suggests that *Ocimum sanctum*, commonly known as holy basil, possesses chemo preventive properties. Ursolic acid, a triterpenoid found in basil and rosemary, has been shown to inhibit NF- κ B activation by blocking IKK. This suppression subsequently reduces the expression of matrix metalloproteinase-9, cyclin D1, and COX-2.

Curcuma longa/ Curcuma domestica: Turmeric has a long history of treating kidney stones and infections, but its use as an adjuvant for psoriasis is relatively recent. Its curcuminoids and volatile oils are thought to be responsible for its anti-inflammatory qualities. They function by specifically blocking phosphorylase kinase (PhK), an enzyme present in the epidermis whose levels have been linked to the clinical manifestation of psoriasis. Along with reductions in keratinocyte transferrin receptor expression and epidermal CD8 + T cell density, it has also been shown that the degree of parakeratosis was correlated with decreased PhK activity in the curcumin and

calcipotriol-treated groups. Although contact dermatitis is a known side effect, no adverse effects were reported in this trial.

Smilax china: Vijaylakshmi et al. (2012) identified *Smilax china* as having anti-psoriatic properties. They isolated the flavonoid quercetin from the plant's methanolic rhizome extract and demonstrated its therapeutic effects on HaCaT cell lines. Their findings showed a significant reduction in epidermal thickness along with decreased leukocyte migration. According to their study, this was the first report highlighting quercetin's potential as an anti-psoriatic flavonoid.

Angelica sinensis: *Angelica sinensis*, commonly known as Dong Quai or female ginseng, is a plant from the Apiaceae family that can be either biennial or perennial. It has been a staple in Traditional Chinese Medicine (TCM) for centuries, where it is believed to replenish blood and correct deficiencies. The extract of *Angelica sinensis* contains psoralen, a powerful furocoumarin. Psoralens act as photosensitizers when exposed to UV-A light, making them useful in psoriasis treatment. Patients can self-administer PUVA therapy by consuming *Angelica sinensis* and then exposing themselves to UV light or natural sunlight. Once ingested, the combination of psoralens and UV exposure slows epidermal DNA synthesis by promoting DNA cross-linking in the skin. Additionally, psoralens contribute to keratinocyte and lymphocyte death, induce reactive oxygen species production, impair mitochondrial function, and exert toxic effects on Langerhans cells. A double-blind, randomized study evaluated the effectiveness of oral psoralen combined with UV-A therapy in treating plaque psoriasis, using the Psoriasis Area and Severity Index (PASI) as a measure. After twelve weeks, two-thirds of the patients experienced at least a 75% improvement in their PASI scores, compared to 0% improvement in the placebo plus UV-A group.

Ulmus rubra: Slippery elm gets its name from the mucilage found in its inner bark. Traditionally, Native Americans used its extract to treat wounds and boils. Today, it is commonly marketed as a natural remedy for conditions such as cystitis, acid reflux, and irritable bowel syndrome. In 2004, Brown and colleagues conducted a study on five patients with chronic plaque-type psoriasis who followed a six-

month medical nutritional therapy regimen at home. Throughout the trial, they monitored intestinal permeability and psoriasis symptoms, observing improvements across all measured parameters. Post-treatment assessments of the Psoriasis Area and Severity Index showed significant enhancement in patient outcomes.

Thespesia populnea: Research on Perry's Scientific Mouse Tail Model demonstrated that *Thespesia populnea* bark extract exhibits anti-psoriatic properties, showing a 25% increase in orthokeratosis. Studies indicate that this plant contains various bioactive compounds, including proteins, lipids or fixed oils, flavonoids, triterpenoids, carbohydrates, glycosides, tannins, and phytosterols.

Alpinia galangal and Annona squamosa: Chanachai et al. (2009) reported that *Alpinia galanga*, *Curcuma longa*, and *Annona squamosa* possess anti-psoriatic properties. Their study highlighted how these plant extracts help manage psoriasis by regulating NF- κ B signaling biomarkers. To analyze this mechanism, they used semi-quantitative RT-PCR to assess the expression of ten different genes within the NF- κ B signaling network in HaCaT cells.

Garlic: Garlic (*Allium sativum*) has been widely recognized as an effective herbal remedy and has been used for thousands of years to treat various health conditions (Pazyar & Feily, 2011). It contains sulfur-based compounds such as alliin, along with enzymes like alliinase, which help convert alliin into allicin through enzymatic processes. Additionally, garlic is rich in other beneficial components, including arginine, selenium, flavonoids, and oligosaccharides (Allison et al., 2006). Aged garlic extract (AGE) is a complex formulation composed of various bioactive compounds, including allin, cyclophilin, fructose-arginine, beta-chlorogenic acid, S-methyl-L-cysteine, S-allyl-L-cysteine, S-acetylcysteine, S-allylmercaptol-cysteine, S-1-propionyl-L-cysteine, and S-methyl-L-cysteine. It also contains essential amino acids such as L-arginine, L-methionine, and L-cysteine.

Ginger: Salafzoon (2017) describes ginger (*Zingiber officinale*) as a flowering medicinal plant known for its pungent root or rhizome. It has been widely used in traditional medicine due to its numerous health

benefits, particularly for chronic diseases such as diabetes (Wang et al., 2011), cancer (Papers, 2013b), ulcers (Kukula-Koch et al., 2018), Alzheimer's disease (Masuda et al., 2004), cardiovascular disease (Al et al., 1449), and depression (Rabelo et al., 2014). The key factors contributing to ginger's positive effects on these conditions are its strong anti-inflammatory and antioxidant properties. The distinct aroma and flavor of fresh ginger root come from its active volatile oils, including shogaols, gingerols, and zingerone, which constitute about 1–3% of its total weight (Article, 2001). Wagesho and Chandravanshi (2015) state that ginger is also rich in antioxidants such as vitamin C, vitamin E, lutein, beta-carotene, lycopene, quercetin, genistein, and tannin. Additionally, it contains essential minerals like manganese, selenium, copper, and zinc. Gingerol, the primary active compound in ginger, has been recognized for its chemo preventive properties. It also suppresses the activity of cyclooxygenase (COX-2) and nitric oxide synthase, two enzymes regulated by NF- κ B (Article, 2001). Additionally, synthetic gingerol derivatives with enhanced potency as platelet aggregation inhibitors, similar to aspirin, could be beneficial in managing cardiovascular diseases by reducing platelet clumping. Due to its strong anti-inflammatory effects, ginger is considered a potential natural treatment for psoriasis.

Cestrum diurnum The West Indian shrub *Cestrum diurnum*, commonly known as “wild jasmine,” belongs to the Solanaceae family and is often cultivated as an ornamental plant. Its leaves contain a powerful steroid glycoside that mimics the function of vitamin D, specifically 1,25-dihydroxycholecalciferol glycosides. Normally, vitamin D₃ is synthesized in the skin through UV light exposure or obtained from dietary sources. Once in the body, the liver and kidneys hydroxylate vitamin D₃ (calcitriol) to form 1,25-dihydroxycholecalciferol, the biologically active form of the vitamin (Prema & Raghuramulu, 1994). Topical vitamin D exerts its therapeutic effects through two mechanisms: the non-genomic pathway, which enhances keratinocyte differentiation by increasing intracellular calcium levels, and the vitamin D receptor-mediated pathway, which inhibits keratinocyte proliferation. Due to these effects, it has been utilized as a localized treatment for psoriasis. A study examined the impact of vitamin D

supplementation on psoriasis. Patients were administered vitamin D₂ once every two weeks for six months. Improvements in the Psoriasis Area and Severity Index (PASI) were observed after three and six months, with an average PASI improvement of 34.21% in the vitamin D group, compared to only 1.85% in the placebo group. This suggests that vitamin D supplementation enhances psoriasis treatment outcomes. Aurochem Laboratories Pvt. Ltd. Markets *Cestrum diurnum* extract (3 g/g) in gel and ointment form under the PsoriaBan Natural brand. Studies indicate that this formulation demonstrates up to 89% effectiveness, particularly in treating psoriasis on the face and scalp.

Barberry bark: *Mahonia aquifolium*, commonly known as the Oregon grape, is an evergreen shrub belonging to the Berberidaceae family. Native to the United States, it has long been used in Traditional Chinese Medicine (TCM) to treat various inflammatory skin conditions. Its therapeutic effects on psoriasis are primarily attributed to berberine, an alkaloid found in the plant's extract. Berberine exhibits anti-inflammatory properties through multiple mechanisms, including reducing lipid peroxidation and lipoxygenase activity, decreasing T-cell infiltration in affected areas, and lowering cyclooxygenase activity, which subsequently reduces IL-8 suppression and prostaglandin E₂ levels. Additionally, berberine inhibits cell proliferation by intercalating into DNA, thereby blocking DNA replication and cell division. Other alkaloids present in *Mahonia aquifolium*, such as columbamine, oxyberberine, jatrorrhizine, and corytuberine, also contribute to its anti-inflammatory effects by inhibiting lipoxygenase. A study evaluated the effectiveness of an ointment containing 10% *Mahonia aquifolium* bark extract, which was found to be beneficial in managing moderate to severe psoriasis vulgaris (Kost et al., 2001). The plant's crude extract significantly reduced IL-8 production, with its key components being protoberberine and bisbenzylisoquinoline alkaloids. The first group of alkaloids was found to suppress T-cell activity and the production of TNF- α , TNF- β , and IL-1, contributing to its effectiveness in psoriasis treatment.

Cloves: Cloves possess strong anti-inflammatory and antioxidant properties, with research indicating that their key compounds, eugenol and isoeugenol, can

prevent NF- κ B activation by blocking the breakdown of I κ B. Murakami et al. (Barrea et al., 2018) discovered that while eugenol does not affect I κ B degradation, bis-eugenol effectively inhibits this process and reduces the production of inflammatory cytokines at both the gene and protein levels.

Silybum marianum: Milk thistle is a well-known herb recognized for its hepatoprotective properties. Research has shown that individuals with psoriasis often exhibit various liver abnormalities, including cirrhosis, fibrosis, necrosis, periportal inflammation, and steatosis. The development of liver disease in psoriasis patients is complex and may result from factors such as alcohol consumption, diet, the effects of anti-psoriatic medications, or the condition itself. Psoriasis patients tend to have elevated levels of cAMP and leukotrienes, and restoring these levels may help manage the disease. Silymarin, a key compound in milk thistle, plays a role in psoriasis treatment by improving liver detoxification, reducing cAMP phosphodiesterase activity, and inhibiting leukotriene production. Methyl salicylate, a compound with anti-inflammatory properties, is found in wintergreen, which is commonly applied topically to treat psoriasis. However, its use can lead to systemic effects such as nausea, rapid breathing (tachypnea), ringing in the ears (tinnitus), and acid-base imbalances. Patients who take aspirin or prescribed salicylic acid-based medications along with salicylate-containing herbal supplements, such as red clover, wintergreen, or aloe vera, have a higher risk of systemic toxicity. Additionally, wintergreen oil can increase the international normalized ratio (INR) and prothrombin time, which may pose risks for individuals on warfarin. Although no studies have confirmed its effectiveness in treating psoriasis, its potential anti-inflammatory properties warrant further research before it can be recommended for use.

CONCLUSION

Psoriasis is a skin disorder that causes rapid cell growth, inflammation, itching, redness, and other symptoms in families with an aberrant immune response. Every individual has a unique set of psoriasis triggers. Depending on the type of psoriasis, patches may develop on the head, shoulders, arms, and other body parts. They may also affect the fingernails, toe nails, joint pain, and edema. Psoriasis

comes in different forms, including guttate, pustular, plaque, and psoriatic arthritis. Since there is no known cure for psoriasis, prevention should be highly valued. There are numerous methods for treatment, including symptomatic measures like using steroidal formulations or blocking the disease's aberrant physiology. Only symptom alleviation can be obtained from psoriasis treatment. The severity of the condition influences the choice of treatment. In severe situations, PUVA is utilized. Finally, immunosuppressants are used. The synthetic medications used to treat it are causing unwanted effects, and some of them have been shown to cause psoriasis. The natural herbal cure, which is harmless and just as effective as the synthetic medication, is the clear choice in that situation. This article highlights a number of plant sources based on reports from various academics and traditional knowledge. The report also discusses the key factors for herbal medication screening, known as the investigative parameters, which should be helpful to researchers in this field.

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