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## APPLICATION OF MEDICAL TEXTILES FOR TREATMENT OF ECZEMA

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Research Scholar.

**Abstract:-** The word eczema comes from a Greek word that means to effervesce or bubble or boil over. Number of tropical and systematic therapies using synthetic ingredients are available since so long to cure eczema. Due to risk and side effects associated with previous used therapies internal and external herbal remedies are considered to be effective and safe alternative treatment for eczema. Furthermore, scientific analysis of herbs reveals that they possess enormous therapeutic capabilities that modern medicines is searching for. With the multitude of treatment options and the rapidly expanding newer technologies available to researcher's, scientist, industrialist and doctor. It is important to review and be aware of the current literature and studies regarding herbs and their active roles in the management of varicose vein ulcer. This review emphasizes on the astounding effects of herbs in the topical treatment of eczema with scientific data. Inclusion of discussed various herbal extracts, gels and oils, in future development of herbal formulations garments could provide complementary and alternative therapy for eczema.

**Keywords:** eczema, Herbs, Therapy, Tropical, Formulation, garments..

### INTRODUCTION

The word eczema comes from a Greek word that means to effervesce or bubble or boil over. Eczema is a disease characterized by skin rashes that have redness, swelling, itching, dryness, and flaking. The skin itches and when scratched, results in a rash. In Ayurveda, this disease is known as Vicharchika. It occurs when the immune system becomes unbalanced, so the condition is often associated with other allergic conditions like allergic asthma, hay fever, etc. Genetic factors, debility, climate, and psychological factors can dispose one to the condition. Eczema affects about 10% to 20% of infants and about 3% of adults and children in the U.S. Most infants who develop the condition outgrow it by their tenth birthday, while some people continue to have symptoms on and off throughout life. With proper treatment, the disease often can be controlled.

### Causes\

Excessive consumption of foods that are dry, stale, cold, salty, spicy, sour, fermented or fried.  
Late night work schedules and Regular late night dinners.  
Excessive physical, mental, and sexual activities; and stress are also factors.  
Excessive intake of tea, coffee, and alcoholic beverages.  
Indigestion, acidity and constipation.

### Symptoms

Itching and Redness on skin.  
Dry and flaky skin.  
Inflammation on skin.  
Small bumps on forehead, neck and cheek.  
Rough and thickened skin.



Figure no 1, 2

**The following can worsen the eczema:-**

- Dust.
- Cigarette smoke.
- Sour food.
- Mental stress.
- Sand.
- Dry air.
- Sweat
- Fabric like wool, jute, nettle, casement, cambric etc.
- Hot shower or bath for long time.
- Sudden change environment
- Soaps shampoos, conditioners and sometimes oils.

**Herbs used for the treatment of eczema**



**1. Chamomile (*Anthemis nobilis* or *Matricaria recutita*)** – these two different chamomiles are antibacterial, anti-fungal, anti-inflammatory and antiseptic. Chamomile is also considered to be hypoallergenic with the ability to defuse skin irritants. It is one of the few herbs that have been included in clinical trials to look into its effectiveness in skincare. Most documented studies have been completed in Germany using a chamomile cream or ointment. In one trial with humans, chamomile was

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found to have an effect that was 60% as active as 0.25% hydrocortisone when applied topically. In another trial, the chamomile ointment was effective in reducing dermatitis following a single application of sodium lauryl sulfate.

**2.Chickweed (*Stellaria media*)** – not a commonly known herb, chickweed is a small white flower that is native to Europe. It has been used in herbal medicine and Chinese medicine for hundreds of years and is even today still recommended by herbalists for skin diseases. This little herb exhibits extremely effective anti-inflammatory and anti-viral activity, which is due to a number of compounds it contains such as polysaccharides, flavonoids and cyclic peptides.



**3.Calendula (*Calendula officinalis*)** – this herb has been known for many generations as an anti-inflammatory herb that can treat a range of different skin conditions. Calendula is believed to benefit eczema by reducing inflammation, eliminating bacteria, and helping the skin heal. Although no clinical trials have been conducted to look specifically at how calendula can treat eczema, studies have however been undertaken to look at the treatment of acute dermatitis in cancer patients undergoing radiation therapy.

**4.Liquorice (*Glycyrrhiza glabra*)** – it is not just a tasty sweet, liquorices is actually a great leafy plant from which the root is harvested for use in food and herbal medicine. It contains a compound called glycyrrhizin, which has been shown to have anti-inflammatory activity.



**Oats (*Avena sativa*)** – oatmeal has been used as a soothing herb for thousands of years in order to relieve itching and irritation. Oats contain compounds called avenanthramides which are potent anti-inflammatory agents and also exhibit anti-oxidant activity. Various clinical studies have been undertaken to look at the effect of oats on eczema and these have all found a significant reduction in skin redness, dryness, scaliness, itching and erythema after application of oat extracts.

**5.Burdock (*Arctium lappa*)** – burdock is one of those herbs that is viewed as a weed by most people in the Western world. However, its taproots are actually eaten throughout Asia and it is high in lots of minerals and vitamins. It's been used as a medicinal herb for centuries for soothing the gastrointestinal tract. In North America, the Cherokee, Malecite, Menominee Ojibwa traditionally use Burdock for the relief of dry, scaly skin conditions such as eczema and psoriasis and in the treatment of acne. One of the reasons that burdock may be useful for skin conditions is its high percentage of mucilage and inulin. Mucilage, when mixed with water, will create a gel-like substance that can soothe the skin. Inulin is a humectant, which means that it draws moisture up through the skin to hydrate the upper layers.



**6. Aloe vera (Aloe barbadensis)** – records have been found dating back over 2,000 years listing aloe vera as a skin treatment for eczema. Legend has it that Alexander the Great conquered the island of Socotra in the Indian Ocean on the advice of the great philosopher Aristotle, solely for the purpose of obtaining a sufficient supply of aloe vera plant to rub on the wounds of his soldiers. Research has found that aloe vera contains wound healing and anti-inflammatory properties, which is why it is thought to be effective on eczema.

**7. Milk thistle (Silybum marianum)** – this herb is named milk thistle because of the milky sap it contains which is a demulcent, meaning that it creates a gel-like layer, trapping moisture and soothing the skin. Milk thistle contains a compound called silymarin which was the subject of a study by Italian researchers in 2008. They applied a product which contained milk thistle to a group of rosacea patients over the space of a month and found that an overall improvement in skin redness, itching, hydration, and skin colour. Plenty of anecdotal evidence suggests that milk thistle alleviates the symptoms of eczema.



**8. Dandelion (Taraxacum officinale)** – in recent years studies have reported that drinking dandelion juice can stimulate the liver and help clean up dyshidrotic eczema (the kind which causes tiny bubble-like blisters paired with intense itching). However, applying dandelion externally can also help with eczema. Dandelion sap, otherwise known as dandelion milk, is used in treating skin diseases caused by microbial or fungal infection. Its flowers are a fantastic natural source of lecithin, which is a moisturising nutrient often used in skincare. Dandelion root contains a number of different compounds including inulin which, as we saw with burdock, draws moisture up to the skin.

**9. Horsetail (Equisetum arvense)** – No other herb in the entire plant kingdom is as rich in silicon as horsetail. Silicon is the material of which collagen is made. Collagen is the “body glue” which gives the skin its muscular tone and elasticity and is needed by your skin for the normal regeneration of healthy skin tissues. Horsetail has been used to improve the strength, tone, and texture of the skin, hair, and nails. This herb may also be used to relieve itching, irritation, and inflammation associated with skin conditions such as eczema, whilst also improving circulation and rejuvenating the connective tissue. Horsetail has been found to be effective in the topical control of allergic contact skin diseases, which may be related to its anti-inflammatory

and wound healing properties.

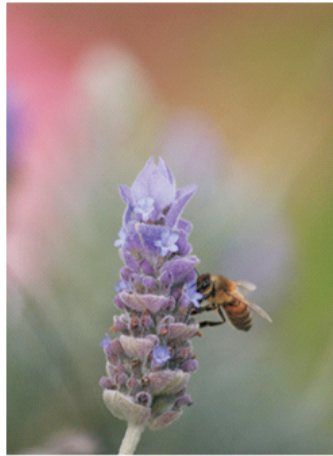


**10. St. John's Wort (*Hypericum perforatum*)** – St. John's wort has been used historically for the topical treatment of bruises and mild burns, and to speed wound healing. Hyperforin is a constituent of the herb that has been found to have antibacterial activity. One study applied a cream containing St. John's wort to eczema on one side of the body and a placebo cream on the other side for a period of four weeks. The St. John's wort cream showed an improvement in redness, crusting, scaling and skin thickening, together with a reduction of skin infection.

**11. Neem (*Azardica indica*)** – Neem oil is used for a large variety of ailments, but seems to be particularly beneficial for skin problems. Its oil is used for eczema and a number of other skin diseases such as ringworm and scabies. It is a powerful insect repellent, anti-bacterial, anti-fungal, anti-viral, anti-inflammatory and also strengthens the body's overall immune responses. Neem oil contains fatty acids which build collagen, promote wound healing and maintain the skin's elasticity. Clinical studies have also revealed that neem inhibits inflammation as effectively as cortisone acetate, this effect further accelerates wound healing.



**12. Turmeric (*Curcuma longa*)** – this herb has been widely researched and found to have many uses. Turmeric has magnificent wound healing activity. It has antioxidant, antiviral, antibacterial, anti-inflammatory and antiseptic properties. It is used and quoted widely for its use in treating eczema, but little data is available to verify this. Nonetheless, it seems that the active ingredient curcumin present in turmeric possesses anti-inflammatory and bactericidal properties which may help treat inflammation of skin associated with eczema.



**13. Lavender (*Lavandula angustifolia*)** – this herb is one of the most versatile botanical extracts available for skincare. It is antibacterial, anti-inflammatory, anti-fungal, anti-...well, it's anti-practically everything. Lavender is thought to stimulate cellular growth and regeneration in the skin by helping your upper layer of skin rejuvenate itself. The fact that lavender calms down inflammation, speeds up wound healing and deals with infection means that it will also have a beneficial effect on eczema. Its essential oil is one of the only ones which are safe to use neat on the skin.

**14. Witch Hazel (*Hamamelis virginiana*)** – this herb is known to relieve itching and help with “weeping” or oozing eczema. In one study, 22 patients with eczema were treated with a standardised witch hazel salve on one arm and a non-steroidal anti-inflammatory cream on the other over the course of three weeks. While the non-steroidal anti-inflammatory cream worked, the witch hazel was just as effective for improving symptoms like redness, scaling, and itching.



**15. Comfrey (*Symphytum officinale*)** – also known as ‘knit-bone’, comfrey is a great skin healing herb. Comfrey is said to help ‘knit’ cells back together after a laceration or abrasion. It contains a cosmeceutical called allantoin which is used to treat wounds, ulcers, burns, sunburns, eczema, psoriasis, impetigo, and acne and other skin eruptions. Allantoin works as an antioxidant, encourages the generation of new cells and speeds up the shedding of dead skin cells. It has skin softening properties and is said to act as a remover of scaly tissue.

**16. Cleavers (*Galium aparine*)** – otherwise known as goosegrass, cleavers has astringent properties and is thought to have a toning, firming effect on skin. When used externally, cleavers is said to benefit eczema and psoriasis as it has anti-inflammatory properties. Cleavers is also used externally for healing wounds and sores, cysts, boils, swellings or for treating skin infections and swollen lymph glands.





**17. Marshmallow (*Althea officinalis*)** – this plant is a very useful medicinal herb, as its soothing properties make it very effective in treating inflammations and irritations of the skin when it comes to eczema. The whole plant, but especially the root, is high in mucilage and highly emollient. Mucilage will create a gel-like substance that can soothe which is particularly useful when it comes to inflamed areas of the skin.

**18. Goldenseal (*Hydrastis canadensis*)** – this herb has been used on the skin to treat wounds, herpes sores, and other skin conditions such as eczema. Goldenseal contains the chemical berberine, which might have effects against bacteria and fungi and is in research for its possible immune stimulation properties. Goldenseal is anti-inflammatory, antimicrobial, antiseptic, astringent and used for healing wounds which would suggest that it is useful in treating inflammation and skin irritations caused by eczema. This herb was a popular remedy amongst Native Americans who used it as a skin soother.



**19. Nettle (*Urtica dioica*)** – stinging nettle has been used for centuries to treat eczema. It is anti-inflammatory, astringent, bactericidal, healing, mildly deodorant and stimulating. Research has also found high anti-microbial activity in nettle extracts. This herb's characteristic 'sting' may reduce the inflammation in the body that causes eczema, as well as the painful and itchy symptoms that go along with it.

**Application of herbal extracts on textile base products:-**

The extracts of these herbs can be applied on garments for the treatment of eczema. So that herbal medicine will be in a contact to effected place for a long time. It is time taking process but with no side effects. Allopathic medicines cure disease in less time but having side effects.

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